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Carl Linnaeus

THE SWEDISH FAUNA
(FAUNA SUECICA)

1761

A translation into English from the Latin
with introduction, commentary, and modern indexes

by

Ann-Mari Jönsson and *Ingemar Struwe*
in collaboration with
Malcolm Scoble

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Frontispiece (p. 34) illustrating the forest goddess Fauna surrounded by deer and other animals by Jean Eric Rhen (1717–93). (Swedish architect, Professor of the Academy of Arts. See Gertz, "Artemis och hinden. Frontispisplanschen i Linnés Fauna Suecica", and Broberg, "Naturen på bild. Anteckningar och linneanska exempel".)

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To Herman

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Uppsala, May 2025.
Ann-Mari Jönsson, FLS, and *Ingemar Struwe*, FLS

INTRODUCTION

It is shameful to live in one's country and be ignorant of it.[1]
(*Turpe est in Patria vivere & Patriam ignorare.*)

Carl Linnaeus's (1707–78) *Fauna Suecica*[2] was first printed in Leiden in 1746 and later in a second expanded edition in Stockholm in 1761 opening with a frontispiece by Jean Eric Rhen, which shows the forest goddess Fauna. Then follows the title page, *Fauna Suecica*, some words of wisdom by the Roman orator Quintilian, Linnaeus's dedication to Anders von Höpken, Nils Palmstierna, and Klas Ekeblad, his own preface, an enumeration of zoological authors, technical terms, as well as an index, *A small fauna of Sweden*, with references to where the animals are treated within the text. Then there are the different orders with their subdivisions; the first animal is Man, *Homo sapiens*. The work ends with *New plants for the Swedish flora*, *Addenda*, *Errata*, and Linnaeus's own indexes of Latin and Swedish names. Finally, there are two plates illustrated by Johan Leche and engraved by Carl Bergquist. All in all the work covers 626 pages[3] with descriptions of 2328 species.

During the 264 years that have passed since the publication of this unique description of the 18th century animal world, there has been no translation from the Latin into any modern language despite the fact that the work is of a central importance for understanding the development of natural history in Sweden.

In *Fauna Suecica*, Linnaeus listed and described the animal species according to his own classification system. It is one of the first attempts to systematically categorize and describe animals, which later led to a standardization of scientific names and classifications. The work contains

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1 Linnaeus's concluding words, placed after no. 2266.

2 We have preferred the spelling *Suecica*, as this is the one used in the work, specifically in no. 259. MOTACILLA *suecica*, *Suecis* (no. 2, etc.), Ch. *Authors*, *Zoologists*: LINNAEUS, Carol. *Animalia Sueciae*, and Ch. *Faunula Suecica*. This spelling is also mostly used in *The Linnaean Correspondence*, see, for example, Linnaeus to Johann Georg Gmelin, 4 May 1746.

3 The first 48 pages unnumbered. Pagination begins with Ch. *The different orders with their subdivisions.*

detailed descriptions of the Swedish animal species (mammals, birds, fish, insects, etc.) with information regarding appearance, behaviour, habitat, and colours, together with noteworthy medical observations and cultural-historical comments. Linnaeus here demonstrates his methodological approach to scientific research and documentation, which laid the foundation for modern scientific methods and contributed to the full development of his binomial nomenclature in his *Species plantarum* (1753), the basis for the scientific naming of plants.

As a reference point for the classification of animals, *Fauna Suecica* is important for zoology, botany, the history of science, agriculture, cultural history, medicine, ethnology, economics, housekeeping, and not least for all those interested in the 18th century and in Linnaeus himself. The work thus has an enormous scope and is of national and international importance.

In 2002, the "The Swedish Species Information Centre" (Sw. "Artdatabanken") at the Swedish University of Agriculture was commissioned by the government to implement "The Swedish Taxonomy Initiative" (Sw. "Det svenska artprojektet"). The overall aim was to find and describe all multicellular species that occur in Sweden. In practice this means completing the mapping of the country's species that Linnaeus once began. Hence *Fauna Suecica* is of great historical importance and continues to be *the* source of studies in biological diversity and taxonomy and the natural reference point. This is illustrated by the extensive Swedish work published in 2020, *Completing Linnaeus's inventory of the Swedish insect fauna: Only 5,000 species left?*[4] Therefore *Fauna Suecica* can be seen as a precursor to the "Encyclopedia of the Swedish Flora and Fauna" (Sw. "Nationalnyckeln till Sveriges flora and fauna")[5] and a natural reference point for the work at "The Swedish Species Information Centre".

Throughout his life Linnaeus collected and described animals during his excursions and journeys. In his preface he describes how Adam, the first human being, devoted himself in Paradise to describing and giving names to animals and plants. Thus Adam appears as the first zoologist

[4] Ronquist F., Forshage M., Häggqvist S., Karlsson D., Hovmöller R., Bergsten J., et. al. (2020). *Completing Linnaeus's inventory of the Swedish insect fauna: Only 5,000 species left?* PloS ONE 15(3): e0228561.

[5] *Nationalnyckeln till Sveriges flora och fauna*. I-. Artdatabanken, Sveriges lantbruksuniversitet. Uppsala 2005-.

and Linnaeus as the first Linnean. The work can now be read by people today in English, the primary scientific language in the modern world. Let us now listen to Linnaeus's own words about *Fauna Suecica* (1746) in one of his autobiographical books:

> *Fauna Suecica* was a masterpiece that did not come second to any of his previous works, and in which Linnaeus, after 16 years of collecting, presented more than 1,000 insects found in Sweden, together with their descriptions, as well as their differences according to genera, and what is even more surprising, with synonyms, on which no scholar before him had ventured. A work that no other nation has yet been able to achieve in any kingdom except Sweden. Through this, Linnaeus won the privilege that during his botanical work with the students he could with equal effort teach his disciples to know animals, birds, snakes, fish, insects and worms and thereby gave the youth a taste for examining the Creator's greatest work in minute detail.[6]

[6] *Vita Caroli Linnaei*. Carl von Linnés självbiografier, p. 139 (*our translation*). Linnaeus here writes in the third person.

THE ENGLISH TRANSLATION, LINNAEUS'S WORKING METHODS, TERMINOLOGY, NAMING OF SPECIES

General policy

We have elected to adopt a literal rather than a free translation of *Fauna Suecica*, allowing us to honour Linnaeus's style and vocabulary and thus ensure the authenticity and flavour of the text. By keeping close to the text, we have made no attempt to recast Linnaeus's telegraphic style into fluent, cursive modern English. This approach seems additionally appropriate given that the telegraphic style has been adopted almost universally in taxonomic descriptions from Linnaeus to the present day.

Mistakes or factual errors in the content have been explained in notes, where necessary and relevant to aid understanding of the text. Obvious misprints of the Latin are corrected, sometimes with an explanatory note. Occasionally, however, Linnaeus's style and expression are quite incomprehensible. In such cases we have retained, and marked with [*sic!*]. Text within square brackets [ ] has been inserted by the translators and numbers in italics (in Linnaeus's preface) within such brackets refer to the pages in the original text (1761). Parentheses in the text ( ) are Linnaeus's own, as are the question marks. We have kept his spelling of vernacular Swedish names, and the same applies to his literature references. At the end of *Fauna Suecica* (1761) there is a supplement to *Flora Suecica* (1745) of 31 plants, which has been included in our translation.

At the Linnean Society of London there are three copies of *Fauna Suecica* (1746) from Linnaeus's own library, with his own handwritten notes, and two copies of the 1761 edition with only a few corrections by Linnaeus himself. At Uppsala University Library there are two copies of

the first edition[7] and one of the second.[8] We have not taken the unpublished notes into consideration, since it is a demanding task in itself and our principal aim has been to translate the published, original work.

Introduction of modern taxonomy

To provide current species identities, and nearly always different generic assignments, we have added modern scientific binomials immediately after the Linnean names. These present day names have been informed by available databases, in particular the official Swedish database *Dyntaxa – Svensk taxonomisk databas*. This exercise has resulted in around a hundred *Nomina dubia*. Vernacular names in the English and Swedish languages are given when officially established or commonly used. Additionally, we have used the taxonomic categories of family, sometimes subfamily, and occasionally higher levels for insects and other lower animals to provide a wider taxonomic context.

Indexes construction

Besides the indexes by Linnaeus himself that are kept in their original form, we have added three indexes of our own: one of modern scientific names based on the species epithets, which are more stable than the genus names in today's ever-changing taxonomy; the other two indexes list the modern English and Swedish names, respectively. In addition, there are biographical notes comprising all persons mentioned in *Fauna Suecica*.

Species descriptions

Linnaeus has elsewhere declared his opinion on language and style. He advocated a simple and clear style, and in the introduction to his *Öland Journey* he scornfully called romantic and wordy writers "nightingales of Pliny". In a letter to his German correspondent *Johann Georg Gmelin* (1709–55)[9] he declared that he always wrote with a hasty hand; you should look at the content, not the words! These rules are taken to their extremes in the species diagnoses of *Fauna Suecica*. Later Linnaeus's telegraphic

[7] In the edition of Stockholm (1746) there are notes by "Prof. Bergman".

[8] Digitized: https://www.alvin-portal.org/alvin/view.jsf?pid=alvin-record:580293

[9] *The Linnaean Correspondence*, Linnaeus to Gmelin, 2 August 1744 (*our translation*).

style became the model for botanical and zoological scientific descriptions, still used in our time. His style usually gives much clarity to the text, but occasionally the meaning is quite difficult or even impossible to grasp. Some descriptions are long and detailed, while others are so short as to be worthless. He himself realized these limitations and once wrote a little resignedly: "This species is described in these words with great difficulty" (no. 1259). It is obvious that Linnaeus worked at a furious speed and did not have the time to check the pages once they were written. Errors and contradictions reveal at times an exhausted writer. In one description (no. 2009), he even admits that he cannot remember the details at that moment, and in other instances (for example no. 2277) he just leaves the sentence unfinished with dashes – – – perhaps aiming to complete it the following day – a task that was never completed.

Linnaeus's text reveals clearly an uneven interest in different groups of animals. Beetles, butterflies, and moths are described with great interest and accuracy, while dragonflies and lacewings are treated very superficially and without inspiration. Linnaeus's fascination with the smallest moths is especially notable. Mites also are studied carefully in great detail. Size was not decisive, in accordance with his motto "*Omnia mirari etiam tritissima*",[10] "Marvel at all things, even the most trivial".

The descriptions of species focus on external morphology, including colours, although it is well known that Linnaeus did not validate colours as key characteristics in botany. All the same more than a hundred different verbal colour expressions occur in *Fauna Suecica*.[11] Sizes are commonly given by comparisons with well-known household pests such as lice, bedbugs, and houseflies. Alternatively, they are expressed as the width of a thumb (nos. 2067 and 2043) or a finger (no. 2064), the length of an end phalanx or ones nail (no. 2068), or more seldom in the rare measurements of the 18th century, like a "span" equal to nine inches (no. 285), or a "line" which is one twelfth of an inch (no. 1893).

Behavioural and ecological facts are often given in detail according to Linnaeus's own observations or reports from colleagues or by quoting the opinions of common people. He comments on the wolf (no. 6) that it is

[10] *Philosophia botanica*, p. 297.

[11] See Ch. *Linnaeus's Colour Vocabulary*.

abundant in the forests but was rare some decades before. It is noted that the masked hunter, a true bug, walks in ambles (no. 942). The habit of the wood-borer in contracting its body and withdrawing its legs and antennae is described meticulously (no. 414). The violent copulation behaviour of the water striders is recorded (no. 970).

There are a couple of onomatopoetic expressions of the song of birds, for example the skylark singing "tirile tirile" (no. 209), the "clong" of the common raven (no. 85), the "crex crex" of the corncrake (no. 194), and the "hvit hvit" of the greater golden plover (no. 190). The cry of the willow grouse is compared to the laughter of a vulgar man (no. 203).

Linnaeus's direct and precise literary style is well-known from his travel diaries and other writings, but is recognizable also in the fuller descriptions in *Fauna Suecica*. Thus in spite of his antipathy to poetic writing there are examples of beautiful, lyrical passages like the squirrel which sails on the water on a woodchip and gives the tail to the winds (no. 37). Prior to the diagnoses he often writes a more fluent text on the habits and occurrences of the animals, and here his fascinating narrative art is evident. He provides detailed cultural history notes and vernacular, provincial species names including about thirty from his home province of Småland, some of them documented for the first time like "snömus", Eng. "snow mouse" (no. 18). He also tells us anecdotes and stories, and once specifically mentions his childhood village of Stenbrohult (no. 973). Linnaeus states when and where the sterlet sturgeon (no. 300) and the wild boar (no. 21) were introduced in Sweden by King Adolf Fredrik, and how other fish species like the common carp were kept in fishponds by the noblemen (no. 359).

Practical advice was also an important feature of his work. We are told how to expel the house cricket from the household with certain plant extracts (no. 867). Bedbugs could be killed with a toxic fungus preparation or by the introduction of wood ants (no. 909) or the predatory bug, the masked hunter, for the same purpose (no. 942). A recipe is given for a mixture with which you can treat lice-affected hens (no. 1959). The antler moth, noxious to farming, is driven away with the help of crows, pigs, and trenches (no. 1140). We are told how the Sami people make thread from bear tendons (no. 19) and reindeer cheese using the intestines of

the grayling (no. 354), and instructed how to mutilate the feet of goats to prevent them from jumping over fences (no. 44). He describes a method of catching common swifts by means of a hooked, flying cicada (no. 272).

As a physician Linnaeus also had medical issues in mind in his presentations. The use of animals for medical purposes was rare, in contrast to the plant world. There is, however, some advice in *Fauna Suecica*, for example how peasants let the wartbiter bite their warts and vomit an eradicating fluid into the warts (no. 870). In Småland the galls of the juniper gall-midge are used against whooping cough (no. 1774). The lumpfish is used in a powder against tertiary fever, i.e. *Plasmodium vivax* malaria (no. 320). The peasants of Småland argue that the bites of the horsehair worm cause paronychia; they even call this disease "Onda betet", i.e. "the Evil bite" (no. 2068).

Folk belief and traditions of common people are always an interesting subject and consequently written about by Linnaeus, for example that a certain type of beetle in the house is the harbinger of death (no. 822), or that the timberman beetle is considered to denigrate religion (no. 653). He mentions that the common raven is considered a holy animal (no. 85) and that the hooded crow is a harbinger of coming storms (no. 88). The common winkle is said to predict sunny weather when clinging to high cliffs (no. 2169). An extremely amusing story is about an addicted thrush drinking wine from a glass together with the tavern guests (no. 215). In some instances folk beliefs appear even as his own opinion. He describes how the house sparrow takes over the nest of the common house martin, which, however, befriends other house martins, and then they tightly close its entrance with mud, suffocating the house sparrow inside (no. 271).

The peasants of Småland are quoted about the ghastly death of the red-brown viper bite (no. 285). That the common cuckoo attacks aviaries and kills chicks of peafowls is stated as an actual fact (no. 96). The terrifying story of the phantasy worm *Furia* which enters the body of animals and man and torments them to a death of severe pain is related with complete seriousness (no. 2070). In contrast, the existence of the unicorn is strongly dismissed in the narwhal description (no. 48). In the case of the hoopoe he just notices that the peasants believe it to be an omen of war (no. 105).

Linnaeus's thorough knowledge of antique mythology, history, and literature is often reflected in his metaphors. In the case of the hermit crab, he compares it to the Greek philosopher *Diogenes* (d. 323 BC) dwelling in a barrel (no. 2032). A duck enjoys the species epithet *penelope* from *Homer's Odyssey* (no. 124). See also below in the paragraphs on the naming of species and on Linnaeus's personality for more examples.

In Sweden Linnaeus is commonly regarded as a botanist, and is often called the "Floral King". Undoubtedly, this was his core skill, which is reflected in his extensive use of botanical adjectives in *Fauna Suecica* like *dehiscent*, *laciniate*, *premorse*, *retuse*, or substantives like *stipe*, for example. He sees the jellyfish as a flower and therefore writes *stamens* and *pistils* for certain of its structures. In descriptions of attributes a very common word instead of *has* is *enjoys*; for example the plant enjoys its flowers.

Linnaeus's use of numbers interspersed among the words in the text is a special habit of his that we have left unchanged, reflecting our approach of adopting a close translation of the text. We have not considered his inconsistent use of cardinals and distributives, but instead followed a correct use of these.

Linnaeus's naming of species

In *Fauna Suecica* (1746) there were no species epithets given, even if Linnaeus later added some in his private copies. A number of synonyms were introduced in *Fauna Suecica* (1761) by mistake or oblivion, although they had already been described in the same book or in *Systema naturae* (1758). The epithets introduced in *Fauna Suecica* (1761) are mainly based on morphological characters such as form, size, colour, pattern, and spectacular structures.

Names based on habitat are not unusual, the most common being *riparia*, inhabiting riverbanks or shores (no. 749), and *nemorum* for those living in groves or meadows (no. 543). An example of feeding habit is evident in *viscivorus* reflecting the consumption of mistletoe berries (no. 216). Adjectives expressing behaviour occur in a number of cases like *velox* for a fast groundbeetle (no. 803) or *agilis* for a rapid lizard (no. 284), *timidus* for the timid mountain hare (no. 25), *volans* for the flying squirrel (no. 38), and *noctiluca* for the glow-worm (no. 699) shining in the night.

He interprets markings on organisms as Greek letters such as *tau* (no. 1100), *chi* (no. 1180), *psi* (no. 1181), *gamma* (no. 1171). Also *c-album* (no. 1059) and *c-nigrum* (no. 1193) are to be found in the text. Even question-marks, *interrogationis*, are identified in a beetle (no. 1172) and in a moth (no. 1172), and a pattern *ziczac* (no. 1116). A moth with two circles on its wings is inventively and humorously named by the picture-like epithet *oo* (no. 1139).

The section on parasitic wasps, *Ichneumon* in Linnaeus's taxonomy, is suddenly dominated by substantives derived from verbs, with the suffix *-or*, all expressing activities like *comitator* (no. 1600), *incubitor* (no. 1602), *desertor* (no. 1605), *manifestator* (no. 1608), *moderator* (no. 1617), *mandator* (no. 1620), *jaculator* (no. 1626), and several others.

In a few cases he names a species after the discoverer, like *kalmi* (no. 948), *rolandri* (no. 957), or *celsia* (no. 1141). Another principle is applied among the leafroller moths, where the species epithets exclusively honour Linnaeus's friends, colleagues, disciples or students as *Alströmer*, *Bergman*, *Brander*, *Haartmann*, *Hast*, *Holm*, *Leche*, *Modéer*, *Uddman*, and *Wahlbom* – and disciples as *Forsskål*, *Löfling*, *Rolander*, and *Solander* (nos. 1318–1320, 1322–1329, 1331–1332, 1335–1336, 1338–1339).

Folklore may also occur as epithets, such as *mortisagus* (no. 822). Naming from classical mythology and literature is especially common in the butterflies, where you find for example *io* (no. 1048), *apollo* (no. 1032), *mnemosyne* (no. 1033), *penelope* (no. 124), *machaon* (no. 1031), *hyale* (no. 1040), and several others.

Morphological terms

Linnaeus's use of anatomical terms in *Fauna Suecica* reveals considerable inconsistency. To make the text intelligible we have attempted to translate these items into serviceable, modern terminology; but if that has proved impossible we have accepted his choice of words. Frequent problems have involved the legs where he varies and mixes the terms *pedes* for both legs and feet, also called *tarsi*, *digiti*, *plantae*, and *palmae* for hindfeet and forefeet respectively, but sometimes he does quite the opposite; even adopting *artus* for joints or legs. Mouth parts are referred to as *rostrum*, *mandibula* or *maxilla* in an inconsistent way, mostly translated by us as

beak or jaw. *Clypeus* (literally "round shield") and *scutum* (literally "oblong shield") are used variably as terms for either the head sclerite above the mouth or the pronotum of the thorax. At times he helps the reader by writing *clypeus capitis*. The digging shovel of the front leg of certain insects has also been termed a *clypeus*. *Incisura* may mean incisure, notch, segment or even a narrow transversal fascia. All localization words like upper, lower, outer, inner, etc., depend on the angle of Linnaeus's observation of the specimens.

When studying butterflies and moths Linnaeus never saw them prepared with outspread wings; thus the lateral edge in our view is often the posterior in his, and the posterior is called the medial. Microlepidoptera were always viewed from the side; thus the anterior edge of the wing becomes the inferior one in his description. *Aculeus* in Linnaeus's sense is mostly not a sting, but he commonly uses it for any sharp projection of an insect body. We follow his terminology here although it may be an ovipositor or just a spine or horn, for which he also uses the words *spina* or *cornu*. *Faux* is used for pharynx as well as for the front of the neck. *Abdomen* may refer to the body part or simply to the venter.

Investigation methods

Close up study by Linnaeus of birds, reptiles, amphibians, and lower animals were executed by the naked eye or through a lens; he obviously did not use a microscope. The light conditions in his study were probably not very good with candles or oil lamps in late evenings, which naturally influenced his interpretation of colours. There are many examples of misinterpreted colours in *Fauna Suecica*. Sometimes Linnaeus notes that the examination is made in daylight, thereby confirming the conditions in other cases. In one case he comments: "I have not examined it sufficiently" (no. 74). In another case he suggests that further examination should be done by others (no. 227). It is often clear that the descriptions were made from a single specimen, with Linnaeus writing "this specimen" or "my specimen". Some species are described only through reports from colleagues or friends or from general knowledge, in such cases sometimes with the remark: "I have not seen it" or "Occurs in the ocean along with many others which I have not been able to examine, since I live far away

from the sea" (no. 2255). He even expresses the more certain statement: "N.B. I have seen it myself" (no. 201). Birds that had been shot were scrutinized in his hand, feather by feather. In some cases Linnaeus noted the great difficulties he had in characterizing an animal, for example with the comment: "Therefore, I do not know whether it is a scale, an aphid or a leafhopper" (no. 1026).

The selection of species

One might expect that all Swedish species from *Systema naturae* (1758) are included in *Fauna Suecica* (1761), but this is not the case. Linnaeus forgot a lot of them thanks to his furious working speed. For example there are 84 C*imex* species in *Systema naturae* (1758), but only 64 in *Fauna Suecica* (1761). Nor did he incorporate all species described in his different Swedish journey diaries. The section on mammals starts with Man, *Homo sapiens*, where Linnaeus also describes the four "types" of man that he can discern in Sweden: Swedes, Goths, Finns, and Lapps (no. 1), followed by the larger animals commonly known to occur in Sweden. His own collections formed the basis of his species selection, and these were completed with reports and material from colleagues, friends, and his own disciples.

In the Swedish fauna Linnaeus includes animals kept on the estates of noblemen, for example the common peafowl (no. 197), wild turkey (no. 198), and muscovy duck (no. 118), and also fish kept in ponds like the common carp (no. 359). Sometimes foreign material was mixed into his Swedish collection and incorrectly included in the Swedish fauna. Linnaeus himself was sometimes confused and wrote the following worried comment in one species description: "Has it been sent from there to us?" (no. 2170). In another case expressing doubt he adds the words: "if I am not mistaken" (no. 329). Among the fishes especially you find species only occurring in the Mediterranean or the Atlantic from Biscay to Mauritania such as the lettered perch (no. 333) or with only tropical or subtropical distribution like the common sawfish (no. 297), likewise a sea urchin occurring from the Red Sea through the Indian ocean and the East Indies to the western Pacific (no. 2117). These records may be from the ichthyologist *Peter Artedi* (1705–35) who worked in the Netherlands close to the seafarers, or from Linnaeus's round the world sailing disci-

ples *Anders Sparrman* (1748–1820) and *Daniel Solander* (1733–82), or *Peter Forsskål* (1732–63) in Arabia, or his disciples visiting southeast Asia, *Carl Fredrik Adler* (1720–61), *Carl Peter Thunberg* (1743–1828), and *Christoffer Tärnström* (1711–46).

Linnaeus's concept of what Sweden encompasses is inexact. He deliberately includes the oceans in the Swedish fauna region, such as the Norwegian Sea and the Atlantic. His marine, geographical nomenclature is unclear and contradictory, so his sea names cannot be translated into modern geographical entities. Instead we have translated Linnaeus directly. Although Finland was a part of Sweden in the 18th century he seldom mentions any occurrences in Finland, in spite of his own journey through Finland on his way home from Swedish Lapland and in spite of his several disciples from Finland. The few exceptions from this exclusion are partly species with an eastern distribution such as the flying squirrel (no. 38), the Russian desman (no. 28), the European mink (no. 13) and the Eurasian golden oriole (no. 95), and in part some observations of his own such as the butterflies clouded apollo (no. 1033), the moorland clouded yellow (no. 1041), and the red-legged shieldbug (no. 922). Conversely, he included northern Norway in the Swedish region, which he visited by himself during the Lapland journey, and all the Norwegian coast up to arctic Svalbard, where his disciple *Anton Rolandsson Martin* (1729–85) did extensive marine research and sent home collections to Uppsala.

In the section *Zoophyta* (nos. 2220–2266), comprising organisms that were thought to be intermediate between animals and plants, some plants, the coralline algae (nos. 2234–2238), were wrongly included. Furthermore, the last species in *Fauna Suecica* is another plant, the spherical, rolling alga *Volvox* (no. 2266), an understandable mistake.

At the end of the book Linnaeus shows integrity and attaches a chapter on animals once collected, but then not found by him for further examination, and are thus only superficially described and without complete taxonomy (nos. 2267–2328).

Linnaeus's personality as revealed in Fauna Suecica

Six years of translation work has brought us into close contact with Carl Linnaeus, his character, moods, energy, and working conditions. You can

follow him in his inspiration, haste, and fatigue in the different sections of *Fauna Suecica*. The breadth of his interests and knowledge is impressive as well as his outstanding quality of observation. There is no doubt that he was "a workaholic".

In his own preface to *Fauna Suecica* (1761), Linnaeus explains the foundations of his inspiration and interest in the natural world, as well as his feelings in his all-engrossing work, by referring to ancient and medieval authors and philosophers. By quoting *Francis Bacon* (1561–1626) Linnaeus declares that the basis for his work is the religious conviction that it is man's duty to investigate all things of God's creation and impose their names. This is further accentuated by the bishop *Isidore of Seville* (ca. 560–636), who states that if you do not know the name, the knowledge of the things is lost.[12]

Linnaeus agrees with the natural philosopher *Pliny the Elder* (23/24–79) that the nature of things is most perfect in the little thing. Linnaeus stresses that already the poet *Virgil* (70 BC–19 BC) and the philosopher *Seneca the Younger* (4 BC–65 AD) had suggested that it would perhaps be possible for later descendants to investigate nature with brighter shining torches.

Linnaeus admits that his love for the study of zoology was moderate in the beginning, but describes how it had gradually captivated him so that there was finally nothing that he loved more. After quoting the Roman poet *Ovid's* (43 BC–18 AD) damning words: "In what kind of meaningless study are you engaging yourself?", he adds his own experiences of having been dissuaded, scorned and laughed at for his studies of such worthless things. Then Linnaeus quotes the English naturalist and priest *John Ray* (1627–1705), who pointed out that God has given us eyes with which to see all things of the creation, and a mind to be able to contemplate them. It is therefore an insult to God to argue that they are superfluous and useless. At the end of his preface, Linnaeus describes with what great labour he examined the thousands of specimens in this work and with no less diligence described them in their diagnoses, the foundation of the art of taxonomy.

[12] See Linnaeus's *Preface*, note p. 42.

Linnaeus clearly had a high opinion of his own worth, and when talking about himself he often used the majestic plural "we". In one of his autobiographical books,[13] he expressed enormous pride in his *Fauna Suecica* (1746), stressing that no other country in the world had been able to produce such a work. He considered himself the greatest ever natural history scientist. His Dutch correspondent *Johan Frederik Gronovius* (1686–1762) called *Fauna Suecica* "a divine book",[14] superior to all his expectations. But other and later readers saw the frequent errors and confusions. *Samuel Ödmann* (1750–1829), who was a zoologist and botanist, and furthermore Linnaeus's disciple, called *Fauna Suecica* a torso, magnificent in its construction, but nevertheless unfinished, a sketch of genius. He argued in a letter, on 10 December 1786, to the Royal Swedish Academy of Sciences[15] that *Fauna Suecica* should be withdrawn and rewritten. Both *Gronovius* and *Ödmann* are right.

[13] See our *Introduction*.

[14] *The Linnaean Correspondence*, Gronovius to Linnaeus, 6 July 1746.

[15] *The Royal Swedish Academy of Sciences* is an independent, non-governmental organization founded in 1739 by among others Linnaeus.

LINNAEUS'S COLOUR VOCABULARY

Linnaeus reveals himself as a true master of observation in zoology. He is very detailed in his descriptions, but he is not always so meticulous and clear when it comes to the use of colours. Patrick Baty makes the point that no common universal terminology existed in the 18th century and that Linnaeus uses "a restricted colour nomenclature comprising 38 colour terms for plants and an even more limited one for minerals".[16] He considers it clear that Linnaeus did not trust colours very much. However, in *Philosophia botanica* (1751) Linnaeus states his own opinion on the colour question: "The colour plays you marvellous tricks in the same species; hence the difference is worth nothing. The variability of colour is particularly striking in domestic animals. There is nothing more variable in flowers than the colour; especially red and blue flowers most easily and very often change into white."[17] Linnaeus's dismissal of colour characters as a species determinant may be true, but he does not dismiss colour descriptions. His *Fauna Suecica* is a resounding proof of that; his subtlety in the use of colours here is impressive indeed. Like an artist fond of colour words he turns the reality into formulas that allow him to describe the colours of animals. It is therefore essential to do justice to the 18th century scientific text by ensuring that the meaning of a word is not lost but can be imagined by the modern reader.

It is not always easy to visualize Linnaeus's colours. They are also a problematic area because their interpretation often varies depending on whom you ask. His colours also change according to whether he saw them in daylight or by the glow of a tallow or wax candle as well as the angle from which he viewed them. In no. 414 (*Hadrobregmus pertinax*), he enlightens us as follows: "The abdomen is black, although it certainly appears entirely white in daylight." In no. 678 (*Stenurella melanura*): "Venter

[16] Baty, *Nature's Palette: A Colour Reference System from the Natural World*, p. 178.

[17] *Philosophia botanica*, p. 229, no. 266 (*our translation*).

and the whole lower surface area are indeed black, but are nevertheless distinctly white in daylight if examined from the anterior." In no. 1722 (*Formica fusca*), he states: "Body dusky ash-grey, clothed with most minute, ash-greyish hairs, so when observed in daylight it most certainly appears to be black, otherwise ash-grey." In no. 1095, Linnaeus states that the wings of the yellow-legged clearwing have a whitish yellow macula, but in fact it is red. In no. 1565 (*Pamphilius betulae*), Linnaeus's choice of colour is probably an example of this effect of his light source, since the legs of this animal are definitely not red, as Linnaeus states, but yellow. In no. 1802, there is a prime example of the question in what light Linnaeus saw his insects or in what condition they were. He states that the face of the pine hoverfly is whitish light yellow. But this hoverfly is black and red or orange red! The designation "whitish light yellow" really raises the question of lighting; in this case, it cannot have been daylight. Probably Linnaeus had been sitting in the dim light of his study with an old faded specimen. It can thus be assumed that he often observed many of his animals only in the glow of a candle, and this affected his vision. We can compare this with the golden-tailed hoverfly in no. 1804: "Thorax not distinctly tomentose, shining with whitish yellow or fuscous depending on the various angles." In no. 1063, Linnaeus discusses the glanville fritillary and says, probably also in this case owing to weak artificial light, that all wings are deep yellow, which they really are not.

Linnaeus's colour scale is truly most extensive; often one colour changes into another, for example, *ruber ad caeruleum* ("red tending to blue") and *pallide-flavescenti-cinereus* ("pale whitish yellow tending to ash-grey"). The combination *obscure flavus* ("dark light yellow") is in fact an astonishing colour quality and also very illustrative of Linnaeus's colours. Together with all the compound adjectives, *prasinus* ("leek-green"), *viridi-aeneus* ("bronze green"), and modifying words *dilute viridis* ("watery green"), *laete green* ("bright green"), *parum viridis* ("slightly green"), reinforcing adverbs as *valde viridis* ("strongly green") or the comparative forms *obscurior* ("rather dark") or superlatives *flavissimus* ("conspicuously light yellow") Linnaeus uses some two hundred or more colours.

Linnaeus also rejoices in several hues of a certain colour sometimes in the same sentence. "Whiteness" is rendered by multiple words: *albedo*

argentea ("silvery whiteness"), *albescens* ("growing white", "becoming white", "whitening"), *albicans* ("verging on white", "whitish"), *albidus*, *albulus*, *exalbidus* ("whitish"), *albissima* ("starkly white"), *albus* ("white"), *candidus* ("shining white", "bright white"), *margaritaceus* ("pearl white"), *niveus* ("snow-white"), *obscure albicans* ("becoming dark white"), and *pallido-albus* ("pale white"). Yet Linnaeus may use, for example, *albescens* and *albidus*, in the same description, which shows that he sometimes only considers them to be variations of one and the same word rather than distinct colour differences. His brown colours also vary: *brunneus* ("dark brown"), *castaneus* ("chestnut-coloured"), *ferrugineus* ("rusty brown"), *fuscus* ("fuscous"), *luridus* ("dirt brown"), *prannius* ("the colour of smoky quartz", i.e. a strongly dark brown to opaque black"), and *spadiceus* ("bright brown"). Rewriting the Latin has not always been possible due to the special nuances of certain words. For example *fuscus* (meaning "brown", "dusky", "swarthy", "brownish-grey") and *orichalceus* (describing a shiny colour between that of gold and brass) are relatively rare. However, because they are commonly found in natural history texts, their English equivalents have been retained to enrich the reader's understanding and enhance the reading experience. Translating or describing all these specific colours, along with their various combinations, hues and shades – complemented by one or two defining adverbs – to achieve a balance between a literal rendition and an understanding accessible to modern readers is a demanding task. This challenge is illustrated by the Latin word *canus* which can be translated as "grey-white" and also conveys meanings of "old" and "hairy"; often, all three connotations are present simultaneously.

The Latin prefix *sub*, which is common in biological and zoological texts, has been translated with "almost", "rather", "slightly", "somewhat", or "weakly", for example, *subcaerulescens* ("weakly bluish").

Verbs ending with *-esco*, for example, *pallescens*, meaning "becoming pale", "fading", "palish" are all present participles and most frequent. In the majority of cases they function as pure adjectives, for example, *fuscescens* meaning "darkish".

Below there is a glossary of the colours and their translations used in *Fauna Suecica* to illustrate Linnaeus's colour vocabulary and to facilitate the reading of the text. The glossary is compiled from P. Baty, *Nature's*

Palette: *A Colour Reference System from the Natural World* (2021), Ch. T. Lewis & Ch. Short, *A Latin Dictionary* (1969), *Oxford English Dictionary. The Historical English Dictionary* (on line ed.), A. J. Rhetzius, *Inledning till Djur-Riket, efter Herr Archiatern och Riddaren Carl von Linnés Lärogrunder* (1772) ["Introduction to the Animal Kingdom, according to the Royal Physician and Knight Carl Linnaeus's Educational Foundations"], W. T. Stearn, *Botanical Latin: History, Grammar, Syntax, Terminology and Vocabulary* (1998), and E. Wikén, *Latin för botanister och zoologer* ["Latin for botanists and zoologists"] (1951).

accipitrinus, hawk-coloured
aeneus, bronze
albens, whitening, whitish
albescens, growing or becoming white, whitening
albicans, verging on white, whitish
albicus, white
albidus, whitish
albo-cinereus, whitish ash-grey
albulus, whitish
albus, white, clear
argenteus, silvery
ater, jet-black
atro-viridis, black-green
aurantius, orange
auratus, gold-coloured
aureus, golden
azureus, azureous

brunneus, dark brown

caeneus, of a muddy or filthy colour
caerulescens, becoming blue, bluish
caeruleus, blue
caesius, lavender blue
candidus, shining white, bright white

canescens, greyish white
canus, grey-white
carneus, light red
castaneus, chestnut-coloured
cereus, wax-coloured
cervinus, of a cervine colour
chloriticus, black-green
cinerascens, becoming ash-grey, ash-greyish
cinereo-albus, whitish ash-grey
cinereo-cerulescens, bluish ash-grey
cinereo-nigricans, blackish ash-grey
cinereus, ash-grey
cinnamoneus, cinnamon-coloured
coccineus, scarlet
concolor, concolorous, of the same colour
corneus, horn-coloured
croceus, saffron yellow
cupreus, copper, copper-coloured
cyaneus, cyaneous

dealbatus, bleached
deauratus, gilded, covered with gold
discolor, drab

eburneus, ivory-white
exalbescens, becoming white, whitening, whitish
exalbidus, whitish
exoletus, faded
exustus, of a burnt colour

ferrugineus, rusty brown
flammeus, flame-coloured
flavens, yellowing
flavescens, whitish yellow
flavicans, yellowing, yellowish

flavo-nigricans, blackish whitish yellow
flavus, light yellow
fuliginosus, sooty
fulvescens, becoming red-yellow, red-yellowish
fulvo-nigricans, blackish red-yellowish
fulvus, red-yellow
fuscatus, darkened
fuscens, becoming dusky, dark swarthy
fuscescens, darkening, darkish
fuscus, fuscous (see above)

glaucescens, weakly greyish blue
glaucus, greyish blue
grisescens, becoming grey, greyish
griseus, grey

helvolus, honey-yellow
hepaticus, liver-coloured
horneus color, horn-coloured
hyalinus, hyaline, colourless, transparent

igneus, of a fiery colour, fiery
ignitus, of a fiery colour, fiery
inauratus, gilded, covered with gold
incanus, quite grey-white; hoary with white pubescence
incarnatus, flesh-coloured, pink

lignei color, the colour of wood
livens, lividus, dark bluish grey
lucens, shining
lucidus, clear, bright, shining
luridus, dirt brown
lutescens, inclining to deep yellow, deep yellowish
luteus, deep yellow

margaritaceus, pearl white
miniaceus, of a red lead colour
murinus, mouse-grey

nebulosus, cloudy
niger, black
nigrescens, blackening, blackish
nigricans, blackening, blackish
nitens, shining
nitidus, shining, bright
niveus, snow-white

obscurus, dark
obsoletus, faded, colourless
ochraceus, ochre-coloured
olivaceus, olive-coloured
opacus, opaque, shaded
opalescens, opalescent, i.e. showing varying colours like that of opal
opalinus, of an opaline colour
opalus, opal-coloured
orichalceus, orichalceous (see above)

pallens, blanched, pale
pallescens, becoming pale, fading, palish
pallidus, pale
pellucidus, pellucid
piceus, pitch black
plumbeus, lead-grey, lead-coloured
prannius, the colour of smoky quartz
prasinus, leek-green
pullus, dusky
purpurascens, becoming purple, purplish
purpureus, purple

rubens, red, reddening
ruber, red
rubescens, becoming red, reddening
rubicundus, reddish
rubiginosus, rust-coloured
rufescens, becoming red-brown, red-brownish
rufus (ruffus), red-brown or brown-red
rutilus, yellowish red

sanguineus, blood-coloured
sanguinolentus, blood-red
sordescens, becoming sordid
sordidus, sordid, dirty
spadiceus, bright brown
sulphureus, sulphur-coloured

testaceus, brick-red
tristis, dull-coloured

unicolor, unicoloured
ustulatus, of a quasi-scorched colour

vinaceus color, the colour of red wine, wine-coloured
violaceus, violet
violus, violet
virens, green
virescens, becoming green, greenish
viridi-ignitus, fiery green
viridis, green
vitrei color, the colour of glass, glass-coloured



THE SWEDISH FAUNA

BY

CARL LINNAEUS

Knight of the Order of the Polar Star,
Archiater to the King, and Professor of Medicine and Botany in Uppsala, etc.

COVERING THE

ANIMALS of the KINGDOM of SWEDEN:
MAMMALS, BIRDS, AMPHIBIANS, FISH, INSECTS, WORMS

DISTRIBUTED THROUGH

CLASSES and ORDERS,
GENERA and SPECIES

WITH

DIFFERENCES OF SPECIES,
SYNONYMS BY OTHER AUTHORS
NAMES OF THE INHABITANTS,
HABITATS,
DESCRIPTIONS OF INSECTS

SECOND EDITION, ENLARGED

With the privilege of His Royal Majesty of Sweden and
His Royal Majesty of Poland and Prince-Elector of Saxonia



STOCKHOLM

At Director LARS SALVIUS'S expense and in his printing house

1761

What is missing in this work, age will supply;
One should indeed not postpone the first attempt for apprenticeship until old age;
Because fear grows every day,
And what we shall venture grows all the time,
And while we are deliberating, when we should begin,
It will be too late to begin.
Hence the fresh and still sweet fruits of our studies should be brought forth,
While there is still indulgence,
And hope,
And one can be sure of a kind reception,
And to dare is not unbecoming.

Quintilian[18]

[18] *Institutio Oratoria*, 12. 6. 1. 3 (*our translation*).

TO HIS ROYAL MAJESTY'S
MOST FAITHFUL, ILLUSTRIOUS, AND EXCELLENT MEN

BARON

ANDERS VON HÖPKEN

Privy Councillor to the King and the Kingdom of Sweden,
Chancellor of Uppsala University,
Knight and Commander of the Royal Order of the Polar Star,

AND

BARON

NILS PALMSTIERNA

Privy Councillor to the King and the Kingdom of Sweden,
Knight and Commander of the Royal Order of the Polar Star,

AND

COUNT

CLAES EKEBLAD

Privy Councillor to the King and the Kingdom of Sweden,
President of the Royal Chancery,
Knight and Commander of the Royal Order of the Polar Star,

To YOU, Most Excellent Men, I humbly offer this Fauna, like the previous one, but enlarged with a thousand animals.

Uppsala 1761,
on 28 July

C. LINNAEUS

PREFACE

Among all the Earthly Miracles, which can never be praised enough, nothing is more illustrious than MAN in all respects, nothing more powerful.

The entire KINGDOM OF STONES consists of objects, the particles of which have either been condensed or separated at random, and on which the unwrought mass nature has not arranged in a more complex way.

The smallest PLANT seed, when embedded into a lump of the Kingdom of Stones, moulds those more rudimentary entities that have been shaped by the seed, in such a way that they become more complex. Plants, therefore, are more complex than stones.

An egg of a particular ANIMALCULE, which has accidentally been hatched on plants, breaks them down, assimilates them, and reorganizes them with even greater complexity, in such a way that the raw particles of the earth of the Stone Kingdom must first be shaped within the Kingdom of Plants before they achieve greater complexity in the Kingdom of Animals. Animals are therefore more advanced than plants.

But if you compare the Animals among themselves, you will always find different degrees of perfection within them. I will compare the following ones: *Worms*, *Insects*, *Fish*, *Amphibians*, *Birds*, and *Quadrupeds*. To explain briefly: the *Spider* has eight legs and as many eyes, while the *Hen* has only two legs and two eyes. Nevertheless, the hen must be considered to be more highly developed than the spider, since the hen with fewer tools can achieve many things that the spider with greater equipment can hardly match. Likewise, an insect such as the *Butterfly* can in no way be placed in the same group as a Worm like the *Leech*, and a Fish like the *Salmon* cannot be compared with the Butterfly, nor a Bird like the *Eagle* with the Salmon, and finally, the *Ox* or *Lion* cannot exceed the Eagle, just as the Quadrupeds can be much more perfect than all the other animals. But there is really no reason for so many of us to proclaim this point, since it is evidently a fact.

No one will rightly blame me for daring to place *Man* among the Quadrupeds. Man is unquestionably neither a Stone nor a Plant, but an Animal, because in that way he lives and moves. And neither is he a *Worm*, because then he would have had no head and no brain. Nor is he an *Insect* for then he would have had Antennae. Nor is he a *Fish*, because he lacks Fins. He is furthermore not a *Bird*, since he has no Feathers. No, he is a *Quadruped*; he has a mouth that is constructed in the same way as that of all other quadrupeds. Lastly, he has four legs; although he walks on two of these, he has two hanging down in front. Certainly, in all honesty, no Natural Historian has ever been able to dig up a feature according to scientific principles, by which Man can be distinguished from an Ape. For somewhere in the world there are Apes that have less hair than Man, walking like Man on two legs, with an upright body, and using legs and hands like the human species so that many more ignorant travellers have advocated the opinion that these beings are really some kind of a Human Being. It is speech that seems to distinguish Man from other animals, yet at the same time this is a kind of capacity or at least a result and not a characteristic that comes from number, form, proportion or place so that it is very difficult to investigate the matter itself and to reveal the specific difference of man. But there is something in us that we cannot see, in this lies the very knowledge of ourselves, *[3]* namely the very prominent *Reason*, through which Man greatly surpasses all animals.

Therefore, nobody will easily deny that Man is an Animal and that this animal belongs to the principal Class and Order because he is far more perfect than other animals for even if Man is equipped neither with fierce Teeth nor fearsome Horns nor curved Claws nor poisonous Spurs, etc., he can still bring down and kill very ferocious Lions, venomous Snakes, voracious Crocodiles, large Elephants, huge whales, swift Squirrels, indeed even all *Birds* flying in the sky and all the *Fish* that the depths of the sea contain, so that none of these animals that have a living body can resist humans effectively. Man appeared in the world entirely naked and unarmed, whereas the foreseeing Creator has given other Animals either Fur or Feathers or scales or a hard protective case or shells or spines. He has given *Wings* to some so that they can fly up in the air, others *Fins* so that they can swim in the depths, and yet others many *Legs* so they can

run rather fast. Man, however, is naked and lacks all these aids, and he walks on only two legs, on which the other Quadrupeds can barely – and only barely – walk. But God has adorned Man, before all other Living Creatures, with a unique feature, namely Reason. If Man, this Animal, wisely uses this characteristic, he can perform many great works that no other Animal can. Furthermore, he does not hesitate to hold an opinion about his own Author and Creator. This feature cannot be observed, but it is divine and derived from God alone. Therefore, Man is the foremost of all earthly inhabitants that God has brought forth, that is, certainly the most excellent of all animals. Thus, the most Benevolent Author of this Nature has wanted Man to rule with singular and true paternal governance and to take care of everything in the best possible way.

Since he is the wisest of them all, God has given this most beautiful Animal to be King and Lord of the world and prepared a most splendid place for him with his own hand, namely Paradise or the Garden of Eden, which was a remarkable place because of an enormous abundance of all that was needed. Here were all the Animals and all the Plants – and thus a large variety and a great joy. Behold – the first, and in truth the very foremost *Botanical Garden*, was a Shelter for the first Man, now complete and truly happy. It should be noted here that the very first tasks of the Human, the first pleasures, were the *Animals* and *Plants!*

The first activities in Paradise in which Man indulged involved, in short, two concise areas of science: an Investigation of all things that had been created and the Application of their respective name.* In order that Man should retain the names he himself had given to them, it was neces-

* Verulam. *Aug. Scient.* 25.
In his note Linnaeus refers to Francis Bacon, Baron Verulam, *De augmentis scientiarum* (1623), which is a Latinized version of O*n the Advancement of Learning* (1605). See *The tvvoo bookes of Francis Bacon, of the proficience and aduancement of learning, diuine and humane. To the King* (1605). 1. 6: 6: "After the creation was finished, it is set down unto us that man was placed in the garden to work therein; which work, so appointed to him, could be no other than work of Contemplation; that is, when the end of work is but for exercise and experiment, not for necessity; for there being then no reluctation of the creature, nor sweat of the brow, man's employment must of consequence have been matter of delight in the experiment, and not matter of labour for the use. Again, the first acts which man performed in Paradise consisted of the two summary parts of knowledge; the view of creatures, and the imposition of names. As for the knowledge which induced the fall, it was, as was touched before, not the natural knowledge of creatures, but the moral knowledge of good and evil; wherein the supposition was, that God's commandments or prohibitions were not the originals of good and evil, but that they had other beginnings, which man aspired to know; to the end to make a total defection from God and to depend wholly upon himself."

sary to have distinct descriptions or marks by which the species could be distinguished. In order to achieve this, a careful examination of the individual animals was necessary; hence there was a need to study Zoology. Undoubtedly, according to the Holy Scripture and common experience, Man was given power over other animals, because nature seemed to have produced everything else for the sake of Humans.** Man should make the animals for the most part his tools and use them. This did not happen because of an innate idea,[19] but experience alone made it happen. Experiments could hardly be conveyed to others *[4]* except by names, and names not without characters. Even the Master himself, who had imposed the names, though they were His own and it was He who had given them, had failed to correctly understand them without description and specific difference. For the first step of wisdom is, and was, to get to know the very things. If the names had been lost, the knowledge of the things would also have been lost.[20] Therefore, the task of the first man, in the very happy state, when he imposed names, was the study of Zoology; hence this study is extremely innate.

When Animals and Plants began to spread far and wide across the globe, and the First Created Humans could not have everything within the small Garden, the human race always lacked something that they had had initially during their rule. These times asked for another life and other customs. Now also the marvellous opportunity had been lost to cultivate the knowledge of Nature and to compare to each other the species of the genera existing in the animal kingdom. In order to achieve the necessary things to sustain life, every stone and every lump of earth had to be turned over and the mortals had to be satisfied with little Knowledge. Since the conditions of the new things were so bad, it was no wonder that all did not deteriorate step by step, but immediately collapsed.

Since then human beings began to learn more by experience, and so they became wiser. Those who were distressed because of their small piece of land put all their effort into cultivating their fields every year. To

** Plin. *hist. mund.* VII:1. In his note Linnaeus refers to Pliny the Elder, *Naturalis historia*, 7. 1 (On Man).

19 Cf. Aristotle.

20 Cf. Isidore of Seville, *Etymologiae*, 1. 7. 1: *Nisi enim nomen scieris, cognitio rerum perit* ("If you do not know the name, the knowledge of the things is lost"), published ca. 625.

support themselves and their families they could hardly do anything else. But the few people who could live a life without these worries devoted themselves, with the greatest effort, to shed, as best they could, new light on this illustrious study which, together with the very happy life in Paradise, both began to cease and had almost ceased.

When it comes to distinguishing *Stones* and different kinds of soil types, the diligence of Man has made greater progress without encountering obstacles. We encounter these things every day wherever we stay. Over the centuries, our knowledge of *Plants* has increased in a remarkable way, because the Plants do not disperse from our view, but mostly rather live in the same area, especially since that time when more work was put into laying out Botanical Gardens or smaller Paradises, where plants can be compared with each other.

Why is it now so important to devote oneself to Zoology, the science, in which we have made so little progress since Adam's days? The *Quadrupeds* hide namely in the Woods, the *Birds* fly away, the *Fish* seek the depths, the *Amphibians* look for hiding places. Finally, the *Insects* try to get away from our eyes by running, jumping, flying, and to say it plainly, every Animal flees in order not to be viewed by Man and they are not like Stones and Plants that are stuck at permanent places. This has long been the main reason, and it still is, why the noblest of the scientific accomplishments, which is most consistent with nature, and full of innocent joy, have until now lied fallow and remained unworked and in disorder so that in this field we are as Ignorant as we are knowledgeable in other sciences. If you ask people, what benefit they have had from Stones or Plants, everyone answers that they have had sufficient use of them. If, however, you ask what use they have had of an Insect, it will be as if silence had been imposed. With compressed mouth *[5]* everyone is silent. If they answer something at all about the marvellous works of the Almighty, they will not be afraid to retort that they have had no use of them whatsoever. But then people interested in curiosities began to keep Animals in their Museums which functioned as Repositories for live animals (which does not happen without high costs, if the animals are to be kept alive). I hope that there will be a time when this, the most noble part of Natural History, at last reaches its long-sought peak! Hence perhaps it may be pos-

sible for late Descendants[21] to investigate these winding courses of Nature with brighter shining torches as if in broad daylight. This is a field that is now surrounded with much darkness and in which we search the way by softly touching it.

The love I felt for this study, in the beginning, thirty years ago, was moderate and not particularly ardent, has gradually captivated me so much so that there is nothing that I love more. But yet I have often thought of the Poet's famous words:

> "In what kind of meaningless study are you engaging yourself?"[22]

And my friends have likewise dissuaded me. In addition, my enemies have scorned me and my science and laughed at it, and that not without haughtiness and mockery. But as it seemed to them, this science was also not without wit so they continually forced their opinions on me: "Let him take care of mosses and flies for whom there is nothing else to do." But all of this was by no means sufficient when it came to putting obstacles in the way of my ardent interest in this study. On the contrary I was daily stimulated in this study by the Learned Ray's[23] statements:

> That it is GOD's works in consideration of which I practice myself.
>
> That what has been created by Divine art and power, we should investigate; to this I devote hour after hour.
>
> That HE has brought me into this world, which is arranged and decorated with such an inexplicable variation of things.
>
> That HE has given me eyes with which to see all these things and a mind to be able to contemplate them.

---

[21] Lat. *seris nepotibus*, see Virgil, *Georgica*, 2. 58, and Seneca, *Epistulae morales ad Lucilium*, 86. 15.

[22] Ovid, *Tristia*, 4. 10. 21.

[23] John Ray was not ordained but as was customary he was allowed to preach for his university. See *The wisdom of God manifested in the works of the creation being the substance of some common places delivered in the chappel of Trinity-College, in Cambridge* (London 1691). Linnaeus has probably used the edition of 1743. See pp. 171 sqq.

It is therefore an insult to God to claim that these things, which you do not dare to deny that He has created, are superfluous and useless.

The common belief of the Theologians is that our sublunar world and everything in it, has been created for the sake of Humans. Therefore, this also applies to the Insects.

What can be of greater use to Man than to bear this in mind and to observe and marvel at the traces of the divine art of creation when it comes to designing insects.

Thus if you refer everything to the body and claim that everything is created to feed, cover, decorate or cure it, then these genera have their own use in these functions too, so it would be easy to demonstrate everything through a systematic review.

If you assert that those studies, in which we seek to know the whole man, as he lives today, are more important and more necessary, you should know that I invigorate myself and rejoice through these studies and investigations. The joy that others have in Hunts, Tales, Dice, Poems, Games, Drinking, I have in exploring, raising and observing Animalcules.

The things in which you find your joy, invigorate and stimulate the soul, although they are laborious.

We should not, therefore, study divine works too inquisitively in human terms, but rather, guided by His works, should admire the craftsman.

The large specimens have been easier to work with because the material is easy to handle in the workshop. As for the Insects, which are so small and so insignificant, what a plan is there then not behind it, what force, to what inextricable perfection are they not created? We marvel at the Elephants' shoulders carrying Palaces, the powerful necks of Bulls and their violent tossings high into the air, the Tigers' prey and the Lions' mane, yet the nature of things is never more perfect than indeed in the smallest entity.[24] Therefore, I beg those of you who read this and also condemn with disgust what has been told above to remember that when you observe Nature, nothing seems to be superfluous, because you would then reject much. *Plin.*

[24] Pliny the Elder, *Naturalis historia*, 11. 1. 2. (On the extreme smallness of insects).

The first edition appeared in 1746. Having finished that edition, I wrote the present one which was enlarged with around a Thousand Animalcules, which I examined with much effort and described with no less diligence, fully convinced that through these kinds of descriptions, the species would be distinguished from each other, and these would not be confused and thereby the foundation of the art, the true diagnosis, collapse.

Uppsala 1761.

AUTHORS, ZOOLOGISTS[25]

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[25] In the text, Linnaeus uses, for example, the Latin title, *Iter Scanicum* for *Skånska Resa* and we have chosen to maintain this usage. Linnaeus's references are also left unchanged.

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TECHNICAL TERMS

QUADRUPEDIA

Forefeet (*Palmae*). The anterior feet.
Hindfeet (*Plantae*). The posterior feet.
Elongate (*Elongata*). A tail that extends the length of body.
Abrupt (*Abrupta*) or *Truncate* (*Truncata*). A tail that is much shorter than the body.

AVES

Cere (*Cera*). The naked tunic of frons encircling the rostral base.
Uropygium (*Uropygium*). The area between the dorsum and the tail.
Rectrices. Larger feathers constituting the tail.
Remiges. Larger alar feathers, with which the bird flies.
    Primariae. From the alar flection to the tip.
    Secondariae. Arranged between the alar flection and the body.
    Tectrices. Feathers covering other wing feathers.
Papillose (*Papillosa*). A naked surface covered with papillae.
Limbs (*Artus*). These are the wings, tail, and legs.
Palmate (*Palmati*). Feet interwoven by a membrane.
Lobate (*Lobati*). Feet augmented by a bilateral membrane on each side.
Tridactyl (*Tridactyli*), *Tetradactyl* (*Tetradactyli*). With 3 or 4 digits, etc.

AMPHIBIA

Scuta (*Scuta*). Each abdominal squama or broad squamae surrounding abdomen transversely beneath.
Vertillicate (*Verticillata*). Tail with squamae arranged in circles.
Divided (*Anceps*). Tail equipped with a bilateral edge.

PISCES

Dorsal (*Dorsalis*). Fin placed on the dorsum.
Pectoral (*Pectorales*). Fins on the lateral side of the body near the head.
Ventral (*Ventrales*). Fins placed on the abdomen.
Anal (*Ani pinna*). Fin inserted behind the exit of excrement.
Caudal (*Caudae pinna*). Fin at the end of the body of a fish.
Monopterygian (*Monopterygius*), *Dipterygian* (*Dipterygius*), one-finned and two-finned, respectively.
Branchiostegal (*Branchiostega*). The membrane connected to the opercule of the gills, equipped with rays, which become visible when the opercules are elevated.

INSECTA

Larva.[26] The grub, born from the egg[27] of an insect, before undergoing metamorphosis.
Pupa.[28] Larva that has undergone the first metamorphosis, before reaching the perfect state.
Coleopters (*Coleoptera*). Insects the wings of which are covered by elytra.
Hemipters (*Hemiptera*). Insects the wings of which are only partially but not completely, covered by elytra.
Gymnopters (*Gymnoptera*).[29] Insects lacking elytra.
Elytron (*Elytron*). The upper horny or crustaceous wing that covers the lower thinner wings.
Scutellum (*Scutellum*). The small crust between the pairs of elytra or wings that are placed at the thoracic base, like a dorsal thoracic tip.
Elytral suture (*Sutura elytrorum*). The cleft between the elytra and the thorax or between the elytra themselves.

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[26] The stage of an insect that has hatched from its egg but not yet developed into a pupa or an adult insect.
[27] Lat. *semen*, i.e. seed.
[28] Non-feeding, developmental stage during which an insect undergoes complete metamorphosis to the imago.
[29] Linnaeus writes gymnopterous meaning "with naked wings". He has probably used gymnopterous as a synonym of apterous.

Antennae (*Antennae*). Movable organs of insects, placed at the eyes, in form clavate, pectinicorn, prismicorn, awl-shaped.

Palps (*Palpi*). Resembling small antennae placed at the mouth.

Halteres (*Halteres*). The petiolate capitula behind the wings of dipterous insects.

Tongueless (*Elinguis*). No proboscis;[30] hence, the insect cannot feed.

Tongue coiled (*Spirilinguis*). The proboscis with a simple or double coil of the tongue.

Four-footed (*Tetrapus*). 4 unguiculate feet, although there are often two additional ones without claws.

Primary wings (*Alae primores*). In butterflies, the larger or anterior wings.

Secondaries (*Secondariae*). In butterflies, the posterior wings.

[30] Lat. *os.*

A SMALL FAUNA OF SWEDEN

Class I
MAMMALIA

I. MAGNATES

HOMO	1.	*Sapiens*	1
Vespertilio	2.	murinus	18
	3.	auritus	

III.[31] *FERAE*

Phoca	4.	vitulina	11
Canis	5.	familiaris	12
	6.	Lupus	13
	7.	Vulpes	14
	8.	Lagopus[32]	
Felis	9.	Catus	3
	10.	Lynx	4
	11.	Kattlo[33]	5
Viverra	12.	Lutra	10
	13.	Lutreola	
Mustela	14.	Gulo	6
	15.	Martes	7
	16.	Putorius	8
	17.	Erminea	9
	18.	nivalis	
Ursus	19.	Arctos	2
	20.	Meles	15

IV. BESTIAE

Sus	21.	Scrofa	36
Erinaceus	22.	europaeus	16
Talpa	23.	europaea	17
Sorex	24.	Araneus	33

V. GLIRES

Lepus	25.	timidus	19
	26.	Cuniculus	20
Castor	27.	Fiber	23
	28.	moschatus	24
Mus	29.	Lemmus	26
	30.	agrestis	27
	31.	terrestris	29
	32.	amphibius	25
	33.	Rattus	28
	34.	Musculus	31
	35.	avellanarius	32
	36.	sylvaticus	30
	37.	vulgaris	21
	38.	volans	22

VI. PECORA

Cervus	39.	Alces	37
	40.	Elaphus	38
	41.	Tarandus	39
	42.	Dama	40
	43.	Capreolus	41
Capra	44.	Hircus	42
Ovis	45.	Aries	43
Bos	46.	Taurus	44

VII. BELLUAE

Equus	47.	Caballus	34

[31] *II.* is missing in the Latin text.

[32] *lagopos* in the text.

[33] FELIS in the text.

Linnaeus's variations in nomenclature have been preserved and highlighted in a note. For example, he writes *cremiterior.*, but in the text it appears as *coemiterior.* (no. 1842). Obvious misprints have been corrected. The reference numbers on the right correspond to entries in the text and refer to *Fn. Su.* (1746). When omitted, they have been inserted within square brackets. The symbol " (" indicates "additional descriptions" of the animal in question, sometimes presented as β, etc. Obvious misprints or incorrect references have been corrected.

VIII. CETE

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Balaena	49.	Mysticetus	264
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[35] See the text.

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[36] *crecia* in the text.

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[37] *ophidion* in the text.

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[38] Due to a misprint "IV" was incorrectly stated in the Latin text.

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[39] *coleoptrata* in the text.

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	1043.	Hyperanth.	788		1091.	Stellatarum	
	1044.	Pamphilus	789		1092.	fuciformis	
	1045.	Arcania			1093.	apiformis	813
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1173. Fulvago
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1177. ludifica
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1181. Psi 879
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1185. exsoleta
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1187. putris
1188. Pinastri
1189. Tragopog.
1190. exclamat.
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1192. gothica
1193. C. nigrum 874
1194. leucomelas
1195. typica
1196. Atriplicis
1197. oleracea 877
1198. perspicillar.
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1200. Rumicis
1201. lucipara
1202. triplasia
1203. occulta
1204. flavicornis
1205. Brassicae
1206. Pisi
1207. Oxyacanthae
1208. Persicariae
1209. hepatica
1210. plebeja
1211. Tritici
1212. Vaccinii
1213. litura
1214. depuncta
1215. oculea
1216. plecta
1217. polymita
1218. retusa
1219. polyodon
1220. nigricans
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1362. mesomella
1363. Evonymel. 891
1364. Padella
1365. sequella
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1367. pascuella
1368. pinetella
1369. pratella 908
1370. culmella 907
1371. nemorella
1372. rhomboid. 910
1373. trigonella 911
1374. capitella
1375. foenella
1376. ramella
1377. nisella
1378. Salicella
1379. Cynosbatella
1380. cinctella
1381. Petiverella
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1387. curvella
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1402. Merianella 900
1403. Wilkella 899
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1409. Schaefferella
1410. Jungiella
1411. Clerkella
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1414. tapetzella 892
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1416. sarcitella 893
1417. vestianella
1418. Pomonella
1419. Strobilella 914
1420. Turionella
1421. dodecella
1422. Cembrella
1423. Resinella
1424. Taedella
1425. Lapella

1426. bracteella[40]
1427. stipella
1428. Corticella
1429. tertianella
1430. tessella 897
1431. argentella
1432. Calthella
1433. pedella
1434. ustella
1435. parenthesel.
1436. elongella
1437. punctella
1438. bicostella
1439. fuscella
1440. minutella
1441. mercurella
1442. Populella
1443. porrectella
1444. leucatella
1445. cinerella
1446. scabrella
1447. asperella
1448. serratella
1449. Juniperella
1450. gelatella
1451. Lichenella
1452. monodactyla
1453. didactyla
1454. tesseradact.
1455. tetradactyla
1456. pterodactyla
1457. pentadactyla
1458. hexadactyla

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1462. rubicunda
1463. depressa
1464. vulgatissim. 767
1465. cancellata
1466. aenea 768
(769
1467. grandis 770
1468. juncea
1469. forcipata

Ephemera
1470. virgo 756
(757
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(759
1471. puella 760
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(762
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1472. vulgata 750
1473. bioculata 751
1474. fuscata
1475. culiciformis 753
1476. horaria 754
1477. diptera
1478. nigra
1479. mutica 752
1480. vespertina 755

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1481. phalaenoides
1482. reticulata
1483. striata 738
1484. grisea 739
1485. grandis 740
1486. rhombica 741
1487. bimaculata 742
1488. flavilatera 743
1489. bicaudata 744
1490. nigra 745
1491. azurea
1492. longicornis 746
1493. filosa
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1495. albifrons
1496. bilineata
1497. ciliaris
1498. umbrosa
1499. nebulosa 748
1500. fusca 746
1501. minuta
1502. flava
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[40] See the text with note.

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	1522.	Quercus bacc.	
	1523.	Querc. pet.	
	1524.	Querc. ped.	
	1525.	Querc. gem.	948
	1526.	Querc. cort.	
	1527.	Querc. ramul.	
	1528.	Fagi	946
	1529.	Viminalis	
	1530.	Amerinae	
	1531.	Capreae	940
	1532.	Sal. strob.	941
Tenthredo	1533.	femorata	
	1534.	lutea	923
	1535.	Vitellina	
	1536.	Amerina	
	1537.	lucorum	924
	1538.	fasciata	
	1539.	nitens	
	1540.	Pini	
	1541.	Juniperi	
	1542.	ustulata	
	1543.	rustica	
	1544.	Padi	944
	1545.	Scrophular.	[935]
	1546.	Abietis	928
	1547.	Cerasi	
	1548.	Salicis	927
	1549.	mesomela	936
	1550.	rufipes	
	1551.	campestris	
	1552.	atra	
	1553.	ovata	
	1554.	viridis	
	1555.	Rosae	929
	1556.	cincta	
	1557.	livida	955
	1558.	septentrion.	
	1559.	12-punctat.	
	1560.	erythroceph.	
	1561.	sylvatica	931
	1562.	nemoralis	
	1563.	Cynosbati	937
	1564.	reticulata	
	1565.	Betulae	
	1566.	saltuum	
	1567.	flava	930
	1568.	intercus	
	1569.	Rumicis	
	1570.	Ulmi	
	1571.	Alni	
	1572.	Salicis	933
Sirex	1573.	Gigas	925
	1574.	Spectrum	926
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	1579.	raptorius	
	1580.	sarcitorius	976
			(981
	1581.	extensorius	980
	1582.	quaesitorius	
	1583.	culpatorius	
	1584.	infractorius	
	1585.	constrictorius	
	1586.	saturatorius	
	1587.	molitorius	
	1588.	crispatorius	
	1589.	Pisorius	966
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	1590.	luctatorius	983
	1591.	volutatorius	
	1592.	vaginatorius	
	1593.	persuasor.	964
	1594.	lituratorius	
	1595.	designator.	965
	1596.	edictorius	960
	1597.	deliratorius	
	1598.	fusorius	
	1599.	fossorius	
	1600.	comitator	
	1601.	peregrinator	
	1602.	incubitor	970
	1603.	reluctator	

1604. denigrator
1605. desertor
1606. coruscator
1607. rutilator
1608. manifestat. 959
1609. compunct. 957, [958]
1610. delusor
1611. titillator [982]
1612. venator
1613. extensor 986
1614. exarator
1615. Turionellae
1616. Strobilellae 971
1617. moderator
1618. Resinellae
1619. praerogator
1620. mandator
1621. enervator 978
1622. gravidator
1623. inculcator 972
1624. pugillator 975
1625. ruspator
1626. jaculator 985
1627. assectator
1628. luteus 967
1629. ramidulus 969
1630. glaucopter. 973
1631. circumflex. 974
1632. cinctus 984
1633. Muscarum
1634. Bedeguaris 939
1635. Juniperi 987
1636. Puparum
1637. Larvarum
1638. Gallarum
1639. Cynipedis 942
1640. Coccorum
1641. Secalis
1642. subcutaneus
1643. Aphidum 953
1644. ovulorum
1645. globatus 951
1646. glomeratus 952
1647. pectinicor.

Sphex

1648. sabulosa
1649. clavipes
1650. figulus
1651. viatica 977
1652. fusca

Chrysis

1653. mystacea
1654. pectinipes
1655. variegata 932
1656. colon
1657. sispes
1658. gibba
1659. rufipes
1660. arenaria 994
1661. semiaurata
1662. fossoria
1663. leucostoma
1664. vaga
1665. ignita 1004
1666. aurata
1667. cyanea
1668. viridula
1669. fulgida

Vespa

1670. Crabro 988
1671. vulgaris 989
1672. rufa 998
1673. parietum 990
1674. muraria 991
1675. cribraria 997
(993
1676. coarctata 1002
1677. campestris
1678. arvensis 992
(996
1679. parietina 995
1680. biglumis
1681. uniglumis 1011
1682. spinipes
1683. bifasciata

Apis

1684. longicornis
1685. tumulor. 1000
1686. clavicorn.
1687. centunc. 1010
1688. cineraria
1689. retusa
1690. rufa 1009
1691. bicornis 1008
1692. truncor.
1693. helvola
1694. succincta 1007
1695. aenea
1696. caerulescens
1697. mellifica 1003
1698. cunicular.
1699. variegata

	1700.	rostrata	999
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	1702.	lagopoda	
	1703.	4-dentat.	
	1704.	florisomnis	
	1705.	conica	1006
	1706.	annulata	
	1707.	ruficornis	
	1708.	cariosa	1001
	1709.	terrestris	1012
	1710.	hortorum	
	1711.	pratorum	
	1712.	lapidaria	1015
	1713.	sylvarum	
	1714.	muscorum	1017
	1715.	hypnorum	1018
	1716.	lucorum	
	1717.	acervorum	1013
	1718.	subterranea	1014
	1719.	alpina	1016
Formica	1720.	herculeana	1019
	1721.	rufa	1020
	1722.	fusca	1021
	1723.	nigra	1023
	1724.	obsoleta	
	1725.	rubra	1022
	1726.	caespitum	
Mutilla	1727.	europaea	
	1728.	formicaria	
	1729.	Acarorum	

VI. DIPTERA

Oestrus	1730.	Bovis	1024
	1731.	Tarandi	1025
	1732.	nasalis	1026
	1733.	haemorrh.	1028
	1734.	ovis	1027
Tipula	1735.	pectinicorn.	
	1736.	4-maculat.	
	1737.	calmariens.	
	1738.	rivosa	1121
	1739.	crocata	1123
	1740.	oleracea	1124
	1741.	hortorum	1125
	1742.	variegat.	1131
	1743.	contamin.	1134
	1744.	lunata	1126
	1745.	pratensis	1128
	1746.	terrestris	1129
	1747.	cornicina	1130
	1748.	nigra	1132
	1749.	atrata	1127
	1750.	bimaculata	
	1751.	ocellaris	
	1752.	annulata	1122
	1753.	flavescens	1133
	1754.	regelationis	
	1755.	replicata	
	1756.	monoptera	
	1757.	arundineti	
	1758.	plumosa	1135
	1759.	litoralis	1140
			(1136
	1760.	motitatrix	1137
	1761.	vibatrix	
	1762.	tremula	
	1763.	monilis	1139
	1764.	macroceph.	1141
	1765.	Marci	1143
	1766.	brevicorn.	
	1767.	putris	1144
	1768.	Febrilis	[1145]
	1769.	Florilega	1146
	1770.	hortulana	1147
	1771.	phalaenoid.	1148
	1772.	hirta	
	1773.	notata	1149
	1774.	Juniperina	1150
	1775.	palustris	1151
	1776.	longicorn.	1152
	1777.	pennicornis	
	1778.	rufipes	
Musca	1779.	plebeja	
	1780.	chamaeleo.	1029
	1781.	microleon	
	1782.	hydroleon	
	1783.	pantheriana	
	1784.	morio	1067
	1785.	maura	
	1786.	tarda	
	1787.	hottentotta	
	1788.	scolopacea	1066
	1789.	tringaria	
	1790.	Conopsoides	
	1791.	anilis	
	1792.	bombylans	
	1793.	mystacea	1069
			(1071

1794. lappona 1087
1795. pendula 1081
1796. florea 1080
1797. nemorum 1078
1798. arbustorum
1799. tenax 1072
1800. intricaria
1801. oestracea 1070
1802. fallax
1803. lucorum
1804. sylvarum
1805. bicincta 1086
1806. arcuata
1807. mutabilis
1808. devia
1809. ichneumonea
1810. diophthal.
1811. vespiformis
1812. festiva
1813. glaucia
1814. noctiluca
1815. gibbosa
1816. Ribesii 1089
1817. Pyrastri 1090
1818. transfuga 1094
1819. Menthastri 1097
1820. scripta 1091
1821. mellina 1092
(1093
1822. pipiens 1096
1823. segnis 1104
1824. femorata
1825. inanis
1826. pellucens 1073
1827. meridiana 1077
1828. caesar 1098
1829. cadaverina 1099
1830. mortuor. 1101
1831. vomitoria 1102
1832. carnaria 1105
1833. domestica 1106
1834. albifrons 1107
1835. sepulchral.
1836. fera Tabanus
1837. grossa 1076
1838. rotundata
1839. Larvarum
1840. Radicum
1841. canicularis
1842. cremiterior.[41] 1108
1843. aestivationis
1844. pluvialis 1112
1845. fenestralis
1846. roralis
1847. serrata
1848. cellaris
1849. meteorica
1850. putris 1110
(1109
1851. Frit
1852. viduata
1853. cupraria 1103
1854. polita
1855. pubera
1856. petronella
1857. arrogans
1858. ungulata 1053
1859. cibaria
1860. scybalaria
1861. stercoraria 1068
1862. fimetaria
1863. parietina
1864. umbrarum
1865. grossificat. 1051
1866. saltuum
1867. vibrans 1052
1868. cynipsea 1054
1869. flava 1114
1870. aestuans 1055
1871. Serratulae
1872. Arnicae 1057
1873. Hyoscyami 1058
1874. germinat. 1059
1875. Urticae
1876. Cardui 1063
1877. Heraclii
1878. Cerasi 1061
1879. solstitialis 1064
1880. florescent. 1065
1881. frondescent.
1882. Bovinus 1045
1883. autumn.
1884. Tarandin. 1046
1885. Bromius 1048

[41] *coemiteriorum* in the text.

	1886.	tropicus	1047
	1887.	pluvialis	1050
	1888.	caecutiens	1049
	1889.	lugubris	
Culex	1890.	pipiens	1116
	1891.	bifurcatus	1115
	1892.	pulicaris	1117
	1893.	reptans	1118
	1894.	equinus	1120
Empis	1895.	borealis	1038
	1896.	pennipes	1041
			(1142
	1897.	livida	
	1898.	forcipata	
	1899.	stercorea	
Conops	1900.	calcitrans	1042
	1901.	irritans	
	1902.	macroceph.	1030
	1903.	vesicularia	
	1904.	flavipes	
	1905.	buccata	
	1906.	aculeata	
	1907.	ferruginea	
Asilus	1908.	crabronif.	1031
	1909.	gibbosus	1034
	1910.	ater	
	1911.	flavus	1032
	1912.	gilvus	1036
	1913.	marginatus	
	1914.	forcipatus	
	1915.	tipuloides	1033
	1916.	oelandicus	1037
	1917.	morio	
Bombylius	1918.	major	1119
	1919.	medius	
	1920.	minor	
Hippobosca	1921.	equina	1043
	1922.	avicularia	
	1923.	Hirundinis	1044
	1924.	Ovina	
	VII.	*APTERA*	
Lepisma	1925.	saccharina	
	1926.	terrestris	
Podura	1927.	viridis	1172
	1928.	atra	1173
	1929.	fusca	1174
	1930.	plumbea	1175
	1931.	nivalis	1176
	1932.	arborea	1177
	1933.	cincta	
	1934.	aquatica	1178
	1935.	fimetaria	1180
	1936.	ambulans	1170
Termes	1937.	pulsator.	1168
	1938.	fatidicum	
Pediculus	1939.	Humanus	1153
	1940.	Pubis	1154
	1941.	Vespertilion.	
	1942.	Suis	
	1943.	Porcelli	
	1944.	Cervi	
	1945.	Ovis	
	1946.	Tauri	1155
	1947.	Vituli	[1156]
	1948.	Equi	
	1949.	Tinnunc.	1157
	1950.	Corvi	1158
	1951.	Infausti	1159
	1952.	Anseris	
	1953.	Sternae	1161
	1954.	Gruis	1162
	1955.	Ciconiae	
	1956.	Recurvir.	1163
	1957.	Haematopi	1164
	1958.	Meleagridis	1160
	1959.	Gallinae	1166
	1960.	Caponis	1165
	1961.	Tetraonis	
	1962.	Lagopi	1167
	1963.	Hirundin.	
	1964.	Farionis	
Pulex	1965.	irritans	1171
Acarus	1966.	Reduvius	1192
	1967.	Ricinus	1193
	1968.	cancroides	1187
	1969.	crassipes	1189
	1970.	Passerinus	1190
	1971.	motatorius	1188
	1972.	Aphidioides	1191
	1973.	coleoptratus	1211
	1974.	telarius	1212
			(1196
	1975.	Siro	1195
			(1194
	1976.	exulcerans	
	1977.	geniculatus	1210
	1978.	aquaticus	1199

	1979.	holosericeus	1200
	1980.	Baccarum	1201
	1981.	Muscarum	1209
	1982.	gymnopter.	1208
	1983.	Coleoptrator.	1198
	1984.	rupestris	1202
	1985.	longicornis[42]	1205
	1986.	littoralis	1206
	1987.	Fungorum	1207
	1988.	scaber	1197
	1989.	Salicin.	1203
	1990.	croceus	1204
	1991.	Tremellae	
Phalangium	1992.	Opilio	1186
Aranea	1993.	diadema	1214
	1994.	reticulata	1221
	1995.	curcurbitina	1224
	1996.	Calycina	1228
	1997.	bipunctat.	1232
	1998.	arundin.	1243
	1999.	angulata	1213
	2000.	domestica	1215
	2001.	lineata	1220
	2002.	riparia	1222
	2003.	labyrinth.	1223
	2004.	redimita	1227
	2005.	corollata	1229
	2006.	fumigata	1231
	2007.	montana	1242
	2008.	notata	
	2009.	rufipes	1230
	2010.	nocturna	1235
	2011.	extensa	1216
	2012.	fimbriata	1226
	2013.	6-punctata	1233
	2014.	4-punctata	1234
	2015.	holosericea	1241
	2016.	senoculata	
	2017.	scenica	1237
	2018.	truncorum	1236
	2019.	rupestris	1238
	2020.	aquatica	1240
	2021.	saccata	
	2022.	virescens	1225
	2023.	palustris	1219
	2024.	viatica	1218
	2025.	levipes	1217
Cancer	2026.	Maenas	
	2027.	rostratus	
	2028.	Pagurus	1244
	2029.	hirtellus	
	2030.	Araneus	1246
	2031.	Maja	1245
	2032.	Bernhardus	1250
	2033.	Gammarus	1248
	2034.	Astacus	1249
	2035.	Mantis	
	2036.	strigosus	
	2037.	Squilla	1252
	2038.	Crangon	
	2039.	norvegic.	1247
	2040.	Arctus	
	2041.	Pulex	1253
	2042.	Locusta	1254
	2043.	stagnalis	1357
Monoculus	2044.	foliaceus	
	2045.	piscinus	
	2046.	Apus	1181
	2047.	Pulex	1182
	2048.	pediculus	1183
	2049.	4-cornis	1184
	2050.	conchaceus	1185
	2051.	lenticularis	
Oniscus	2052.	Asilus	
	2053.	Oestrum	
	2054.	Psora	
	2055.	Entomon	1255
	2056.	Ceti	
	2057.	marinus	
	2058.	Asellus	1257
	2059.	Armadillo	
	2060.	scopulorum	
	2061.	aquaticus	1258
	2062.	bicaudatus	
Scolopendra	2063.	lagura	1264
	2064.	forficata	1263
	2065.	electrica	1261
Julus	2066.	terrestris	1260
	2067.	sabulosus	1262
	2068.	complanatus	

[42] See the text with note.

Class VI

VERMES

I. INTESTINA

Gordius	2068.	aquaticus	1265
	2069.	argillaceus	
Furia	2070.	infernalis	
Ascaris	2071.	vermicularis	1269
	2072.	lumbricoides	
Lumbricus	2073.	terrestris	1271
	2074.	marinus	1270
Fasciola	2075.	hepatica	1274
	2076.	intestin.	1268
	2077.	barbata	
Hirudo	2078.	sanguisuga	1272
	2079.	medicinal.	
	2080.	octoculata	725
	2081.	stagnalis	
	2082.	complanat.	
	2083.	geometra	1275
	2084.	muricata	
	2085.	heteroclit.	
Myxine	2086.	glutinosa	
Teredo	2087.	navalis	1329

II. MOLLUSCA

Limax	2088.	ater	1276
	2089.	rufus	1277
	2090.	maximus	1278
	2091.	agrestis	1279
	2092.	flavus	1280
	2093.	papillosus	
	2094.	bilamellatus	
Nereis	2095.	caerulea	
	2096.	pelagica	
	2097.	mollis	
	2098.	noctiluca	
Aphrodita	2099.	aculeata	1284
Lernaea	2100.	Cyprinacea	1282
	2101.	Asellina	
	2102.	Salmonea	
Priapus	2103.	senilis	
	2104.	judaicus	
	2105.	felinus	
Sepia	2106.	officinalis	1281
	2107.	Loligo	
Medusa	2108.	capillata	1286
	2109.	aurita	
	2110.	cruciata	
Asterias	2111.	rubens	1285
	2112.	minuta	
	2113.	glacialis	
	2114.	ophiura	
	2115.	caput medusae	
Echinus	2116.	esculentus	1289
	2117.	spatagus	1290
	2118.	Cidaris	

III. TESTACEA

Chiton	2119.	punctatus	
Lepas	2120.	anatifera	1350
	2121.	Scalpellum	
	2122.	Balanus	1349
	2123.	Balanoides	1348
Pholas	2124.	Dactylus	
	2125.	crispata	
Mya	2126.	truncata	
	2127.	arenaria	
	2128.	lutraria	
	2129.	pictorum	
	2130.	margaritifera	1331
Solen	2131.	Siliqua	
Tellina	2132.	radiata	
	2133.	trifasciata	
	2134.	incarnata	1337
	2135.	bimaculata	
	2136.	balthica	1335
	2137.	pisiformis	
	2138.	cornea	1336
Cardium	2139.	echinatum	1339
	2140.	solidum	
	2141.	edule	1340
Donax	2142.	trunculus	
Venus	2143.	Gallina	
	2144.	mercenaria	
	2145.	exoleta	
	2146.	literata	
Arca	2147.	barbata	
Ostrea	2148.	maxima	1343
	2149.	edulis	1338
Anomia	2150.	craniolaris	1347
	2151.	squamula	
	2152.	patelliformis	
	2153.	retusa	
	2154.	cap. serpentis	
	2155.	Terebratula	
Mytilus	2156.	edulis	1333
	2157.	barbatus	
	2158.	anatinus	1332

Bulla	2159.	Hypnorum	1303
	2160.	fontinal.	1302
Buccinum	2161.	Lapillus	1321
	2162.	glaciale	
	2163.	undatum	
Strombus	2164.	Pes pelecan.	1323
Murex	2165.	antiquus	
	2166.	despectus	
Trochus	2167.	cinereus	
	2168.	zizyphinus	
Turbo	2169.	littoreus	
	2170.	Clathrus	1325
	2171.	Terebra	1322
	2172.	perversus	1300
	2173.	Muscorum	1301
Helix	2174.	Lapicida	1298
	2175.	albella	1299
	2176.	planorbis	1306
	2177.	complanata	1308
	2178.	vortex	1307
	2179.	cornea	1304
	2180.	spirorbis	1305
	2181.	contorta	1309
	2182.	hispida	1296
	2183.	Pomatia	1293
	2184.	arbustorum	1295
	2185.	vivipara	1312
	2186.	nemoralis	1294
	2187.	fragilis	1311
	2188.	stagnalis	1310
	2189.	putris	1317
	2190.	limosa	1314
	2191.	tentaculata	1313
	2192.	auricularia	1315
	2193.	balthica	1316
Nerita	2194.	Fluviatilis	1318
	2195.	littoralis	1320, [1319]
	2196.	lacustris	
	2197.	glaucina	1324
Haliotis	2198.	tuberculata	1326
Patella	2199.	vulgata	1291
	2200.	lacustris	1292
Dentalium	2201.	Entalis	1327
Serpula	2202.	planorbis	
	2203.	spirillum	
	2204.	spirorbis	
	2205.	contortupl.	
	2206.	triquetra	
	2207.	glomerata	1328
	2208.	ringens	

IV. LITHOPHYTA

Madrepora	2209.	turbinata
	2210.	truncata
	2211.	stellaris
	2212.	favosa
	2213.	organum
	2214.	flexuosa
	2215.	Ananas
	2216.	ramea
Millepora	2217.	Eschara
Tubipora	2218.	Urceus
	2219.	repens

V. ZOOPHYTA

Isis	2220.	Hippuris
	2221.	Anastatica
Gorgonia	2222.	Flabellum
	2223.	Placomus
	2224.	pinnata
Alcyonium	2225.	arboreum
	2226.	digitatum
	2227.	rubrum
	2228.	gelatinosum
Tubularia	2229.	ramosa
	2230.	muscoides
Flustra	2231.	foliacea
	2232.	fistulosa
	2233.	pilosa
Corallina	2234.	officinalis
	2235.	squamata
	2236.	corniculata
	2237.	rubens
	2238.	cristata
Sertularia	2239.	pumila
	2240.	tamarisca
	2241.	abietina
	2242.	halecina
	2243.	myriophylla
	2244.	falcata
	2245.	pluma
	2246.	echinata
	2247.	antennina
	2248.	lendigera
	2249.	geniculata
	2250.	polyzonias
	2251.	flexuosa
	2252.	bursaria

	2253.	loricata	
	2254.	fastigiata	
	2255.	scruposa	
Hydra	2256.	polypus	1283
	2257.	socialis	
	2258.	umbellaria	
	2259.	triticea	
Pennatula	2260.	phosphorea	
	2261.	mirabilis	
Taenia	2262.	vulgaris	1266
	2263.	lata	
	2264.	Solium	1267
	2265.	canina	
Volvox	2266.	globator	

THE DIFFERENT ORDERS WITH THEIR SUBDIVISIONS

Class I

MAMMALIA

I. MAGNATES

Homo

1. HOMO *sapiens* [*Homo sapiens* Linnaeus, 1758. Eng. Man or Human, Sw. Människa], Ruler of the Kingdoms of Nature. [*Fn.* 1.][43]
   (α) The Swedes are a mixture of various European peoples.
   (β) The Goths are quite tall with whitish hair; irises of eyes bluish ash-grey.
   (γ) The Finns have muscular bodies, long light yellow hair; irises of eyes fuscous.
   (δ) The Lapps have small bodies with short, straight, black hair; irises of eyes blackish.

   The Swedes (α) mostly live in rather populous cities.

   The Goths (β) live in very remote regions, especially between Småland and Blekinge. The inhabitants of Dalarna have some similarities to these people but also differences.

   The Finns (γ) originate from the eastern part of the Bothnian Bay.

   The Lapps (δ) descend from the Samoyedic people. During winter they live in the forests of Lapland and during summer among the mountains, always in huts and tents, without houses, large residences, paths, fences or grains. They live their lives like shepherds among the reindeer.[44] Their livestock is similar to ours.

[43] The ref. has been inserted according to Ch. *A small fauna of Sweden.*

[44] See no. 41.

Vespertilio

2. VESPERTILIO *murinus* [*Vespertilio murinus* Linnaeus, 1758. Eng. Particoloured bat, Sw. Gråskimlig fladdermus], caudate; nose and mouth simple; auricle smaller than head. [*Fn.* 18.]

Bell. Av. 147. Vespertilio.
Gesn. Av. 694. Vespertilio.
Aldr. Orn. 1. p. 571. Vespertilio.
Jonst. Av. 34. Vespertilio.
Charl. Exerc. 80. Vespertilio.
Raj. Quadr. 243. Vespertilio.
Alb. Orn. 3. p. 95. t. 101. Vespertilio.
In Sweden: Läderlapp, Flädermus. In Småland: Nattblacka.
Lives in tree hollows and wall crevices; flies at night, feeds on moths. Hibernates just like the bear,[45] hedgehog,[46] and mole;[47] hence owls predate bats.

DESCR. Primary teeth: 6 upper ones, pointed, widely spaced.
4 lower ones, pointed, contiguous.
Laniary teeth: 2 upper ones, anterior larger.
3 lower ones, anterior the largest.
Molar teeth: 3 ones on each side, tricuspid.
Pentadactyl hands strongly palmate and in the form of a wing.
Pentadactyl hindfeet divided, small.
Lower jaw protruding beyond upper jaw.

3. VESPERTILIO *auritus* [*Plecotus auritus* (Linnaeus, 1758). Eng. Common long-eared bat or Brown long-eared bat, Sw. Brunlångöra], nose and mouth simple; auricles double, larger than head.

Lives as the preceding species in tree hollows.
Perhaps only a sexual variety and not a distinct species. I can hardly find anything that admits a species difference.

[45] See no. 19.
[46] See no. 22.
[47] See no. 23.

III. FERAE[48]

Phoca

4. PHOCA *vitulina* [*Phoca vitulina* Linnaeus, 1758. Eng. Common seal or Harbour seal, Sw. Knubbsäl], canine teeth covered. *Fn.* 11.
Gesn. Aqu. 702. Phoca sive vitulus marinus.
Aldr. Pisc. 722. Phoca sive vitulus.
Jonst. Ichth. t. 44. Phoca vulgaris.
Rond. Pisc. 1. p. 453. Vitulus marinus.
Gall. Adopt. 191. t. 191 Veau marin.
Raj. Quadr. 189. Phoca sive vitulus marinus.
Ephem. N. C. 1. p. 9. t. 1. Phoca.
In Sweden: Siäl.
Occurs in the Gulf of Bothnia and in the Baltic Sea; abundant.
[DESCR.] There are two varieties: "Grå-Siäl"[49] and "Wikare-Siäl".[50] The latter gives birth in February and the former in January; the latter is solitary, the former gregarious; the latter is black and the former grey-white, respectively.[51]
Head as that of a cat,[52] very short. Five supraorbital setae above both eyes, placed in a circle, as a wart. Moustaches undulating on each side, and in seven orderly groups. 6 primary upper teeth, 4 lower ones. Laniaries solitary,[53] upper ones widely spaced, lower ones approximate. Tongue emarginate, smooth. Short forelimbs retracted inside skin of pectus. Forefeet with 5 lower digits, barely separated, gradually smaller. Femora connected with tail. Hindfeet pentadactyl; exterior digits quite broad; those in the middle shorter. Tail very short, somewhat flat, blunt. No auricles; ear apertures closable. Two umbilical nipples, retractile. Area above nose slopes away rapidly. *It. Gotl.* 20. *W-Goth.* 191. Caught in nets. *It. Gott.* 184, 270, 299; eaten by fishermen. *It. Goth.* 198.

Canis

5. CANIS *familiaris* [*Canis lupus familiaris* Linnaeus, 1758. Eng. Domestic dog, Sw. Hund], tail bent back on itself to the left. *Fn.* 12.
Gesn. Quadr. 91. Canis socius & fidelis.
Raj. Quadr. 177. Canis cicurus, domesticus sive socius.
Charl. Onom. 23. Canis villaticus.
In Sweden: Hund.
α *Charl. Onom.* 23. Canis sagax.
In Sweden: Jagt-hund.

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48 II. is missing.
49 I.e. the Grey seal or Atlantic seal.
50 I.e. the Ringed seal.
51 The transl. reflects Linnaeus's use of the Latin pronouns *hic* and *ille*, resp.
52 See no. 9.
53 I.e. canine teeth.

β *Raj. Quadr.* 176. Canis venaticus grajus sive graecus, nonnullis scoticus.
In Sweden: Wint-hund.

γ *Raj, Quadr.* 176. Canis mastivus.
Gesn. Quadr. 92. Canis sanguinarius.
In Sweden: Blod-hund.

δ *Raj. Quadr.* 177. Canis aquaticus aviarius.
In Sweden: Engelsk Dogg.

ε *Raj. Quadr.* 177. Canis melitaeus.
In Sweden: Knä-hund.

ζ *Syst. nat.* 39. Canis fricator.
In Sweden: Mops.

η *Aldr. Digit.* 555. Canis pantherinus.
In Sweden: Fogel-Hund.

θ Canis hispanicus. *It. W-goth* 117.

ι Vulgi: Canis nudus aethiopicus.
In Sweden: Naken-Hund.
Lodges with us in houses; of foreign origin; most abundant.
[DESCR.] There is a description of the domestic dog in *Amoenit. Academ.* vol. 4, p. 43.

6. CANIS *lupus* [*Canis lupus* Linnaeus, 1758. Eng. Grey wolf or Wolf, Sw. Varg], tail curved. *Fn.* 13.
Syst. nat. 36. Canis cauda recta corpore breviore.
Gesn. Aquat. 152. Lupus.
Aldr. Quadr. 144. Lupus.
Jonst. Quadr. 89. Lupus.
Charl. Onom. 14. Lupus vulgaris.
Raj. Quadr. 173. Lupus.
In Sweden: Warg, Ulf.
Lives today generally in forests. Twenty-six years ago it was a rather rare animal in Sweden.
[DESCR.] Bends its neck easily. Walks on curved claws. Can endure hunger for a long time. Only attacks man if it suffers from extreme cold and hunger. Carries no lice or fleas. Caught in regions where wolves are found. *It. W-Goth.* 16.

7. CANIS *vulpes* [*Vulpes vulpes* (Linnaeus, 1758). Eng. Red fox, Sw. Rödräv], tail erect with a white tip. *Fn.* 14.
Syst. nat. 36. Canis cauda recta longitudine corporis.
Gesn. Quadr. 55. Vulpes.
Aldr. Quadr. 195. Vulpes.
Jonst. Quadr. t. 56. Vulpes.
Charl. Onom. 14. Vulpes.
Raj. Quadr. 177. Vulpes.

In Sweden: Räf.
Occurs ubiquitously in forests.
There are many varieties in our Sweden.
α Red-yellow, which is the common species in Sweden.
β Cruciform, Korssräf.
γ Rusty brown, Brandräf.

8. CANIS *lagopos* [*Vulpes lagopus* (Linnaeus, 1758). Eng. Arctic fox or Blue fox, Sw. Fjällräv], tail straight with a concolorous tip. *Syst. nat.* 10, p. 40.
Vulpes, white. *Kalm. Bahus.* 236.
Isatis. Act. Petropol. 1760. v. 5. p. 358.
In Sweden: Fiäll Racka.
Occurs in the Lapland mountains. Feeds on mice and lemmings.
[DESCR.] Feet densely hirsute as in a hare.[54] Of a variable bluish colour.

Felis

9. FELIS *catus* [*Felis catus* Linnaeus, 1758. Eng. Domestic cat, Sw. Tamkatt], tail elongate; body with blackish fasciae, three dorsal, longitudinal ones; sides spiral-like.
Felis, tail elongate; ears equal. *Fn.* 3.
Gesn. Quadr. 98. Felis vulgo Catus.
Aldrov. Digit. 564. Felis.
Jonst. Quadr. 180. t. 72. Felis domestica.
Charl. Onom. 20. Felis.
Ray. Quadr. 98. Felis vulgo Catus.
In Sweden: Katta.
The domestic cat lodges with us in houses; of foreign origin.

10. FELIS *lynx* [*Lynx lynx* (Linnaeus, 1758). Eng. Eurasian lynx, Sw. Lo],[55] tail relatively short with a jet-black tip; auricles tufted at tips.
Felis, tail truncated; body red-brownish, maculate. *Fn.* 4. *Syst. nat.* 35.
Gesn. Quadr. 155. Lupus cervarius.
Aldrov. Digit. 90. Lynx.
Jonst. Quadr. t. 71. Lynx.
Charl. Onom. 13. Lynx.
Raj. Quadr. 166. Lynx.
In Sweden: Warglo.
Inhabits dense forests; climbs trees.

[54] See no. 25.
[55] See no. 11.

[DESCR.] Seams of the fur:[56] α from curved side of auricle to shoulders. β from throat to brachium and elbow to anterior or outer side. γ from anus to rear knee. δ duplicated from knee to heel, with curved, somewhat stiff, shortish hairs placed between.
Setiferous warts above eyes, 6 larger upper ones, 8 smaller lower ones; 5 warts on temples, of which two are upper, equal, but three lower and more widely spaced; wart in between larger; 4 unequal warts at heel of forefeet.

11. FELIS [*Lynx lynx* (Linnaeus, 1758). Eng. Eurasian lynx, Sw. Lo],[57] tail truncated; body white, maculate. *Fn.* 5.†[58]
Act. Ups. 1736, p. 2. n. 3. *Lynx*, white coloured; maculae black; tail truncated.
In Sweden: Kattlo.
Inhabits very vast forests; quite rare; climbs trees.
This animal is well known. I do not know why I have not seen it.

Viverra

12. VIVERRA *lutra* [*Lutra lutra* (Linnaeus, 1758). Eng. Common otter or Eurasian otter, Sw. Utter], hindfeet palmate, naked; tail less than half the length of the body.
Lutra, all digits equal. *Fn.* 10.
Bell. Aquat. 31. t. 32. Lutra.
Gesn. Ichth. 515. Lutra.
Aldr. Quadr. 294. Lutra.
Jonst. Quadr. 104. Lutra.
Schonev. Ichth. 46. Lutra.
Charl. Onom. 17. Lutra.
Scott. Phys. 1063. f. 45. Lutra.
Gall. Adopt. 147, t. 147. Lutra.
Raj. Quadr. 187. Lutra.
In Sweden: Utter.
Inhabits rivers, swamps, and fishponds; ubiquitous.

13. VIVERRA *lutreola* [*Mustela lutreola* (Linnaeus, 1761). Eng. European mink, Sw. Flodiller], mouth white; hindfeet palmate, hirsute; digits subequal. *Hwitt.* 79.
In Finland: Tichuri. In Sweden: Maenk.
Occurs in the waters of Finland; feeds on fish, frogs, and aquatic insects.
[DESCR.] Body dusky red-yellow; the shorter hairs whitish yellow, the longer ones black. Stature as that of the otter[59] but only a third of its size. Ears roundish. Mouth white. Tongue covered with soft papillae. Vertex greyish white with intermixed white hairs. Feet palmate, pentadactyl. Claws not retractile. Tail attenuated towards tip, covered with slightly longer hairs. *Gadd.*

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[56] Lat. *sutura*, probably referring to the constant folds of the fur.

[57] See no. 10.

[58] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata* p. 560.

[59] See no. 12.

Mustela

14. MUSTELA *gulo* [*Gulo gulo* (Linnaeus, 1758). Eng. Wolverine or Glutton, Sw. Järv], feet divided; body dusky red-brown; dorsum medially black. *Fn.* 6.
Charl. Onom. 14. Gulo.
Scheff. Lapp. 339. Gulo.
Rzacz. Polon. 218. Gulo.
In Sweden: Järf, Filfrass.
Inhabits the mountains of Lapland and Dalarna and very vast forests.

15. MUSTELA *martes* [*Martes martes* (Linnaeus, 1758). Eng. European pine marten, Sw. Mård or Skogsmård], feet divided; body blackish red-yellowish; throat pale.
Mustela, blackish red-yellowish; throat pale. *Fn.* 7.
Gesn. Quadr. 151. Martes.
Jonst. Quadr. t. 64. Martes.
Charl. Onom. 19. Martes.
Scott. Phys. 1068, t. 46, f. 3. Martes.
Raj. Quadr. 200. Martes, aliis Foyna.
In Sweden: Mård.
Inhabits forests of beech trees and spruces.
DESCR. There are two varieties; the one inhabits beech forests[60] and the other spruce forests.
Ears short. Nose prominent. Upper jaw blunt. 6 upper incisors, parallel, small, with blunt and pointed edges; 2 canine teeth, very large, widely spaced. 5 molars, of which the three anterior ones are simple and smaller; the other two widely spaced. 6 lower incisors, of which the two medial ones, with apically notched tip, very small and blunt. The two canines, very large and parallel to the incisors. Molars as upper ones. Tongue long, smooth, covered with pointed, soft, reclining papillae. Feet pentadactyl; digits subequal, villous all over; feet semi-palmate; thumb somewhat shorter.
Tail large, the length of the body up to the neck. A fuscous colour all over. Neck pale white beneath; moustaches as in the cat.[61]

16. MUSTELA *putorius* [*Mustela putorius* Linnaeus, 1758. Eng. European polecat or Ferret, Sw. Iller or Frett], feet divided; body blackish light yellow; mouth and auricles white.
Mustela, blackish yellow-white; mouth white; collar whitish yellow. *Fn.* 8.
Gesn. Quadr. 767. Putorius.
Aldr. Quadr. 330. Putorius.
Jonst. Quadr. 155. t. 64. Putorius.
Merr. Pin. 163. Putorius.
Raj. Quadr. 199. Putorius.
In Skåne: Iller.

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[60] Linnaeus probably means stenmård, *Martes foina* (Erxleben, 1777), which is found in South and Central Europe, even up to Denmark. Nowadays it is an invasive species in Skåne.

[61] See no. 9.

It is said to inhabit the fields of Skåne.

17. MUSTELA *erminea* [*Mustela erminea* Linnaeus, 1758. Eng. Stoat or Ermine, Sw. Hermelin], feet divided; tail tip jet-black. *Fn.* 9.[62]
Gesn. Quadr. 149. Mustela.
Aldr. Quadr. 307. Mustela vulgaris.
Jonst. Quadr. t. 74. Mustela vulgaris.
Raj. Quadr. 195. Mustela vulgaris.
Charl. Onom. 19. Mustela sylvestris.
In Småland: Wesla.
β *Raj. Quadr.* 198. Mustela candida sive animal Emineum recentiorum.
Charl. Onom. 19. Hermellanus.
Wagn. Helv. 180. Mustela alpina candida.
In Sweden: Hermelin, Lekatt.
Occurs in forests, especially those of Lapland, also everywhere around houses.
[DESCR.] During summer it is dusky grey, but white beneath; throughout winter snow-white; tip of the tail always black, from almost tip to middle.

18. MUSTELA *nivalis* [*Mustela nivalis* Linnaeus, 1766. Eng. Weasel or Little weasel, Sw. Småvessla], tip of tail with hardly any black hairs.
In Sweden: Snö-Mus.
Occurs in Västerbotten.
[DESCR.] Very similar to the preceding species, snow-white; tail also white but hairs only very sparse, furthest ones blackish, but not black on the whole tip of the tail; body half the size of the ermine.[63]

Ursus

19. URSUS *arctos* [*Ursus arctos* Linnaeus, 1758. Eng. Brown bear, Sw. Brunbjörn], tail abrupt. *Fn.* 2.
Gesn. Quadr. 14. Ursus.
Aldrov. Digit. 117. Ursus.
Scott. Phys. 1093. t. 50. Ursus.
Jonst. Quadr. 125. t. 55. Ursus.
Charl. Onom. 13. Ursus.
Gall. Adopt. 67. t. 67. Ursus.
Raj. Quadr. 171. Ursus.
In Sweden: Björn.
Inhabits very vast and dense forests in Northern Sweden.
The Lapps make thread from its tendons, which are better than those of the reindeer.
Besides meat it eats wild celery and willowherb.

[62] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.
[63] See no. 17.

20. URSUS *meles* [*Meles meles* (Linnaeus, 1758). Eng. European badger, Sw. Grävling], tail concolorous; body ash-grey above, black beneath; black fascia through ears and eyes.
Meles, anterior claws very long. *Fn.* 15.
Gesn. Quadr. 686. Meles.
Aldr. Quadr. 264. Taxus.
Jonst. Quadr. t. 64. Taxus.
Charl. Onom. 17. Taxus & Daxus.
Raj. Quadr. 185. Taxus sive Meles.
Merr. Pin. 168. Taxus suillus, Meles.
In Sweden: Gräf-svin.
Inhabits shady, low, stony forests; less abundant.
DESCR. Body the size of a dog;[64] ash-grey above, with white hairs, medially black; beneath fuscous just as legs. Head white above; black fasciae through eyes and ears. 6 nipples, 2 on pectus towards abdomen, 2 medially on abdomen, 2 on groin. Feet pentadactyl, with forefeet longer in the middle. 3 black setae above eyes. Large, roundish cavity above anus and beneath tail discharging a sebaceous liquid.

IV. BESTIAE

Sus

21. SUS *scrofa* [*Sus scrofa* Linnaeus, 1758. Eng. Wild boar and Domestic pig, Sw. Vildsvin and Tamsvin], dorsum anteriorly setose; tail pilose. *Fn.* 36.
Gesn. Quadr. 146. Aper.
Aldr. Bisulc. 1013. Aper.
Charl. Onom. 11. Aper.
Jonst. Quadr. 74. Aper 96. Sus agrestis sive Aper.
In Sweden: Will-Swin.
β *Charl. Onom.* 11. Sus.
Aldr. Bisulc. 937. Sus.
Jonst. Quadr. 47. Scrofa.
Gesn. Quadr. 872. Sus.
Raj. Quadr. 92. Sus sive Porcus domesticus.
In Sweden: Swin.
Roams widely, but the feral boar was introduced into Öland by our King Adolf Fredrik.
Pigs with undivided hooves or solid hooves, not bifid, are found everywhere in Uppland as domestic pigs.
The description of *S. scrofa* may be found in *Amoenit. Acad.* vol. 5, p. 461.

[64] See no. 5.

Erinaceus

22. ERINACEUS *europaeus* [*Erinaceus europaeus* Linnaeus, 1758. Eng. European hedgehog, Sw. Igelkott], auricles rounded; nostrils crested.

Erinaceus, spinose, auriculate. *Fn.* 16.[65]

Gesn. Quadr. 368. Echinus terrestris.

Aldr. Quadr. 459. Echinus terrestris.

Jonst. Quadr. 119. t. 68. Erinaceus.

Charl. Onom. 19. Erinaceus.

Raj. Quadr. 231. Echinus sive Erinaceus terrestris.

Seb. Thes. 1. p. 78. t. 49. f. 1. 2. Erinaceus parvus nostras.

It. Gottl. Jul. 10. Erinaceus.

In Sweden: Igelkott.

Occurs in Gotland and Götaland; abundant, but rarer in the rest of Sweden, hardly found in Norrland; hibernates.

DESCR. Body covered entirely with spines; spines palish ash-grey or whitish variegated with fuscous zones. Head (except for the vertex) and the palish ash-grey underside of body covered with hairs and not spines. Auricles round. Eyes small, black. Nose pointed; openings of nostrils, on outer side, furnished with a membranous, fleshy, and curled appendage. The pentadactyl forefeet and hindfeet entirely similar to those of a bear;[66] second digit longer than the others. Prepuce hanging down. Eight nipples. Smells of ambrosia, even its dung does so.

Talpa

23. TALPA *europaea* [*Talpa europaea* Linnaeus, 1758. Eng. Common mole or European mole, Sw. Mullvad], caudate; feet pentadactyl. *Fn.* 17.

Gesn. Quadr. 931. Talpa.

Aldr. Quadr. 451. Talpa.

Jonst. Quad. 118. Talpa.

Charl. Exerc. 25. Talpa.

Raj. Quadr. 236. Talpa.

Seb. Thes. 1. p. 51. t. 32. f. 2. Talpa virginianus niger.

α *Seb. Thes.* 1. p. 68. t. 41. f. 1. Talpa alba nostras.

β *Seb. Thes.* 1. p. 68. t. 41. f. 4. Talpa maculata ostfrisica.

In Sweden: Mullvad. In Småland: Surck.

Inhabits fields, meadows, and gardens underground.

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[65] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata* p. 560.

[66] See no. 19.

Sorex

24. SOREX *araneus* [*Sorex araneus* Linnaeus, 1758. Eng. Common shrew, Sw. Vanlig näbbmus], tail longer than body. *Fn.* 33.
Gesn. Quadr. 747. Mus araneus.
Aldr. Quadr. 441. Mus araneus.
Jonst. Quadr. t. 66. Mus araneus.
Charl. Onom. 25. Mus araneus.
Schwenckf. Quadr. 114. Mus araneus.
Dal. Pharm. 450. Mus araneus.
Raj. Quadr. 239. Mus araneus.
In Sweden: Näbbmus.
Occurs ubiquitously in tunnels and forests.
DESCR. Body blackish ash-grey; the size of a rather small mouse. Tail exactly as that of a mouse, long. Ears short, ample. Snout more prominent than that of a pig, very long tip furnished with nostrils; from all sides entirely fortified with whiskers.
Lower lip 2/3 shorter than upper one. Feet naked, 5–5,[67] divided.
Lower jaw with 4 pointed, quadrifid molars; 2 straight, serrated incisors.
Upper jaw with 4 bifid molars; 4 very small canines; 2 incisors bifid, curved.

V. GLIRES

Lepus

25. LEPUS *timidus* [*Lepus timidus* Linnaeus, 1758. Eng. Mountain hare, Sw. Skogshare], tail relatively short; auricles apically black.
Lepus, tail abrupt; pupils jet-black. *Fn.* 19.
Gesn. Quadr. 69. Lepus.
Aldr. Quadr. 247. Lepus.
Jonst. Quadr. t. 65. Lepus.
Charl. Onom. 20. Lepus.
Raj. Quad. 204. Lepus.
In Sweden: Hare.
Inhabits forests ubiquitously. In our country ash-grey in the summer, in the winter always white. Tail, however, always white and tips of auricles black. Eyebrows with 5 black setae. Moustaches with numerous setae; upper ones black, lower ones white. Beneath tail a cavity on each side, fruit sized, with a pea-shaped, movable gland.
Gnaws at trunks that it passes. Therefore, very easily killed by a snare.
A dislocation of the neck happens very easily and soon becomes lethal. *It. W.Goth.* 270.

[67] I.e. forefoot with 5 and hindfoot with 5 digits.

With a needle a blanket (called "Filt") is made out of the white wool of the hare. But one should rather call it a trap net for fleas, in which all the fleas of the whole body are gathered. Therefore, namely as an experiment, the people of Dalarna used to place the blanket inside the garment of the body.

26. LEPUS *cuniculus* [*Oryctolagus cuniculus* (Linnaeus, 1758). Eng. European rabbit, Sw. Vildkanin],[68] tail relatively short; auricles naked.
Lepus, very short-tailed, pupils red. *Fn.* 20.
Gesn. Quadr. 72. Cuniculus.
Aldr. Quadr. 382. Cuniculus.
Jonst. Quadr. t. 65. Cuniculus.
Charl. Onom. 21. Cuniculus.
Raj. Quadr. 205. Cuniculus.
In Sweden: Kanin.
Is kept in houses, where it has been brought from elsewhere.

Castor

27. CASTOR *fiber* [*Castor fiber* Linnaeus, 1758. Eng. Eurasian beaver or European beaver, Sw. Europeisk bäver], tail oval, flat. *Fn.* 23.
Aelian. Anim. 359. Kastor.
Hildeg. Phys. 115. Biber.
Bellon. Aquat. 29. t. 30. Fiber.
Gesn. Ichth. 185. Castor.
Jonst. Ichth. t. 68. Castor.
Rond. Ichth. 236. Castor.
Charl. Onom. 17. Castor.
Gall. Adopt. 131. t. 131 Castor.
Scott. Phys. 979. t. 33. Castor sive Biber.
Schonev. Ichth. 34. Fiber sive Castor.
Raj. Quadr. 209. Castor sive Fiber.
It. Lapp. maj. 28.
In Sweden: Bäfwer. In Småland: Biur.
Inhabits lakes and rivers, especially those of Lapland. Eats bark of aspen, common rowan, etc.

28. CASTOR *moschatus* [*Desmana moschata* (Linnaeus, 1758). Eng. Russian Desman, Sw. Desmanråtta or Myskmullvad], tail long, flattened and lanceolate; feet palmate. *Fn.* 24.
Clus. Exot. 375. Mus aquaticus exoticus. *It. Wgoth.* 161.

[68] Domestic form included.

Worm. Mus. Mus aquaticus.
Raj. Quadr. 217. Mus aquaticus exoticus.
In Sweden: Däsman.
Inhabits shallow swamps. It is said to have been seen in Sweden but not by us; abundant in Russia.

Mus

29. MUS *lemmus* [*Lemmus lemmus* (Linnaeus, 1758). Eng. Norway lemming, Sw. Fjällämmel], tail relatively short; feet pentadactyl; body variegated with red-yellow and black. *Fn.* 26.
Scheff. Lapp. 346. Mus montanus.
Ol. Magni Sept. l. 18. c. 20. Lemmus.
Worm. Mus. 322. t. 325. Mus norwagicus vulgo Lemming.
Monogr. 6. Mus norwagicus.
Olear. Mus. 21. t. 12. f. 6. Leming.
Raj. Quadr. 227. Mus norwagicus vulgo Leming.
Charl. Onom. 22. Mus norwegicus.
Act. Stockh. 1740. p. 326. t. 6. f. 4. 5. Mus cauda abrupta; corpore fulvo nigromaculato.
In Sweden: Fiällmus, Sabellmus. In Lapland: Lummick.
Occurs in the mountains of Lapland; does not descend every year in flocks to the neighbouring provinces; times and years differ.

30. MUS *agrestis* [*Microtus agrestis* (Linnaeus, 1761). Eng. Field vole or Short-tailed field vole, Sw. Åkersork], tail relatively short; body dusky black; abdomen ash-greyish. *Fn.* 27.
Inhabits fields; abundant during harvest.

31. MUS *terrestris* [*Arvicola amphibius* (Linnaeus, 1758). Eng. Eurasian water vole, Sw. Vattensork],[69] tail medium, subpilose; forefeet subtetradactyl; hindfeet pentadactyl; auricles not projecting beyond surrounding fur.
Mus, tail long, pilose; ears almost rounded, not projecting beyond surrounding fur. *Fn.* 29.
In Sweden: Moile.
Lives mostly a foot underground; digs out tunnels ubiquitously also at water bodies; very damaging in gardens.
DESCR. Almost the same size and appearance as the preceding species, but tail not at all glabrous and naked, but pilose just as the body, and not of the same length as in a rat,[70] since it is barely half

[69] See no. 32.
[70] See no. 33.

the length of the body. Dorsum fuscous or black. Abdomen dusky ash-greyish. Ears small, pilose just as rest of body. Upper teeth the colour of boxwood. Feet 5–5;[71] thumbs of forefeet very small.

32. MUS *amphibius* [*Arvicola amphibius* (Linnaeus, 1758). Eng. Eurasian water vole, Sw. Vattensork],[72] tail elongate, pilose; hindfeet palmate.

Castor, tail linear, smoothly rounded. *Fn.* 25

Raj. Quadr. 217. Mus major aquaticus sive Rattus aquaticus.

Lives in ditches, marshes, and less frequently by muddy water bodies.

An obscure animal not properly observed by us. Might it be the same as the preceding species?

33. MUS *rattus* [*Rattus rattus* (Linnaeus, 1758). Eng. Black rat, Sw. Svartråtta], tail elongate, almost naked; forefeet tetradactyl with a small thumb-claw; hindfeet pentadactyl. [*Fn.* 28.]

Mus, tail long, almost naked; body dusky ash-greyish.

Gesn. Quadr. 109. Mus domesticus major.

Jonst. t. 66. Glires.

Raj. Quadr. Mus domesticus major sive Rattus.

In Sweden: Rotta.

Occurs ubiquitously in Sweden except for Lapland; troublesome in houses.

DESCR. Body grey, white beneath. Ears suboval, covered with short hairs. Wart above eyes with 2 long hairs. Moustaches white, the length of the head. Feet 4–5,[73] divided, covered above with very short, white hairs and with papillose warts beneath. Digits flattened. Lateral claws shortish. Tail the length of the body, almost naked, scaly, scabrous with very short hairs.

34. MUS *musculus* [*Mus musculus* Linnaeus, 1758. Eng. House mouse, Sw. Husmus], tail elongate, almost naked; forefeet tetradactyl; hindfeet pentadactyl; pollex lacking spines.

Mus, tail long, almost naked; body dusky ash-greyish; abdomen somewhat whitening. *Fn.* 31.

Raj. Quadr. 218. Mus domesticus vulgaris sive minor.

Jonst. Quadr. t. 66 Mures.

In Sweden: Mus.

Occurs ubiquitously in houses and in acorn-bearing forests; a noxious little animal to edible things.

[DESCR.] Body whitish beneath. Feet with 4–5 digits,[74] each with 6 warts. Tail the length of the body, weakly pilose.

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[71] See the com. to no. 24.

[72] See no. 31.

[73] I.e. forefoot with 4 and hindfoot with 5 digits.

[74] See the com. to no. 33.

35. MUS *avellanarius* [*Muscardinus avellanarius* (Linnaeus, 1758). Eng. Common dormouse or Hazel dormouse, Sw. Hasselmus], tail elongate, pilose; body red-brown; throat verging on white. *Fn.* 32.
Raj. Quadr. 220. Mus avellanarum minor.
Inhabits forests; often infests gardens.

36. MUS *sylvaticus* [*Apodemus sylvaticus* (Linnaeus, 1758). Eng. Common field mouse or Wood mouse, Sw. Mindre skogsmus], tail elongate; forefeet tetradactyl; hindfeet pentadactyl; body grey with black hairs; abdomen whitish.
Mus, tail long; body black whitish yellow; abdomen white. *Fn.* 30.
Raj. Quadr. 218. Mus domesticus medius.
Lives in houses and forests.

Sciurus

37. SCIURUS *vulgaris* [*Sciurus vulgaris* Linnaeus, 1758. Eng. Red squirrel, Sw. Ekorre or Röd ekorre], auricles with tufted tips; forefeet tetradactyl; hindfeet pentadactyl.
Sciurus, jumping only onto forefeet. *Fn.* 21.
Gesn. Quadr. 13. Sciurus.
Jonst. Quadr. t. 66. Sciurus.
Raj. Quadr. 214. Sciurus vulgaris
In Sweden: Ikorn. People of Österbotten call it "Gråskinn".[75]
Lives in trees; abundant; red during summer, quite grey-white during winter; it is called "Gråwerck".[76]
There is a very rare snow-white variety. *It. Wgoth.* 222. It sails on a woodchip and gives the tail to the winds.[77] *It. Gotl.* 222.

38. SCIURUS *volans* [*Pteromys volans* (Linnaeus, 1758). Eng. Flying squirrel, Sw. Flygekorre], flying because of an extension in the hypochondriac regions. *Fn.* 22.
Seb. Thes. 1. p. 67. t. 41. f. 3. Sciurus volans.
Act. Petrop. 5. p. 210. Quadrupes volatile Russiae.
Occurs in Finland and Lapland, though rather rare.

[75] Eng. "Greyskin".

[76] Eng. "Vair".

[77] Linnaeus writes in his *Öländska och Gothländska Resa* that the squirrels sail across lakes on woodchips and bark and disappear every seven years (for July 2), p. 222.

VI. PECORA

Cervus

39. CERVUS *alces* [*Alces alces* (Linnaeus, 1758). Eng. Moose, Sw. Europeisk älg], horns without branches or stalks, palmate; dewlap below throat. *Fn*. 37.
Gesn. Quadr. 39. Alces.
Aldr. Bisulc. 836. Alce.
Jonst. Quadr. 65. t. 30. Alce.
Charl. Onom. 9. Alce.
Scott. Phys. 901. t. 24. Alce.
Gall. Adopt. 169. t. 169. Alce.
Raj. Quadr. 39. Alce.
Olear. Mus. 12. t. 9. f. 2. Alces cornu.
In Sweden: Älg.
Inhabits forests, rarer today than previously.

40. CERVUS *elaphus* [*Cervus elaphus* Linnaeus, 1758. Eng. Red deer, Sw. Kronhjort], horns branched, smoothly rounded, recurved. *Fn*. 38.
Gesn. Quadr. 79. Cervus, Cerva, Hinnulus.
Jonst. Quadr. t. 31. Cervus.
Charl. Onom. 8. Cervus.
Raj. Quadr. 84. Cervus.
In Sweden: Hiort, Kronhiort.
Inhabits forests, but rather rare; abundant in the King's enclosures.[78]
[DESCR.] Mane dorsal, slightly erect above shoulders, black. Dewlap below throat, the size of a thumb, covered with black, smooth facial beard. False hooves,[79] divaricate in forefeet and parallel in hindfeet, when viewed from the rear.

41. CERVUS *tarandus* [*Rangifer tarandus* (Linnaeus, 1758). Eng. Reindeer, Sw. Vildren and Tamren], horns branched, smoothly rounded; apices palmate. *Fn*. 39.
Gesn. Quadr. 130. Rangifer.
Aldr. Bisulc. 859. Tarandus.
Jonst. Quadr. t. 37. Cervus palmatus.
t. 36. Cervus mirabilis. (*fig. bon.*)
t. 34. Tragelaphus.
t. 34. Hippelaphus.
Olear. Mus. 16. t. 10. f. 3. Rhangifer. (*fig. bona*)
Raj. Quadr. 88. Cervus rangifer.

[78] See no. 21.
[79] I.e. dewclaws.

Charl. Onom. 9. Rangifer & Tarandus.
In Sweden: Rhen.
The reindeer occur entirely wild in the mountains of Lapland, and when domesticated they are also the only livestock of the Lapps.
[DESCR.] Female and male reindeer are both horned, although the antlers of the females are smaller than those of the males. In the other cervid species the female has no horns. Ruminates just as the other species of its genus; feeds especially on lichens during winter.
There is a description of the reindeer in *Amoenitat. Acad.* vol. 4, p. 144.

42. CERVUS *dama* [*Dama dama* (Linnaeus, 1758). Eng. Fallow deer, Sw. Dovhjort], horns branched, flattened, at tip palmate. *Fn.* 40.
Bell. Itin. Clus. 57. Dama.
Gesn. Quadr. 84. Dama vulgaris platyceros.
Aldr. Bisulc. t. 741. Dama.
Jonst. Belg. t. 31. Dama.
Raj. Quadr. 81. Cervus platyceros.
In Sweden: Dof, Dofhiort.
Lives in the King's enclosures[80] and those of the noblemen and also sometimes in forests.

43. CERVUS *capreolus* [*Capreolus capreolus* (Linnaeus, 1758). Eng. European roe deer, Sw. Rådjur], horns branched, smoothly rounded, erect, at tip bifid. *Fn.* 41.
Gesn. Quadr. 64. Capra, Capreolus sive Dorcas.
Aldr. Bisulc. 738. Caprea Plinii. Capreolus.
Jonst. Quadr. t. 33. Capreolus marinus.
t. 33. Capriolus.
Charl. Onom. 9. Dorcas.
Raj. Quadr. 89. Caprea plinii, Capreolus vulgo.
In Sweden: Rådjur.
Inhabits forests, less common today than previously.

Capra

44. CAPRA *hircus* [*Capra hircus* Linnaeus, 1758. Eng. Goat or Domestic goat, Sw. Get], horns carinate, arcuate. *Fn.* 42.
Gesn. Quadr. 57. Capra.
Aldr. Bisulc. 619. Caper.
Jonst. Quadr. 27. Hircus.
Charl. Onom. 7. Hircus domesticus.
Raj. Quadr. 77. Capra domestica.

[80] See no. 21.

In Sweden: Get.

Often kept as a domesticated animal; feeds on small branches of shrubs.

Mutilation of feet so that it cannot jump over fences. *It. Wgoth.* 117.[81]

Ovis

45. OVIS *aries* [*Ovis aries* Linnaeus, 1758. Eng. Domestic sheep, Sw. Får], horns flattened, crescent-shaped. *Fn.* 43.

Aldr. Bisulc. 370. Ovis.

Gesn. Quadr. 138. Ovis.

Jonst. Quadr. 38. Ovis.

Raj. Quadr. 73. Ovis domestica.

Charl. Onom. 6. Ovis.

In Sweden: Får.

Found ubiquitously, domesticated. Lives especially in dry and very sterile regions. Especially enjoys eating sheep fescue.

There is a description of the sheep in *Amoen. Acad.* vol. 4, p. 169.

Bos

46. BOS *taurus* [*Bos taurus* Linnaeus, 1758. Eng. Cow or Domestic cow, Sw. Nötkreatur], horns smoothly rounded, curved outwardly; dewlaps loose. *Fn.* 44.

Charl. Onom. 5. Bos domesticus.

Aldr. Bisulc. 13. Bos.

Gesn. Quadr. 25. Bos.

Raj. Quadr. 70. Bos domesticus.

In Sweden: Ko, Nöt.

Occurs ubiquitously domesticated; the aurochs[82] cannot be found anywhere in our country. Feeds especially on plants growing in marshland.

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[81] Lat. *Castratio pedum.* Linnaeus writes in his *Wästgöta-Resa* that as for goats a small tendon is cut off in the back of the hoof (for July 1), p. 96.

[82] "Urus sylvestris", i.e. *Bos primigenius*, Bojanus 1827, regionally extinct in Sweden 7800 years ago, globally extinct in 1627, last individual in Poland.

VII. BELLUAE

Equus

47. EQUUS *caballus* [*Equus caballus* Linnaeus, 1758. Eng. Horse, Sw. Häst], tail setose all over. *Fn.* 34.

Gesn. Quadr. 132. Equus, Caballus, Equa.

Aldr. Quadr. 12. Equus.

Jonst. Quadr. 1. t. 1. 23. 4. Equus.

Charl. Onom. 2. Equus.

Raj. Quadr. 62. Equus.

In Sweden: Häst.

Lives alongside us, but occurs sometimes wild in Skåne and Gotland; commonly domesticated. The Öland horses originate from an island of the Gothic Sea and are the smallest in the whole world. *Jonst. Quadr.* 20.

Theophrastus' *Hippomannes*: a tongue-shaped object with the appearance of a spleen inside the mouths of foals.[83] When the foal is taken out this is often observed. Old people had much to say about this; it was magic and antiepileptic, etc.

Having been brought out to the pastures at the beginning of summer, the horse often dies suddenly, since it has been killed by lots of gad-flies that live in the ventricle.[84]

VIII. CETE

Monodon

48. MONODON *monoceros* [*Monodon monoceros* Linnaeus, 1758. Eng. Narwhal, Sw. Narval]. *Art. Gen.* 78. *Syn.* 108. *Fn.* 263.

Charl. Onom. 168. Monoceros unicornu marinum.

Schonef. Ichth. 28. Balaenae decimum genus Nahrwal.

Will. Ichth. 42. Monoceros piscis.

Raj. Pisc. 11. Monoceros piscis de genere cetaceo.

Tulp. Obs. l. 4. *Obs.* 59. t. 375. Unicornu marinum.

Dal. Pharm. 413. Monoceros unicornu.

Occurs in the Atlantic Ocean.

OBS. In nature there is no unicorn. Such a tale has its origin in the tooth of this animal, which the ancients believed to be the other horn of the quadruped.

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[83] Lat. *intra os pulli* should be written as *in os pullorum*. See *Fn. Su.* (1746). *Hippomanes* was originally a kind of fleshy excrescence believed to occur in the mouth of a newborn foal and to act as an aphrodisiac (*OED*).

[84] Possibly refers to larvae of certain oestrid flies (*Gasterophilidae*) that live in the gut.

Balaena

49. BALAENA *mysticetus* [*Balaena mysticetus* Linnaeus, 1758. Eng. Bowhead, Bowhead whale or Greenland whale, Sw. Grönlandsval], flexuous nostrils medially on head, without fins on dorsum.

Balaena, fistula medially on head; dorsum acuminate towards tail. *Art. Gen.* 76. *Syn.* 106. *Spec.* 106. *Fn.* 264.

Gesn. Aqu. 114. Balaena vulgo dicta.

Aldr. Cet. 688. Balaena vulgi.

Jonst. Pisc. 152. Balaena vulgaris.

Rond. Pisc. 1. p. 475. Balaena vulgo dicta sive Musculus.

Charl. Onom. 46. Balaena vulgaris.

Schonef. Ichth. 35. Balaena bellonii.

Willugh. Ichth. 35. Balaena bellonii.

Raj. Pisc. 6. Balaena vulgaris edentula, dorso non pinnato.

Dal. Pharm. 414. Balaena.

In Sweden: Grönlands walfisk.

Occurs in the Atlantic Ocean; feeds on jellyfish.

50. BALAENA *physalus* [*Balaenoptera physalus* (Linnaeus, 1758). Eng. Fin whale, Sw. Sillval], nostrils in the middle of head; adipose fin at the end of dorsum.

Balaena, fistula medially on head; pinniform tuberosity at the end of dorsum. *Art. Gen.* 77. *Syn.* 107. *Fn.* 265.

Raj. Pisc. 9. 10. Balaena edentula, corpore strictiore, dorso pinnato.

Will. Ichth. 41. Physeter.

Rond. Ichth. 485. Physeter.

Gesn. Aquat. 723. 851. Physalis bellua sive Physeter.

Aldr. Cet. 689. Physeter.

Jonst. Pisc. 216. Physeter.

Charl. Pisc. 167. Physeter sive Physalus.

In Sweden: Finn-fisk. *Martens Spitsb.* 125.

Occurs in the Norwegian Sea and is eaten by the inhabitants. It tasted almost like sturgeon, which was eaten every day by the inhabitants, when I travelled through Finnmarken, the most northern part of Norway.

Delphinus

51. DELPHINUS *phocoena* [*Phocoena phocoena* (Linnaeus, 1758). Eng. Common porpoise or Harbour porpoise, Sw. Tumlare], body subconiform; dorsum broad; rostrum slightly blunt. *Art. Gen.* 75. *Syn.* 104. *Fn.* 266.
Bellon. Aqu. 16. Tursio.
Gesn. Aqu. 711. Phocaena sive Tursio.
Aldr. Cet. 719. Phocaena sive Tursio.
Jonst. Pisc. 220. t. 41. Phocaena.
Will. Ichth. 31. Phocaena.
Raj. Pisc. 13. Phocaena.
In Sweden: Marswin, Tumblare.
Occurs throughout the seas in general, but it is seldom captured by the Swedes. *It. Gotl.* 198. *Scan.* 116.

52. DELPHINUS *orca* [*Orcinus orca* (Linnaeus, 1758). Eng. Killer whale, Sw. Späckhuggare], rostrum turned upwards; teeth broad, serrate. *Art. Gen.* 76. *Syn.* 106. *Fn.* 267.
Gesn. Aqu. 635. Orca.
Aldr. Cet. 698. Orca.
Jonst. Pisc. 217. Orca.
Rond. Pisc. 483. Orca.
Schonef. Ichth. 53. Orca.
Charl. Onom. 168. Orca.
Will. Ichth. 40. Orca.
Raj. Pisc. 10. Orca.
In Sweden: Löpare.
Occurs in the West Sea.
OBS. Without doubt there are many more fish of this order in the West Sea and in the Northern Sea, about which we have no knowledge since they are rarely caught and are observed dead only by common people and then ignored.

Catodon

53. CATODON *macrocephalus* [*Physeter macrocephalus* Linnaeus, 1758. Eng. Sperm whale, Sw. Kaskelot], dorsum without fins; fistula on neck.
Catodon, fistula on neck. *Art. Gen.* 79. *Syn.* 108. *Fn.* 262.
Clus. Exot. l. 6. c. 17. Cete.
Willug. Ichth. 41. Cete clusio descriptum.
Raj. Pisc. 11. Cete Pot-walfisch batavis maris accolis dictum.
Occurs in the Norwegian Sea.

Class II

AVES

I. ACCIPITRES

Falco

54. FALCO *chrysaëtos* [*Aquila chrysaetos* (Linnaeus, 1758). Eng. Golden eagle, Sw. Kungsörn], cere deep yellow; legs lanate; body variously fuscous and rusty brown; tail black at base, ash-grey, undulate. *Fn.* 56.

Will. Orn. 27. t. 1. Chrysaëtos.

Raj. Av. 6. n. 1. Chrysaëtos.

In Sweden: Örn.

Lives on high and precipitous cliffs. 4 eggs.

DESCR. Body the size of a rather large goose, cloudy rusty brown and fuscous. Head and neck more blackish above. Remiges black; secondaries slightly whitish. Tail rounded. Rectrices black, towards base ash-grey and undulate or cloudy. Anal region rusty brown. Legs rusty brown, covered up to digits. Bill short, tip hooked, black. Moustaches of rictal setae, above of which deep yellow cere, in which there are transverse nostrils.

55. FALCO *albicilla* [*Haliaeetus albicilla* (Linnaeus, 1758). Eng. White-tailed eagle, Sw. Havsörn], cere light yellow; rectrices white, those in the middle black. *Fn.* 58.

Bell. Icon. 15. Pygargus.

Gesn. Av. 205. Pygargus.

Will. Orn. 31. Pygargus sive Albicilla, quibusdam Hinnularia.

Raj. Av. 7. n. 5. Pygargus.

In Sweden: Hafs-Örn.

Occurs ubiquitously in forests.

DESCR. Body brick-red. Feathers of head and neck pointed; margin of feathers whitish or becoming pale. Abdomen dark brown. Remiges black, of which larger ones inwardly white; of these twelve are white towards tip, but outwardly black. Tibiae, bill, and cere deep yellow. The size of a goose. Female is more whitish.

56. FALCO *rusticolus* [*Falco rusticolus* Linnaeus, 1758. Eng. Gyrfalcon, Sw. Jaktfalk],[85] cere, eyelids, and legs deep yellow; body with ash-grey and white undulations; neck white.

Occurs in Sweden.

[85] See no. 64.

DESCR. The size of a domestic hen.[86] Bill blunt. Throat white, without maculae. Body ash-grey above, undulated with white. Neck generally surrounded by a white ring. Body white beneath, scattered with small, cordate, fuscous maculae. Tail rounded with 12 or 13 white and fuscous fasciae. Claws black.

57. FALCO *milvus* [*Milvus milvus* (Linnaeus, 1758). Eng. Red kite, Sw. Röd glada], cere light yellow; tail forficate; body rusty brown; head rather whitish. *Fn.* 59.

Gesn. Av. 610. Milvus.

Aldr. Orn. 368. t. 1. Milvus.

Will. Orn. 41. t. 6. Milvus.

Raj. Av. 17. n. 6. Milvus.

Albi. Orn. 1. p. 4. t. 4. Milvus.

In Sweden: Glada.

Occurs ubiquitously; common.

DESCR. Body rusty brown above and beneath; feathers on the back and above wings, medially with a black macula; towards base wings are white. On head feathers are white, acuminate, with black rachises and whitish tips. Pectus and femora are covered with long rusty brown feathers arising from a black rachis. Primary remiges 10 in number, of which 1–5 are black above, but 6–10 black-rusty brown; all remiges 1–10 becoming white beneath towards rear. Secondary remiges 11–20 blackish above with rusty brown tips, ash-grey beneath; fasciae blackish. Tail long, forcipate, red-brown; 1st remex blackish above outer margin. Legs light yellow; claws black. Bill black; cere pale white yellow.

58. FALCO *gentilis* [*Accipiter gentilis* (Linnaeus, 1758). Eng. Northern goshawk, Sw. Duvhök],[87] cere and legs light yellow; body ash-grey, patterned with fuscous maculae; tail with four blackish fasciae. *Fn.* 60.

Will. Orn. 46. Falco gentilis i.e. nobilis dictus.
45. t. 5. Falco montanus.

Raj. Av. 13. Falco gentilis, i.e. nobilis dictus.
Falco montanus.

In Sweden: Falk.

Occurs in great numbers in the mountains of Dalarna, where it is captured every year by the Germans.

DESCR. The size of a domestic hen[88] or crow.[89] Legs, cere, and irises of eyes light yellow. Body entirely ash-grey with fuscous maculae. Tail ash-grey with four transverse, fuscous fasciae. Feathers of head black, laterally rusty brown. Neck, dorsum, and wings fuscous above with rusty brown tips of feathers, whitish yellow beneath with scattered, oblong, fuscous maculae beneath throat, neck, pectus, and abdomen; maculae yet more slender on femora. Remiges fuscous, naked on the sides, but on anterior side whitish with ash-greyish spots and 5 or 6 fuscous fasciae. All rectrices

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[86] See no. 199.

[87] The Swedish duvhök was first described by Linnaeus in *Syst. nat.* (1758) with the scientific name *Falco gentilis*. This name was used to describe the juvenile duvhök. Later in the same work, he describes the adult duvhök under the name *Falco palumbarius*. Cf. no. 67.

[88] See no. 199.

[89] Linnaeus only refers to *Corvus*, see nos. 85–93.

outwardly and beneath fuscous with 5 or 6 broad, blackish fasciae, equal, indistinct at tip. Rectrices pale whitish yellow beneath, with sparse thin longitudinal fuscous lines.

59. FALCO *subbuteo* [*Falco subbuteo* Linnaeus, 1758. Eng. Eurasian hobby, Sw. Lärkfalk], cere and legs light yellow; head fuscous; nape white; abdomen pale patterned with oblong, fuscous maculae. *Fn.* 64.

Alb. Orn. 1. p. 6 t. 6. Subbuteo.

Rudb. Pict. Dendro-Falco.

Occurs in Skåne. *J. Leche.* Nests in tree holes. It is taught to hunt skylarks.

DESCR. Female: Bill blue; cere light yellow; eyelids[90] deep yellow; iris red. Head dusky black; nape verging on white; throat and sides of head whitish. Abdomen verging on white, with an oblong macula on each feather. Femora rusty brown. Tail beneath whitish and rusty brown. Wings longer than tail.

Remiges bluish black and ash-grey except for the primaries that have black tips and margins verging on white. Remiges 1–20 with 5 to 10 whitish maculae on inner side except for the 21st.

Tail acuminate; remiges maculate beneath except for the two in the middle that are longer and without maculae; 9 maculae in each remex which are pale rusty brown and especially conspicuous on inner side.

Legs naked, deep yellow. All corporeal feathers bluish ash-grey towards base.

60. FALCO *buteo* [*Buteo buteo* (Linnaeus, 1758). Eng. Common buzzard, Sw. Ormvråk], cere and legs deep yellow; body fuscous; abdomen pale with fuscous maculae. *Fn.* 65.

Gesn. Av. 46. Buteo.

Will. Orn. 38. t. 6. Buteo vulgaris.

Raj. Av. 16. n. 2. Buteo vulgaris sive Triorchis.

In Uppland: Quidfogel.

Occurs ubiquitously, abundant at Gottsunda in Uppsala. In the middle of July, the chicks sit on our hedges. Because of its continuous wailing the bird is called "Quidfogel"[91] in Uppland.

DESCR. The size of a domestic hen.[92] Bill and claws black; cere and legs light yellow. The bird's whole head above neck fuscous; feathers rusty brown at margins; whole bird pale whitish yellow beneath, with fuscous, longitudinal maculae of which posterior ones are almost cordate. Iris whitish; nictitating membrane bluish. Remiges blackish; inner side white beneath; of these 1, 2, 3, 4 are without fasciae; the remaining 5 and 6 have fasciae that are darker on inner side and outwardly and inwardly embellished. Rectrices blackish ash-grey, equal, with many rather dark fasciae, which are especially conspicuous above; tip indistinctly rusty brown; rectrices beneath white at base.

Eggs white with a few weakly red-brown maculae.

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[90] With Lat. *palpebrae* Linnaeus means the "orbital ring" (or "eye-ring"), as birds do not have eyelids (only a transparent nictitating membrane).

[91] Eng. "Whimpering bird".

[92] See no. 199.

61. FALCO *tinnunculus* [*Falco tinnunculus* Linnaeus, 1758. Eng. Kestrel or Common kestrel, Sw. Tornfalk], legs and cere light yellow; sides red-brownish with black spots; pectus with fuscous striae; tail rounded. *Fn.* 67.

Gesn. Av. 54. Tinnunculus accipiter.

Aldr. Orn. l. 5. c. 6. Tinnunculus sive Cenchris.

Will. Orn. 50. t. 5. Tinnunculus sive Cenchris.

Raj. Av. 16. n. 16. Tinnunculus.

Alb. Orn. 1. p. 7. t. 7. Tinnunculus.

In Sweden: Kyrko-falk.

Lives on very high towers and walls. 4 whitish eggs with numerous red maculae. Being very audacious it causes severe and extensive damage to doves.[93]

[DESCR.] Male: Head grey-white, striated with very thin, black filaments that are formed from the black rachis of each feather. Bill short, curved, blue-black; upper beak marked with a denticle on each side and lower beak[94] with a sinus. Cere light yellow, just as the naked area around eyes. Throat whitish.

Dorsum and alar tectrices red-brown or rusty brown; every feather marked with a pointed, black macula at tip.

Pectus, belly, and femora rather watery red-brown or rusty brown with black, longitudinal, maculae linear on pectus and oval on abdomen; a great number of scattered maculae on femora.

Pale area without maculae beneath tail. Grey-white area from dorsum to tail.

Tibiae mostly naked, deep yellow.

22 remiges, of which the second is the longest; the rest then becoming gradually shorter; all remiges fuscous above, grey-white beneath and anteriorly without maculae (except for the secondaries that are slightly rusty brown) posteriorly with seven or eight sinuses or whitish maculae.

Rectrices long, lateral, shortish, all grey-white, towards tip marked with a wide, black fascia; all anteriorly without maculae, but in the rear inwardly marked with eight black, rather broad maculae, except for the 2 feathers in the middle, which are without these maculae and entirely grey-white, with the exception of the fascia at tip, which is black as in the others.

Alar tectrices white with small, black maculae beneath.

Female: The size of a dove.[95] In all respects the same as the male, but colour of tail especially variable and body darker.

12 rectrices, rusty brown, ending at tip with a large, black macula; each marked with 9 or 10 transverse, black lines, of which 6. 6. or the ones in the middle do not become white at the outermost part of the tip, as do the rest 1, 2, 3, 4, 5.

62. FALCO *lanarius* [*Falco biarmicus* Temminck, 1825. Eng. Lanner falcon, Sw. Slagfalk], cere deep yellow; legs and bill blue; body with black, longitudinal maculae. *Fn.* 61.

Gesn. Av. 76. Lanarius.

Aldr. Orn. l. 7. c. 10. Lanarius gallorum.

Will. Orn. 48. Lanarius cujus mas Tertiarius.

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93 Linnaeus only refers to *Columba*, see nos. 207 and 208.

94 Lat. *maxilla superior* and *maxilla inferior*, resp.

95 Linnaeus only refers to *Columba*, see nos. 207 and 208.

Raj. Av. 15. n. 13. Lanarius.
Alb. Orn. 2. p. 7. t. 7. Lanarius.
Inhabits forests; a rather rare bird; migrates.
DESCR. Dorsum and wings rusty brown. Head and the whole body whitish ash-grey, underneath marked with black, longitudinal maculae. Tail long with opposite whitish maculae. Tibiae covered beyond the middle. Legs blue. Bill bluish. Hence very distinct from *Falco italicus*.

63. FALCO *haliaetus* [*Pandion haliaetus* (Linnaeus, 1758). Eng. Osprey, Sw. Fiskgjuse], legs and cere blue; body fuscous above; white beneath; head white. *Fn.* 57.
Gesn. Av. 74. Falco, cui pedes caerulei, Cyanopoda.
Aldr. Orn. l. 2. c. 3. Haliaetus.
l. 2. c. 7. Morphnos.
Will. Orn. 37. t. 6. Balbusardus.
Raj. Av. 16. n. 3. Balbusardus anglorum.
In Sweden: Blåfot, Fisk-örn.
Lives on the ground amongst the reeds of lakes. 4 eggs, white, elliptical, large. Feeds on fish.
DESCR. Cere bluish. Iris light yellow. Nostrils oblong. Legs bluish; outermost digit retrorse as if revolving. Body of a fuscous colour above, except for the white head. Body entirely white beneath; digits rounded fairly smoothly beneath.

64. FALCO *gyrfalco* [*Falco rusticolus* Linnaeus, 1758.[96] Eng. Gyrfalcon, Sw. Jaktfalk], cere blue; legs deep yellow; body fuscous, with ash-grey fasciae; tail white-sided. *Fn.* 62.
Rudb. Pict. Falco albo-cinereus viridis, pedibus luteis.
Will. Orn. 44. Gyrfalco.
Raj. Av. 13. n. 3. Gyrfalco.
Occurs around us, but rather rare; predatory on doves.[97]
DESCR. Dorsum blackish ash-grey. Belly whitish ash-grey with transverse maculae. Legs deep yellow. The size of a cock.

65. FALCO *apivorus* [*Pernis apivorus* (Linnaeus, 1758). Eng. European honey buzzard, Sw. Bivråk], cere black; legs semi-naked, light yellow; head ash-grey; caudal fasciae ash-grey; tip of tail white. *Fn.* 66.
Will. Orn. 38. t. 3. Buteo apivorus sive vespivorus.
Raj. Av. 16. n. 2. Buteo apivorus sive vespivorus.
Alb. Orn. 2. p. 8. t. 8. Accipiter palumbarius.
In Sweden: Slaghök.
Inhabits forests. Eggs ash-grey with dark maculae.

[96] See no. 56.
[97] Linnaeus only refers to *Columba*, see nos. 207 and 208.

DESCR. Bill black, cere black, wrinkled; iris of eyes saffron yellow. Head ash-grey. Dorsum dusky rusty brown. Rectrices of tail apically white, then a transverse, black line, and after that a broad ash-grey fascia. Pectus and abdomen white with blackish maculae. Legs light yellow.

66. FALCO *aeruginosus* [*Circus aeruginosus* (Linnaeus, 1758). Eng. Western marsh harrier, Sw. Brun kärrhök], cere fuscous; body grey; vertex, throat, axillae, and legs deep yellow. *Fn.* 63.
Will. Orn. 42. t. 7. Milvus aeruginosus.
Raj. Av. 17. n. 4. Milvus aeruginosus.
Alb. Orn. 1. p. 3. t. 3. Milvus aeruginosus.
In Sweden: Höns-tjuf.
Inhabits forests.
DESCR. Body brick-red. Vertex, throat, and axillae light yellow. Tibiae naked, light yellow.

67. FALCO *palumbarius* [*Accipiter gentilis* (Linnaeus, 1758). Eng. Northern goshawk, Sw. Duvhök],[98] cere black; edge and legs light yellow; body fuscous; rectrices with pale fascia and apically white.
Raj. Av. 18. Accipiter palumbarius.
Occurs in Sweden; hostile to domestic hens.[99]
DESCR. The size of a domestic hen. Body sooty. Head from eye to nape girdled with an indistinct whitish fascia. Body white underneath with copious fuscous and undulating stripes, but beneath throat thin fuscous longitudinal lines. Outermost digit connected to the membrane.

68. FALCO *nisus* [*Accipiter nisus* (Linnaeus, 1758). Eng. Eurasian sparrowhawk, Sw. Sparvhök], cere green; legs light yellow; pectus whitish, undulated with fuscous; tail with blackish fasciae. *Fn.* 68.[100]
Albin. Orn. 3. p. 4. t. 4. Accipiter fringillarius.
Gesn. Av. 51. Falco fringillarius.
Alb. Orn. 1. p. 5. t. 5. Accipiter fringillarius.
Gesn. Av. 52. Accipiter minor mas, quem vulgo Nisum sive Sparverium appellant.
Aldr. Orn. l. 5. c. 2. Accipiter Fringillarius.
Aldr. Orn. 345. Moschetus.
Bell. Ic. 19. 6. Accipiter Fringillarius.
Will. Orn. 51. t. 5. Accipiter Fringillarius sive recentiorum Nisus & Sparverius.
Raj. Av. 18. n. 2. Fringillarius accipiter, recentiorum Nisus & Sparverius.
In Sweden: Sparfhök.
Lives ubiquitously in ancient towers and elsewhere.
DESCR. Tail fuscous, with five black fasciae. Pectus, abdomen, and neck white beneath with transverse, fuscous wavelets. Dorsum and body fuscous above. Legs light yellow. Cere green.

[98] See no. 58 with note.
[99] See no. 199.
[100] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata* p. 560.

Strix

69. STRIX *bubo* [*Bubo bubo* (Linnaeus, 1758). Eng. Eurasian eagle-owl, Sw. Berguv], head long-eared; body red-brown. *Fn.* 45.
Gesn. Av. 234. Bubo primus.
Bell. Av. 25 a. Bubo.
Willugh. Orn. 62. n. 12. Bubo primus.
Alb. Orn. 2. p. 9. t. 9. Bubo.
In Sweden: Uf.
Lives on craggy cliffs in forests, on very high hilltops, towers, and in stony land; preys on hares and mice.
DESCR. Almost the size of the female domesticated goose.[101] Body brick-red tending to red-brown; all thin lines are transverse, undulate, black, rather large longitudinal ones, equally black. Tail longer than wings with sordid fasciae. Wings scattered with black maculae. Tibiae and feet clothed with dense wool as in a hare. Bill black, covered with setae at base, at the position of the waxy fleshy covering.

70. STRIX *scandiaca* [*Bubo scandiacus* (Linnaeus, 1758). Eng. Snowy owl, Sw. Fjälluggla],[102] head long-eared; body whitish. *Fn.* 46.
Rudb. Pict. Bubo scandianus.
Inhabits the mountains of Lapland.
DESCR. The size of a turkey.[103] Body entirely white and scattered with black maculae. It would have been similar to *S. nyctea*,[104] if the eyebrows of this owl had not been formed like ears.

71. STRIX *otus* [*Asio otus* (Linnaeus, 1758). Eng. Long-eared owl, Sw. Hornuggla], head long-eared with six tufts. *Fn.* 47.
Bell. Icon. 25. 6. Asio, Otus.
Will. Ornith. 64. t. 12. Otus sive Noctua aurita.
Raj. Av. 25. n. 2. Otus sive Noctua aurita, Asio latinis.
Alb. Orn. 2. p. 10. t. 10. Otus sive Asio.
In Sweden: Horn-uggla.
Inhabits forests, tree holes, and abandoned houses.

72. STRIX *aluco* [*Strix aluco* Linnaeus, 1758. Eng. Eurasian tawny owl, Sw. Kattuggla],[105] head smooth; body rusty brown; irises jet-black; primary remiges serrate. *Fn.* 48. *It. Oel.* 69.
Will. Ornith. 67. t. 13. Aluco minor.

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[101] See no. 114.
[102] See no. 76.
[103] See no. 198.
[104] See no. 76.
[105] See no. 77.

Raj. Av. 25. n. t. Aluco minor.
Alb. Av. 2. t. 11. Aluco.
Lives in tree holes.
DESCR. Almost the size of a domestic hen.[106] Colour of dorsum, tail, and wings grey. Head with grey, white or black maculae. Behind ears, a black circular segment, which forms a remarkable structure of feathers. White maculae on dorsal sides and in wing coverts. Remiges 1, 2, 3 become gradually shorter and are serrate at outer margin. All remiges 1–24 grey with broad fasciae and sulcate. Rectrices slightly grey here with 5 slightly fuscous fasciae, except for the two in the middle. Abdomen verging on white with oblong grey and black maculae. Legs whitish with blackish spots.

73. STRIX [*Strix* Linnaeus, 1758. Eng. Earless owls or Wood owls, Sw. "Skogsugglor"],[107] head smooth; body deep yellow. *Fn.* 49.
Rudb. Pict. Strix tota flammea.
Occurs in Uppsala; rather rare. *Rudbeck*.
Is it a variety of the preceding species?

74. STRIX [*Strix* Linnaeus, 1758. Eng. Earless owls or Wood owls, Sw. "Skogsugglor"],[108] head smooth; body fuscous; irises of eyes red-yellow. *Fn.* 50.
Rudb. Pict. Noctua major, oculorum iridibus croceis.
Occurs in the north of Sweden.
DESCR. The size of a cuckoo.[109] I have not examined it sufficiently.

75. STRIX *funerea* [*Aegolius funereus* (Linnaeus, 1758). Eng. Boreal owl, Sw. Pärluggla], head smooth; body fuscous; irises of eyes light yellow. *Fn.* 51.
Frisch. Av. 1. 98. Ulula flammeata?
Rudb. Pict. Noctua major, oculorum iridibus pallide luteis.
DESCR. Similar to the previous owl but somewhat larger. The size of a crow.[110] Body entirely sordid ash-grey above with pea-shaped, white maculae. Head girdled with a sordid blackish ring on each side; a dusky whitish inside each ring; inside rings head is whitish, with a tinge of sordid fuscous; irises of eyes pale deep yellow. Bill whitish; claws black.

76. STRIX *nyctea* [*Bubo scandiacus* (Linnaeus, 1758). Eng. Snowy owl, Sw. Fjälluggla],[111] head smooth; body whitish. *Fn.* 54.
Rudb. pict. Noctua scandiana maxima ex albo & cinereo variegata.
Edw. Av. 61. t. 61.
In Sweden: Harfång.
I have discovered that it occurs on the Fullerö estate at Västerås.

[106] See no. 199.
[107] See no. 74.
[108] See no. 73.
[109] See no. 96.
[110] Linnaeus only refers to *Corvus*, see nos. 85–93.
[111] See no. 70.

DESCR. Twice as large as a cock. Whole body almost snow-white. Pectus and abdomen with undulate, transverse, fuscous lines and also alar tectrices coloured in the same way. The snow-white remiges are expanded along the length of the wings with a double row of small maculae that are almost rounded and ash-grey, to which even sometimes a third order of maculae is added. Head almost white, as also the tail, which all the same is marked at random with very small black spots or maculae. It varies with crescent-shaped, fuscous maculae, as in the rest of Sweden; in the mountains of Lapland entirely snow-white.

77. STRIX *stridula* [*Strix aluco* Linnaeus, 1758. Eng. Eurasian tawny owl, Sw. Kattuggla],[112] head smooth; body rusty brown; third remex rather long. *Fn.* 55.

Aldr. Orn. 561. t. 563. Strix.

Will. Orn. 65. Strix.

Raj. Av. 25. n. 2. Strix.

In Sweden: Skrik-Uggla.

Inhabits forests; abundant in Sweden.

78. STRIX *ulula* [*Surnia ulula* (Linnaeus, 1758). Eng. Northern hawk-owl, Sw. Hökuggla], head smooth; body fuscous above with white maculae; rectrices and fasciae whitish. *Fn.* 52.

Gesn. Av. 773. Ulula.

Aldr. Orn. 68. c. 6. Ulula.

Will. Orn. 68. t. 13. Ulula aldrovandi.

Raj. Av. 26. n. 4. Ulula latinis.

Occurs between the cities Piteå and Luleå of Västerbotten.[113]

DESCR. Much in common with the previous species so that it perhaps only differs as to sex or age. Body fuscous above and scattered with rather large, white maculae. Whole bird whitish ash-grey beneath, with transverse, slightly undulating, fuscous lines so that each feather is painted with 5 or 6 fuscous fasciae. Wings fuscous with sparse, white maculae, while the fuscous remiges are characterized by white sides with slightly rounded maculae. Tail measures almost a foot, slender, fuscous, surrounded by 9 or 12 whitish fasciae. Head ash-grey, spotted or with wavelets that are crowded together. Area around temples whitish ash-grey. Both ocular canthi black. From the region of the ears, an oblong, black macula descends all the way to the lower beak[114] and is gradually narrowed; this macula is in turn received by another oblong, ash-grey macula with sparse, black wavelets; then there is also another black macula that is very similar to the first one, which is united with it at the base. Mentum or throat is covered by a small, black macula. Tibiae feathered, ash-grey, covered with pale lines. Claws strongly pointed, pale blackish. The size of a crow.[115]

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[112] See no. 72.

[113] Today Luleå is situated in Norrbotten, which landscape did not exist in Linnaeus's days when everything opposite Österbotten was in fact Västerbotten.

[114] Lat. *maxilla inferior.*

[115] Linnaeus only refers to *Corvus*, see nos. 85–93.

79. STRIX *passerina* [*Glaucidium passerinum* (Linnaeus, 1758). Eng. Eurasian pygmy owl, Sw. Sparvuggla], head smooth; body fuscous; five rows of remiges maculate with white. *Fn.* 53.

Gesn. Av. 620. Noctua.

Aldr. Orn. l. 8. c. 7. Noctua.

Will. Orn. 69. t. 13. Noctua minor & minima.

Raj. Av. 26. n. 6. Noctua minima.

Alb. Orn. 2. p. 12. t. 12. Noctua minima.

Lives in tree holes. 4 spotted eggs.

DESCR. The size of the blackbird.[116] Whole body dusky ash-grey above, with whitish spots, but entirely whitish beneath with longitudinal, fuscous maculae. Wings with white maculae beneath, arranged in 5 rows, of which outermost are smaller. Wings outwardly with whitish spots, arranged in 5 or 6 rows. Tail with 4 transverse, white lines. Head with numerous white spots; temples white. Bill deep yellow, with black vibrissae. Legs whitish, deep yellow beneath; claws black.

Lanius

80. LANIUS *excubitor* [*Lanius excubitor* Linnaeus, 1758. Eng. Great grey shrike, Sw. Varfågel], tail wedge-shaped; sides white; dorsum grey-white; wings black with white macula.

Ampelis, bluish, wings and tail blackish. *Fn.* 181.

Will. Orn. 53. t. 10. Lanius cinereus major.

Raj. Av. 18. n. 3. Lanius sive Collurio cinereus major.

Alb. Orn. 2. p. 12. t. 13. Lanarius cinereus major.

Among hunters: Warfogel.

Occurs ubiquitously where there are trees; less abundant. The falconers use this bird to lure falcons.

DESCR. The size of the blackbird.[117] Head and dorsum grey-white. Long, black macula from bill through eyes to ears. Throat and whole of body white beneath.

Remiges 1–9 black, from base to middle white. Remex 10 similar to primaries but white only on inner side beneath middle. Remiges 11–13 similar to primaries. Tail wedge-shaped. Rectrices black medially except for the outermost tips. The more exterior are the lateral rectrices the more they are white at base and tip, just as the outermost ones are only black medially.

81. LANIUS *collurio* [*Lanius collurio* Linnaeus, 1758. Eng. Red-backed shrike, Sw. Törnskata], tail wedge-shaped; dorsum grey; four rectrices unicoloured medially; bill blunt.

Ampelis, dorsum grey; longitudinal macula at eyes. *Fn.* 180.

Will. Orn. 54. Lanius tertius.

Raj. Av. 18. Lanius minor rufus sive tertius aldr.

Alb. Orn. 2. p. 14. Lanarius tertius.

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[116] See no. 220.

[117] See no. 220.

Occurs on bushes in meadows. 6 eggs, white, rather blunt at extremity, with a dusky red-brownish circle.

DESCR. Bill conical, cultrate. Upper beak[118] longer, emarginate at tip on each side. Head and uropygium grey-white. Dorsum grey or red-brown tending to brick-red. Belly from throat to end of sternum, as are sides of body, watery reddish white. Belly white behind of sternum. Black line from frons and base of bill through eyes to ears; above this line a minor white line. Remiges blackish; 3, 4, 5, 6, 7, 8 very lightly white at base; hence white macula of wings. Rectrices black, but from base to the middle, just as all are also white at outermost tips, except for those four in the middle that are entirely black. Legs black. Bill black. Tectrices of nostrils black; faux white. Tongue bifid, lacerate. Hence it is not a kind of the northern wheatear[119] or wagtails.[120] The size of the Eurasian bullfinch.[121]

Female enjoys her colour, which is different from that of the male.

Raj. Av. 19. n. 5. Lanius minor.

Alb. Orn. 2. p. 14. t. 15. Lanarius tertius femina.

DESCR. Bill the size and appearance as the preceding species, also regarding habitat. Head grey; dorsum grey brick-red with transverse, thin black lines, one in every feather near tip. Belly and pectus to throat verging on white and appearing as a mixture of deep yellow with abundant, undulating thin lines. Remiges blackish, without maculae. Rectrices grey, but white at margin and tip, except for the 4 in the middle that are unicoloured. Outermost feathers of rectrices solitary, shortish, just as those of the preceding species. Hence the male has rectrices that are black at base and white at tip, and in the middle four unicoloured ones. Female with ash-grey rectrices, white at margin and tip; the four in the middle without maculae.

82. LANIUS *garrulus* [*Bombycilla garrulus* (Linnaeus, 1758). Eng. Bohemian waxwing, Sw. Sidensvans], secondary remiges ending with membranous tips; tail undivided.

Ampelis, some remiges ending with membranous tips. *Fn.* 179.

Gesn. Av. 703. Garrulus bohemicus.

Jonst. Orn. 44. Garrulus bohemicus gesneri, Ampelis aldr.
t. 43. Picae glandariae genus.
t. 17. Picae glandariae species alia.

Will. Orn. 90. t. 20. Garrulus bohemicus.

Raj. Av. 85. Garrulus bohemicus.

Alb. Orn. 2. p. 25. t. 126. Garrulus bohemicus.

In Sweden: Sidenswantz. In Uppsala: Snötuppa.

Inhabits forests; appears at the beginning of winter; migrates or build nests in the northern countries during summer.

DESCR. Bill black, convex. Upper beak[122] longer, curved. Both tips emarginate on each side. Tongue cartilaginous, pointed, bifid. Head rusty brown with longish feathers towards nape. White line at corner of mouth. Whole body ash-grey, but towards head more chestnut-coloured. Throat, temples

[118] Lat. *maxilla superior.*

[119] See no. 254.

[120] Linnaeus only refers to *Motacilla*, see nos. 244–264.

[121] See no. 225.

[122] Lat. *maxilla superior.*

or the area round eyes, tectrices of nostrils, bill, legs, remiges, and rectrices all black. Lower caudal tectrices (in some birds frons and area beneath eyes) grey. When erected the longish tail feathers are tufted. Rectrices black, equal with light yellow tips; costa reddish; caudal tectrices dusky saffron yellow or ash-grey above, rusty brown beneath. Remiges black, of which 1, 2, 3, 4 are anteriorly white at tip; 5, 6, 7, 8 anteriorly pale whitish yellow at tip; 10, 11, 12, 13, 14, 15, 16 anteriorly white at tip; 17–18 without maculae, but 11, 12, 13, 14, 15, 16 end with an oblong, scarlet membrane. Wings of tectrices black, the larger anterior feathers of which have white tips. Differs from the thrush[123] through its shorter bill and no vibrissae. But is it really a good species of this genus?

83. LANIUS *caudatus* [*Aegithalos caudatus* (Linnaeus, 1758). Eng. Long-tailed tit, Sw. Stjärtmes], tail elongate; head hirsute.

Parus, vertex white; tail longer than body. *Fn.* 243.

Gesn. Av. 642. (*non fig.*) parus caudatus.

Aldr. Orn. l. 17. c. 15. Parus caudatus sive monticola.

Merr. Pin. 178. Parus caudatus.

Gesn. Av. 642. *f. infim.* Parus caudatus.

Will. Orn. 176. t. 43. Parus caudatus.

Raj. Av. 74. n. 8. Parus caudatus.

Alb. Orn. 2. p. 53. t. 57. f. 1. Parus caudatus.

In Sweden: Ahltita.

Inhabits alder thickets. Nest oval, open on lowest side.

DESCR. Head most lightly hirsute and white, just as pectus. Belly flesh-coloured. Tail long, black. Wings variegated with blue, black, and white; black flection between neck and dorsum. Dorsum fuscous with black maculae. A most beautiful bird.

84. LANIUS *biarmicus* [*Panurus biarmicus* (Linnaeus, 1758). Eng. Bearded tit, Sw. Skäggmes], vertex grey-white; tail longer than body. [*Fn.* 243.]

Edw. Av. 55. *l.* 55. Lanius minimus.

Alb. Av. 1. p. 46. *l.* 48. Parus beardmanicus.

Occurs in Skåne. I have not seen it. I am therefore in doubt as to whether it is the same as the penduline tit or not.

[DESCR.] *Mr Leche* has seen this bird in Skåne and also depicted it; it was less beautiful than the previous species, since it entirely lacked the blue colour. Head, throat, and pectus verging on white; nape black; dorsum blackish bronze; abdomen pale bronze. All remiges blackish, but 12–19 white at outer margin; nevertheless, the whiteness is very broad on the 18th. Rectrices black, but 1, 2, 3 white on outer side.

[123] Linnaeus only refers to *Turdus*, see nos. 215–221.

II. PICAE

Corvus

85. CORVUS *corax* [*Corvus corax* Linnaeus, 1758. Eng. Common raven or Northern raven, Sw. Korp], jet-black; dorsum bluish; tail almost rounded. *Fn.* 69.

Gesn. Av. 334. Corvus.

Jonst. Orn. 38. t. 16. Corvus.

Aldr. Orn. l. 12. c. 1. Corvus.

Will. Orn. 82. t. 18. Corvus.

Raj. Av. 39. n. 1. Corvus.

Alb. Orn. 2. p. 19. t. 20. Corvus.

In Sweden: Korp.

Inhabits dense forests; nests on top of trees, especially on branches of spruce trees. Eats carrion, the scent of which, although being very remote, it perceives with remarkable sagacity. It is considered a holy animal in our country and is not intentionally killed by anybody. In Småland and in the southern provinces, it flies high in the bright sky and brings out a peculiar cry or sound ("clong"), which is heard from far away.

DESCR. Almost the size of a cock. Body entirely jet-black; dorsum vaguely bluish. 20 remiges, of which first two slightly shorter. Rectrices equal.

86. CORVUS *corone* [*Corvus corone* Linnaeus, 1758. Eng. Carrion crow, Sw. Svartkråka], bluish jet-black; tail rounded; rectrices pointed.

Raj. Av. 39. n. Cornix.

Alb. Av. 2. p. 20. 1. 21. Cornix.

Occurs in Västerbotten. It was once killed by *Mr Adlerheim*. It is a rare bird in our regions.

[DESCR.] It is entirely bluish jet-black even at the abdomen, which is not the case with the raven;[124] feathers to bill worn down.

87. CORVUS *frugilegus* [*Corvus frugilegus* Linnaeus, 1758. Eng. Rook, Sw. Råka], jet-black; frons ash-greyish. *Fn.* 70. *It. Oel.* 67.

Aldr. Orn. l. 12. c. 3. Cornix frugilega.

Will. Orn. 84. t. 18. Cornix frugivora & frugilega.

Raj. Av. 39. n. 3. Cornix frugilega.

Alb. Orn. 2. p. 21. t. 22. Cornix frugilega.

In Öland: Roka.

Occurs in Öland, in the fields of Skåne, and in the southern maritime provinces; nests in trees. A bird destructive to sowed corn; feeds on crops.

[124] Linnaeus only refers to *Corax*, see no. 85.

88. CORVUS *cornix* [*Corvus cornix* Linnaeus, 1758. Eng. Hooded crow, Sw. Gråkråka], ash-greyish; head, throat, wings, and tail black. *Fn.* 71.
Aldr. Orn. l. 2. c. 4. Cornix cinerea frugilega.
Will. Orn. 84. t. 77. Cornix cinerea frugilega.
Raj. Av. 39. n. 4. Cornix cinerea frugilega.
Alb. Orn. 2. p. 22. t. 23. Cornix cinerea.
In Sweden: Kråka.
Inhabits small woods and lives commonly among alders; lays four eggs; eats insects and various carcasses; flies in flocks; feeds on larvae; hence it cleanses pastures and meadows from worms that consume the hay. It is a harbinger of coming storms and wind in maritime regions. Also eats clams and heads of frogs. Eradicates the grasses beneath which the larvae hide. Turned towards the wind it sits looking around.
DESCR. Head, throat, wings, tail, legs, and bill are black. All the rest ash-grey; black beneath from throat to the middle of the neck.

89. CORVUS *monedula* [*Coloeus monedula* (Linnaeus, 1758). Eng. Eurasian jackdaw or Eurasian crow, Sw. Kaja], frons fuscous; back of head quite grey-white; frons, wings, and tail black. *Fn.* 72.
Will. Orn. 85. t. 19. Monedula sive Lupus.
Raj. Av. 40. n. 5. Monedula sive Lupus.
Alb. Orn. 1. p. 14. t. 14. Monedula
In Sweden: Kaja.
Occurs ubiquitously; abundant in villages. Migrates from Småland in the autumn; remains through the winter in Uppland and during winter gathers in flocks overnight in towers. Feeds on crops and carcasses.
DESCR. Bill, frons, throat, wings, tail, legs, remiges, and rectrices black.
Head and behind neck ash-grey.
Iris of the eye snow-white.
Dorsum blackish.
Pectus and abdomen dark ash-grey.

90. CORVUS *glandarius* [*Garrulus glandiarius* (Linnaeus, 1758). Eng. Eurasian jay, Sw. Nötskrika], alar tectrices blue; transverse lines white and black; body variegated with rusty brown. *Fn.* 74.
Gesn. Orn. 700. Pica glandaria 1. Garrulus avis.
Aldr. Orn. l. 12. c. 14. Pica glandaria.
Will. Orn. 88. t. 19. Pica glandaria.
Raj. Av. 41. n. 22. Pica glandaria.
Albin. Orn. 1. p. 16. t. 16. Pica glandaria.
In Sweden: Ållonskrika. In Östergötland: Kornskrika.
Lives commonly among oak-trees.

DESCR. Head grey-rusty brown. Area of scapula, pectus, and abdomen rusty brown. Frons whitish rusty brown, with longitudinal, black maculae. Lower beak[125] outwardly black. In some birds, throat whitish. Remiges black, but 1–9 mostly whitish at outer margin. Remiges 10–14 from base to above the middle snow-white on outer side. All other remiges black, of which 5 are gradually longer than the rest. Wings of tectrices blue on outer side, with transverse, black lines. Tail black, with white tectrices. Bill black. Vibrissae of 5 or 6 black setae on each side. Tongue membranous, bifid.

91. CORVUS *caryocatactes* [*Nucifraga caryocatactes* (Linnaeus, 1758). Eng. Eurasian nutcracker or Spotted nutcracker, Sw. Nötkråka], fuscous with white spots; wings and tail black; rectrices apically white, those in the middle apically worn down.

Corvus, ash-grey, with black tail and wings. *Fn.* 75.

Gesn. Av. 245. Caryocatactes.

Will. Orn. 90. t. 20. Caryocatactes gesneri & turneri.

Raj. Av. 42. n. 5. Caryocatactes.

In Sweden: Nötwecka,[126] Nötkraka.

Inhabits thickets of hazel and oak; feeds on nuts.

DESCR. Body entirely fuscous, with a white obovate macula on each feather towards every tip. Wings black above, shining. Remiges 5–8 with a large marginal, white macula on the inner side. Secondaries only white apically. Uropygium black, without maculae. Area around anus white. Tail almost rounded. Rectrices apically white; feathers in the middle apically worn down.

92. CORVUS *pica* [*Pica pica* (Linnaeus, 1758). Eng. Eurasian magpie, Sw. Skata], variegated with white and black; tail wedge-shaped. *Fn.* 76.[127]

Gesn. Av. 695. Pica.

Lonic. Hist. 343 a. Pica.

Jonst. Orn. 44. t. 17. Pica.

Will. Orn. 87. t. 19. Pica varia sive caudata.

Raj. Av. 41. n. 1. Pica varia sive caudata.

Albin. Orn. 1. p. 15. t. 15. Pica varia caudata.

In Sweden: Skata. In Uppland: Skiura. In Gotland: Skära.

Lives in trees near houses; very common throughout Sweden; however, exiled from the whole of Lapland and Skanör. Builds nests skillfully, which frequently contain 7 eggs each. This bird should not be separated from the genus *Corvus*.

[DESCR.] Head, neck, dorsum, uropygium, anus, femora, bill, and legs jet-black. Pectus, sides, tectrices, and base of wings white. Remiges 1–10 black on outer side but white on lower side. The other black feathers outwardly silky, bluish. Tail wedge-shaped, length of the body. All feathers folded together, manifestly silky, greenish above.

[125] Lat. *maxillae inferiores*.

[126] Nötväcka is the Swedish trivial name of *Sitta europaea* Linnaeus, 1758. See also no. 104.

[127] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

93. CORVUS *infaustus* [*Perisoreus infaustus* (Linnaeus, 1758). Eng. Siberian jay, Sw. Lavskrika], dorsum ash-grey; rectrices red-brown, the two in the middle ash-grey; fascia blackish.

Turdus, with red-brown rectrices; the two in the middle ash-grey; fasciae blackish, those nearest tip ash-grey. *Fn.* 187.

Will. Orn. 145. t. 36. Merula saxatilis.

Raj. Av. 63. n. 3. Merula saxatilis Sturni generis.

Alb. Orn. 3. p. 51. t. 55. Merula saxatilis.

In Sweden: Lappskata, Olycksfogel.[128] In Jämtland: Röd-tiuxa.

Inhabits chaffy forests, especially in Lapland, a landscape rich in forests, where it is a most audacious bird that often snatches the food before us when we are eating.

DESCR. Bill black, thick, short, subtriangular; covered with setae at base, just as is the case with the crows;[129] nostrils ovate, covered with setae. Head fuscous; dorsum palish ash-grey with pinnate feathers, which are sparse and well spaced. 18 remiges fuscous, at base brick-red tending to red-brown; anterior tectrices brick-red tending to red-brown; first three gradually shorter. Tail rounded with shortish sides, as long as the body; it is undivided and brick-red tending to red except for the two ash-grey feathers in the middle; fascia blackish proximally, ash-grey apically on each side; the nearest fascia to this one is barely ash-grey apically. Tail tectrices brick-red tending to red-brown. Sides brick-red. Legs black, with posterior claw sturdy, larger; all claws flattened, and medially emarginate inwardly. Tip of bill emarginate on each side. Tongue emarginate with bifid lobes. The size of a thrush.[130]

Coracias

94. CORACIAS *garulla* [*Coracias garullus* Linnaeus, 1758. Eng. European roller, Sw. Blåkråka], blue; dorsum red; remiges black.

Corvus, dorsum blood-coloured; remiges, black; rectrices green. *Fn.* 73. *It. Scan.* 321.

Gesn. Av. 335. Cornix caerula.

Aldr. Orn. l. 12. c. 18. Garrulus argentoratensis.

l. 12. c. 5. Cornix caerulea.

Will. Orn. 85. t. 20. Cornix caerulea.

Worm. Mus. 296. Cornix caerulea.

Raj. Av. 41. n. 3. Garrulus argentoratensis.

In Sweden: Spansk Kråka. In Småland: Blåkråka. In Skåne: Ållekråka.[131]

Occurs in Småland, Skåne, etc.; eats frogs and dung beetles.

[128] Eng. "Bad luck bird".

[129] Linnaeus only refers to *Corvus*, see nos. 85–93.

[130] Linnaeus only refers to *Turdus*, see nos. 215–221.

[131] Linnaeus is mistaken here. Ålkråka or ålakråka is a common name for skarv (storskarv) in Skåne.

DESCR. It is the most splendid and beautiful of all Swedish birds. Bill black. Base of upper beak[132] minimally concealed by feathers but with a curved tip. Head bronze green, greenish, and watery blue. Orbits of eyes naked. Eyebrows slightly branching. Dorsum grey-rusty brown. Abdomen and wings watery bluish beneath. Uropygium weakly violet-blue. Base of wings very bright blue. Upper tectrices watery blue. Remiges black, anteriorly dark bluish and at base blue. Rectrices equal, greenish blue, outwardly rather whitish, but 1,1 apically black and 6,6 of a uniform colour. Tongue lacerate.

95. CORACIAS *oriolus* [*Oriolus oriolus* (Linnaeus, 1758). Eng. Eurasian golden oriole, Sw. Sommargylling], light yellow; wings and tail black.

Ampelis, light yellow; limbs black; outer rectrices posteriorly light yellow. *L. Act. Holm.* 1750. p. 127. t. 3. f. 5. *descr.*

Aldrov. Orn. 854. t. 857. 858.

Will. Orn. t. 36. f. 6. Picus nidum suspendens.

Raj. Av. 68. Picus nidum suspendens.

Occurs in Finland, where this specimen was killed and then brought to me. It is a very rare bird for us.

Cuculus

96. CUCULUS *canorus* [*Cuculus canorus* Linnaeus, 1758. Eng. Common cuckoo, Sw. Gök], tail uniformly blackish, punctate with white. *Fn.* 77.

Gesn. Av. 363. Cuculus.

Aldr. Orn. l. 5. c. 107. Cuculus.

Bell. Ic. 22. 6. Cuculus.

Will. Orn. 62. t. 77. Cuculus.

Raj. Av. 23. Cuculus.

Alb. Orn. 1. p. 8. t. 8. Cuculus.

In Sweden: Gjök. In Lapland: Geecka.

Occurs in the whole of Sweden, abundant. Usually reared by the white wagtail.[133] Sings on dry branches of trees; feeds on larvae of Lepidoptera; captures small birds in the autumn. Attacks aviaries; kills the pine grosbeak[134] and chicks of peafowl; hence it is killed with rifles.

DESCR. Cuckoos vary in colour. I am still in doubt regarding sex,[135] age, and species. I have described it in the following way:

1732. V:16: Head dark grey-white, as in the neck; whole dorsum covered on both sides with grey, interlucent feathers. Neck of an ash-grey colour beneath, with undulate lines, mixed with deep yellow. Uropygium of the same colour as dorsum but more watery. Belly whitish with transverse, dusky blackish. Similarly feathers beneath tail verging on white but still even paler. Tail fairly long

[132] Lat. *mandibula superior.*

[133] See no. 252.

[134] See no. 223.

[135] See *Fn. Su.* (1761), *Errata*, p. 560.

with respect to body, with 12 blackish rectrices, apically white; white maculae from the margin towards the middle. Wings long, dusky blackish above and dark grey-white beneath with small, transverse, white lines. Remiges blackish. Bill slightly curved. Upper beak[136] longish, black; lower beak[137] paler and weakly greenish. Nostrils wide open, prominent, naked. Tibiae anteriorly partly concealed and light yellow, just as are the feet. Tongue sagittate, plain. Two anterior claws, and as many posteriorly. Eyelids light yellow with margin naked. There was once a female, in which there were two eggs the size of a large pea seed; its belly was full of pilose caterpillars.

1733. VI:2 and IX:16. Male. Similar to the preceding description in everything, but differs regarding bill, which has a deep yellow, loose, soft membrane from bill to the angle of mouth, just as is the case with the chicks of the genus Passer (it might therefore be a chick of this year). Head ash-grey or grey-white without any grey maculae, just as also dorsum, which all the same, placed at a certain angle, shone towards the light. Whole neck, even beneath, grey-white without maculae. Belly darker than is the case with the preceding species; tail whitish yellow beneath. Legs light yellow.

1734. VII:7. Head, dorsum, and whole body grey-white above; each feather with a blackish ash-grey tip terminating in a small white line; disc embellished with one or two brick-red fasciae. Remiges blackish ash-grey, with seven or more white maculae; throat blackish. Neck and pectus verging on white beneath, with transverse, whitish ash-grey lines. Belly white. Rectrices black with white maculae and variegated with darkish brick-red. Upper tail tectrices concolorous with those of dorsum; lower white with black maculae. Tibiae semi-naked, light yellow as are also feet and claws. Bill black, inwardly light yellow. Tongue entire, not bifid. This bird was killed while singing. Female has fuscous lines on the sides of neck, lacking in male.

Jynx

97. JYNX *torquilla* [*Jynx torquilla* Linnaeus, 1758. Eng. Eurasian wryneck, Sw. Göktyta].

Cuculus, palish grey; rectrices black; fasciae undulate. *Fn.* 78.

Bell. Ic. 76. a. Jynx, Torquilla. Turbo, Sisopigis.

Gesn. Av. 573. Jynx.

Aldr. Orn. l. 12. c. 42. Jynx sive Torquilla.

Jonst. Orn. t. 42.

Will. Orn. 95. t. 22. Jynx sive Torquilla.

Raj. Av. 44. n. 8. Jynx sive Torquilla.

Rudb. Lapp. 66. t. 66 Jynx.

Alb. Orn. 1. p. 21. t. 21. Torquilla.

In Sweden: Gjöktyta. In Småland: Saed-Gjök.

Lives in decaying tree trunks where it picks out worms; melodious in spring. Neck twisting in all directions, indicative of hawks approaching sparrows.

DESCR. O. *Rudbeck* has given an excellent and most laudable drawing of this bird in *Lapp.* 1. c. Remiges fuscous, outwardly with 6 or 7 equal, rusty brown fasciae. 10 rectrices, equal, scattered with blackish spots; 4 or 5 black fasciae, undulate.

[136] Lat. *maxilla superior.*

[137] Lat. *maxilla inferior.*

Picus

98. PICUS *martius* [*Dryocopus martius* (Linnaeus, 1758). Eng. Black woodpecker, Sw. Spillkråka], black; cap scarlet. *Fn.* 79.

Gesn. Av. 708. Picus maximus vel niger.
Aldr. Orn. l. 12. c. 31. Picus maximus.
Will. Orn. 92. t. 21. Picus niger maximus.
Raj. Av. 42. n. 1. Picus niger maximus.
Alb. Orn. 2. p. 26. t. 27. Picus maximus niger
In Sweden: Spillkråka, Tillkråka. In Gotland: Toile.
Lives in ancient, dry trees.

DESCR. Body entirely jet-black; oblong; a purple macula from the base of bill to occiput. Bill and legs bluish ash-grey.

99. PICUS *viridis* [*Picus viridis* Linnaeus, 1758. Eng. Eurasian green woodpecker or European green woodpecker, Sw. Gröngöling], green; vertex scarlet. *Fn.* 80.

Gesn. Av. 710. Picus viridis.
Aldr. Orn. l. 12. c. 34. Picus viridis nostras.
Will. Orn. 93. t. 21. Picus viridis.
Raj. Av. 42. n. 2. Picus viridis major.
Alb. Orn. 1. p. 18. t. 18. Picus viridis.
In Sweden: Wedknarr, Grönspik, Gröngjöling.
Lives in withered trees.

DESCR. Varies from purple vertex with black maculae to purple vertex with white maculae, and finally to purple vertex without maculae.

Bill pointed, flattened; upper beak[138] carinate, trigonal. Nostrils oblong, covered with setae. Tongue cylindrical with a pointed tip, tendinous, retracted inside cylindrical tunic. Head and neck are whitish with blackish spots, which are blacker around the beaks[139] and arranged in lines. Vertex is purple with many ash-grey maculae having purple or blood-coloured tips; purple line on each side beneath sinus of mouth. Dorsum, just as alar tectrices, green continuously from middle of dorsum to outermost part of tail. Tectrices greenish deep yellow. Belly white with transverse, undulate, black spots, which are imbued with greenness.

Remiges black above with bright white maculae; blackish beneath with maculae verging on white and arranged in rows. Tail is blackish with a mixture of sordid green towards base. This description was of a female.

Male differs from female in the sense that temples and area of eyes are black. Throat white. Pectus and belly weakly green, variegated with undulations.

[138] Lat. *maxilla superior.*

[139] Lat. *maxillae.*

100. PICUS *major* [*Dendrocopos major* (Linnaeus, 1758). Eng. Great spotted woodpecker, Sw. Större hackspett], variegated with white and black; anus and occiput red.

Picus, variegated with white and black; vertex black; three lateral variegated-white rectrices on each side. *Fn.* 81.

Gesn. Av. 708. Picus varius major.

Aldr. Orn. l. 12. c. 32. Picus major.

Will. Orn. 94. t. 21. Picus varius major.

Raj. Av. 43. n. 4. Picus varius major.

Alb. Orn. 1. p. 19. t. 19. Picus varius major.

In Sweden: Gyllenrenna.

Lives in trees in the countryside.

DESCR. Bill with upper beak,[140] carinate, pointed, and with angled sides; tip of bill flattened. Tongue very long with a thin bony tip. Head black; frons pale; temples white; blackness extending from bill to nape. Male marked with scarlet maculae on occiput. Neck white from back to middle. Remiges on both sides black with 3 to 6 white maculae. 10 jet-black rectrices, of which 1, 2, 3 become white on each side. Beneath tail it is scarlet.

101. PICUS *medius* [*Dendrocopos medius* (Linnaeus, 1758). Eng. Middle spotted woodpecker, Sw. Mellanspett], variegated with white and black; anus and vertex red.

Picus, variegated with white and black; three lateral rectrices variegated with a white tip. *Fn.* 82.

Will. Orn. 94. t. 21. Picus varius minor.

Raj. Av. 43. n. 5. Picus varius minor.

Gesn. Av. 708. Picus varius minor.

Aldr. Orn. l. 12. c. 33. Picus varius minor.

Occurs ubiquitously along with the preceding species.

DESCR. Similar to the preceding species but smaller. Head covered with a large, scarlet macula, which is extended anteriorly between eyes. Occiput with a long, triangular macula, which is not extended to bill; throat and neck, just as pectus, white beneath; temples whitish ash-grey. Tail black, bifid. 10 rectrices, of which 5 black; 1, 2, 3 more blunt; they are fuscous beneath; tip varied with white and black; the woodpecker is red beneath tail. Wings black; remiges embellished with 3 to 6 white maculae on each side.

The middle woodpecker matches the larger woodpecker through the white frons and the large white macula on the wing coverts. The larger woodpecker differs clearly through the fact that the head of the middle woodpecker is entirely scarlet above. But only the occiput of the male larger woodpecker is scarlet. Pectus of the middle woodpecker has longitudinal, fuscous striae, which are not found in the larger woodpecker. Abdomen of the middle woodpecker less saturated blood-red.

[140] Lat. *maxilla superior.*

102. PICUS *minor* [*Dendrocopos minor* (Linnaeus, 1758). Eng. Lesser spotted woodpecker, Sw. Mindre hackspett], variegated with white and black; anus brick-red.

Picus, variegated with white and black; three lateral rectrices, half black *Fn.* 83.

Raj. Av. 43. Picus varius tertius.

Alb. Orn. 1. p. 20. t. 20. Picus varius minor.

Occurs along with the preceding species in Skåne. *Mr Leche.*

DESCR. The size of a sparrow. Head black between eyes towards nape; the nape is connected with the black head through a thin line from the back of the neck. Vertex either white or scarlet between eyes. Frons grey. Throat, pectus, and abdomen grey. White macula above eyes. Temples grey. Wings black with six rows of maculae verging on white. Rectrices 4, 5 black; 1, 2, 3 half black, some with black maculae.

When it rests with wings folded upwards, these are embellished with white fasciae. Pectus interspersed with thin fuscous lines, as in the middle woodpecker. Sinciput scarlet, but this is neither the case with occiput nor frons.

103. PICUS *tridactylus* [*Picoides tridactylus* (Linnaeus, 1758). Eng. Eurasian three-toed woodpecker, Sw. Tretåig hackspett], variegated with white and black, tridactyl. *Fn.* 84.

Acad. Stock. 1740. p. 222. Picus pedibus tridactylis.

Edw. Av. 114. t. 114. Picus tridactylus.

Inhabits the mountains of Dalarna.

DESCR. I have inserted a description in the journals of the Academy in Stockholm,[141] and give here a summary: Same size as the immediately preceding species and also of the same appearance. Body black, maculate; a white line extending on each side from sinus of mouth towards nape, where it merges; it then descends dilated through neck and dorsum continuously down to tail. Pectus and abdomen vary with variable amounts of black and white beneath. Remiges black above; 3 or 5 with rows of very small, white maculae, but remiges ash-grey beneath; 7 or 8 with rows of larger, white maculae. Upper alar tectrices black. Tail short, stiff, with jet-black rectrices; outermost maculate with white on each side. Vertex saffron yellow. Bill angled, with a flattened, wedge-shaped tip. Feet tridactyl consisting of two anterior, equal digits, except for the inner one, which is slightly smaller; only one posterior digit; there are not two, as is the case with the other species, and this single one is longer and thicker.

Sitta

104. SITTA *europaea* [*Sitta europaea* Linnaeus, 1758. Eng. Eurasian nuthatch, Sw. Nötväcka], rectrices black, four lateral ones with tips inwardly white. *Fn.* 182.

Gesn. Av. 711. Picus cinereus sive Sitta.

Aldr. Orn. l. 12. c. 38. Sitta.

Will. Orn. 98. t. 23. Sitta sive Picus cinereus.

Raj. Av. 47. n. 4. Sitta sive Picus cinereus.

Alb. Orn. 2. p. 27. t. 28. Sitta sive Picus cinereus.

In Sweden: Nötwäcka, Nötpacka.

[141] I.e. *Kungliga Svenska Akademiens Handlingar.*

Lives in shelters, walls of houses, and tree trunks.

DESCR. Bill awl-shaped. Tongue lacerate, emarginate. Head ash-grey, marked longitudinally with a jet-black line, the breadth of the bill, from nostrils to nape. Neck, dorsum, upper alar tectrices, and uropygium ash-grey. Throat, pectus, and abdomen white. Lower tectrices of the rectrices and sides of abdomen coloured with rusty brown and white maculae. 17 remiges ash-grey; the first 6 from base to almost the fourth quarter white. Tectrices beneath wing whitish ash-grey with a jet-black macula. Tail entire, flexible. 12 rectrices, of which the four last ones are marked with a white macula dividing the tip vertically in the middle. The two secondaries fuscous, only apically grey-white, but the two medial ones entirely grey-white. *Rinman.*

Upupa

105. UPUPA *epops* [*Upupa epops* Linnaeus, 1758. Eng. Hoopoe or Eurasian hoopoe, Sw. Härfågel], crest variegated. *Fn.* 85.

Bell. Ic. 72. a. Upupa.
Gesn. Av. 776. Upupa.
Aldr. Orn. 17. c. 11. Upupa.
Charl. Onom. 92. t. 93. Upupa.
Will. Orn. 100. t. 24. Upupa.
Raj. Av. 48. n. 6. Upupa.
Jonst. Orn. t. 42. 27. Epops, Upupa.
Alb. Orn. 2. p. 39. t. 42. 43. Upupa.
In Sweden: Härfogel. In Skåne: Popp.

Inhabits very vast forests. Recites its own name with a sound, through which it is easily recognized. Our peasants consider it an omen of war. Lays two ash-grey eggs in tree holes.

DESCR. Bill blackish, slightly turned upwards, convex, flattened, slightly blunt. Double crown (just as the crested, pliable parrot), formed of feathers longer than bill, brick-red, with black tips. Neck and pectus whitish yellow. Remiges 1–10 black, towards base white. Dorsum variegated with black and light yellow. Uropygium white. Tail black with a transverse, white line. Abdomen whitish. Legs weakly purplish. Remiges black. 1st shorter, 2nd to 6th equal with a transverse snow-white fascia. 7th shorter on inner side, with a large, snow-white macula. 8th with three triangular, snow-white maculae at outer margin and one linear macula towards tip. 9th and 10th with four transverse, whitish fasciae. 18th with a white macula at tip. Ten equal, black rectrices; white fascia at base; outermost with a snow-white macula interiorly on each side.

Certhia

106. CERTHIA *familiaris* [*Certhia familiaris* Linnaeus, 1758. Eng. Eurasian treecreeper, Sw. Trädkrypare], grey above, white beneath; ten fuscous remiges each with a white macula. *Fn.* 213.

Gesn. Av. 251. Certhia.
Aldr. Orn. l. 2. c. 44. Certhia.
Jonst. Orn. t. 42. Certhia.

Will. Orn. 100. t. 23. Certhia.
Raj. Av. 47. n. 5. Certhia.
Alb. Orn. 3. p. 24. t. 25. Certhia.
Bell. Ic. 98. a. Certhias, Certhius, Reptatrix.
In Sweden: Krypare.
Lives in tree trunks, from the cracks of which it collects eggs and larvae of insects. Fears people less than do other small birds.
DESCR. Bill thin, arcuate, flattened. Body, dorsum, and tail grey above, with blackish and whitish maculae; body verging on white beneath. Tail long, stiff, slender, wedge-shaped. Rectrices pointed, dusky ash-grey, with rather pale outer margin. Uropygium whitish yellow. Posterior claw the length of a finger and very long. Remiges fuscous; feathers 4–14 medially with transverse, whitish macula. Remiges 1–23 gradually shorter. Tongue cartilaginous, acuminate, arcuate. Nostrils partially covered, without vibrissae.

III. ANSERES

Anas

107. ANAS *cygnus* [*Cygnus cygnus* (Linnaeus, 1758). Eng. Whooper swan, Sw. Sångsvan], bill semi-cylindrical, jet-black; cere light yellow; body white. *Fn.* 88.[142] *It. W:goth.* 143.
Bell. Ic. 30. a. Cygnus, Cycnus.
Gesn. Av. 372. Cygnus.
Aldr. Orn. l. 19. c. 1. Cycnus.
Will. Orn. 212. Cygnus ferus.
Raj. Av. 136. n. 2. Cygnus ferus.
Alb. Orn. 3. p. 31. t. 91. Cygnus.
β *Will. Orn.* 271. t. 69. Cygnus mansuetus.
Raj. Av. 136. n. 1. Cygnus mansuetus.
In Sweden: Swan.
Occurs in Skåne, for example, near Malmö in great numbers, and Ekholmsund,[143] and during summer ubiquitously in the rivers of Lapland. Rarely, it is kept at the estates of noblemen. Cygnets sit on the back of their mother. Catches fish. *It. Scan.* 186. 228.

108. ANAS *cygnoides* [*Anser cygnoides* (Linnaeus, 1758). Eng. Swan goose, Sw. Svangås], bill semi-cylindrical, at base gibbous. *Fn.* 89.
Raj. Av. 138. Anser cygneus guineensis.
Will. Orn. 275. Anser hispanicus, *an potius guineensis?*
In Sweden: Turckisk Gås, Siberisk Gås.

[142] See Ch. *A small fauna of Sweden.*
[143] Nowadays Ekolsund.

Found only with us where it has been brought from abroad.
DESCR. Colour varying. Larger than the domestic goose;[144] guttural thicker and more raucous.

109. ANAS *fusca* [*Melanitta fusca* (Linnaeus, 1758). Eng. Velvet scoter, Sw. Svärta], blackish, with a white macula behind ears and a white alar line. *Fn.* 106. *It. Goth.* 215, 271.
Rudb. Pict. Anas fera nigra.
Will. Orn. 278. t. 70. Anas niger.
Raj. Av. 141. n. 4. Anas niger.
In Sweden: Swärta.
Occurs in the West Sea and in the Baltic Sea.
DESCR. Male: About the size of a rather small goose. Bill of a goose, flesh-coloured, but at base it is black and gibbous with a white macula beneath eyes. Body entirely black. Primary remiges black; secondaries or tectrices white. Tail short. Legs red with a black membrane.
Female: Bill fuscous without a protuberance; margins of beaks[145] lamellate and toothed. Tongue laterally ciliate. Body fuscous with rather pale tips to feathers. Primary remiges 1–10 jet-black; 11 black; 12–20 white with almost blackish tips; 21 very similar to the eleventh feather. Legs red with a palmate, black membrane. Tail short. Round white macula behind eyes; temples whitish.

110. ANAS *nigra* [*Melanitta nigra* (Linnaeus, 1758). Eng. Common scoter, Sw. Sjöorre], gibbous at base of bill; whole body black.
Will. Orn. 280. *l.* 74. Anas niger minor.
Raj. Av. 141. Anas niger minor.
Inhabits the water bodies of Lapland.

111. ANAS *marila* [*Aythya marila* (Linnaeus, 1761). Eng. Greater scaup, Sw. Bergand], black; shoulders undulated with ash-grey; abdomen and alar macula white.
Raj. Av. 142. Fuligula forte gesneri.
Occurs in Lapland. *Mr* C. *Solander.*
DESCR. Barely the size of the mallard.[146] Bill thick. Bill, head, neck, pectus, thorax, tail, and uropygium above and beneath, remiges outwardly, and legs black. But alar macula and abdomen, which is posteriorly undulate, white. First primary remiges black; posterior ones inwardly whitish. Secondaries white and apically black. Dorsum undulate with white and black.

112. ANAS *spectabilis* [*Somateria spectabilis* (Linnaeus, 1758). Eng. King eider, Sw. Praktejder], bill gibbous at base, flattened; keel pennaceous, black; head greyish white.
Edw. Av. 154. *l.* 154. Anas canadensis, capite griseo-caeruleo.

[144] See no. 114.
[145] Lat. *maxillae.*
[146] See no. 131.

Occurs in Norrland, but rather rare, from where this stuffed specimen was brought to the Supreme King.[147]

113. ANAS *tadorna* [*Tadorna tadorna* (Linnaeus, 1758). Eng. Common shelduck, Sw. Gravand], flat nosed; frons flattened; body variegated white.

Anas, variegated white; sides of pectus rusty brown; abdomen longitudinally maculate with ash-grey. *Fn.* 93.

Tadorna. *It. Scan.* 212.* *W:goth.* 214.*

Will. Orn. 278. t. 70. 71.

Alb. Orn. 90. t. 94. Vulpanser.

Raj. Av. 140. n. 1. Tadorna bellonii, Vulpanser quibusdam.

Clus. Exot. 368. Brandgås.

In Gotland: Jugås.

We have found that it occurs only in Gotland. Down is most soft, just as in the common eider.[148]

DESCR. Slightly smaller than the domestic goose.[149] Female white. Pectus rusty brown above. Belly longitudinally marked with ash-grey maculae. Head and upper part of neck palish ash-grey. Remiges rusty brown towards tips; hence alar macula transverse, broad, rusty brown. Bill that of the domestic goose, but more flat nosed.

I have not seen the male. The inhabitants have said that it is coloured in another way and more beautiful with a fleshy caruncle or crest at base of bill.

114. ANAS *anser* [*Anser anser* (Linnaeus, 1758). Eng. Graylag (Greylag) goose, Sw. Grågås], bill semi-cylindrical; body ash-grey above, paler beneath; neck striate. *Fn.* 90.

Gesn. Av. 158. Anser ferus.

Aldr. Orn. l. 19. c. 18. Anser ferus.

Will. Orn. 274. t. 69. Anser ferus.

Raj. Av. 136. n. 4. Anser.

In Sweden: Willgås.

β *Gesn. Av.* 141. Anser domesticus.

Will. Orn. 273 t. 75. Anser domesticus.

Raj. Av. 136. n. 3. Anser domesticus.

In Sweden: Gås.

Occurs especially in Lapland; it is a migratory bird that arrives during spring and leaves during winter.

β Kept everywhere. In Öland the down is plucked every year. *It. Oel.* 83.

DESCR. Entirely ash-grey. Dorsum more fuscous. Outer margin of feathers white. Neck, pectus, and sides ash-grey with a rather whitish margin. Whitish behind femora and beneath tail. Head grey

[147] I.e. Adolf Fredrik.

[148] See no. 117.

[149] See no. 114.

tending to ash-grey, without maculae; margin of frons white. Remiges black; tectrices fuscous with a white tip. Rectrices ash-grey at tip and margin white; tectrices entirely white.

115. ANAS *bernicla* [*Branta bernicla* (Linnaeus, 1758). Eng. Brent goose or Brant, Sw. Prutgås], fuscous; head, neck, and pectus black; collar white. *Fn.* 91.
Gesn. Av. 110. Branta sive Bernicla.
Aldr. Orn. l. 19. c. 33. Branta sive Bernicia.
Jonst. Orn. t. 49. Bernicla, Brenta.
Will. Or. 274. Bernicla sive Bernacla.
275. f. 10. Branta.
Raj. Av. 137. Bernicla sive Bernacla.
Valent. Mus. 495. Anser scoticus verus, Bernicla.
Alb. Orn. 89. t. 93. Brenta.
In Holland: Rotgans. In Kalmar: Prutgås.
Occurs in Skåne and Kalmar. It is a marine and migratory bird.
DESCR. The size of a rather small goose. Body entirely dusky black. Bill, neck, head, and pectus black. Collar narrow, white. Remiges and rectrices jet-black above, fuscous beneath. Abdomen behind legs, lower tail tectrices, and sides of uropygium white. It is the most savoury of all aquatic birds.

116. ANAS *erythropus* [*Anser erythropus* (Linnaeus, 1758). Eng. Lesser white-fronted goose, Sw. Fjällgås], ash-grey, white-fronted. *Fn.* 92.
Clus. Exot. 368. Helsingegas.
Rudb. Pict. Anser cinereus ferus, torque inter oculos & rostrum albo, erythropes.
In Västerbotten: Fiaellgås.
Inhabits the mountains of Hälsingland and Lapland.
DESCR. Male: Head and neck black down to sternum. Frons, temples, and throat white. Dorsal feathers ash-grey with black tips, white at margin. Pectus, abdomen, and tail beneath white. Femora ash-grey. Remiges dusky ash-grey. Rectrices black. Upper tail tectrices[150] white. Female: Bill sordid light red. Only frons white. Head, neck, dorsum, and tail ash-grey. Pectus and abdomen bright white. Blackish macula on sternum. Legs blood-coloured.

117. ANAS *mollissima* [*Somateria mollissima* (Linnaeus, 1758). Eng. Common eider, Sw. Ejder], bill semi-cylindrical; claw blunt; cere posteriorly bifid, wrinkled. *Fn.* 94.
Barth. Act. 1. p. 90. Anas plumis mollissimis, vulgo Eider.
Worm. Mus. Anas plumis mollissimis.
Will. Orn. 277. Anas plumis mollissimis.
278. Anas cuberti sive farnensis.
Raj. Av. 141. n. 3. Anas cuberti sive farnensis.
In Sweden: Åda, Eider, Gudunge. In Bohuslän: Aera.

[150] Lat. *tectrice* should be written as *tectrices*.

Lives in the deep sea; nests in maritime regions, especially in Gotland. Lays 5 or 6 eggs; often nests beneath junipers. Down collected from nests is the softest of all, very elastic and precious. *It. Goth.* 213.

DESCR. Male: Body mostly white, excepting black cap of head, posteriorly bipartite, anteriorly tripartite, emitting angles towards sinus of the cere of upper beak.[151] Sternum, abdomen, and entire posterior part jet-black; femora, uropygium, rectrices, and remiges black. Entire posterior part of head close to cap greenish. Anterior part of pectus is whitish flesh-coloured. Almost the size of a goose. Female: Body entirely that of a woodcock[152] or ash-grey undulated with brick-red and black maculae. Transverse line on wing very narrow, white.

118. ANAS *moschata* [*Cairina moschata* (Linnaeus, 1758). Eng. Muscovy duck, Sw. Myskand], face naked, papillose. *Fn.* 98. *It. Scan.* 93.

Raj. Av. 150. n. 3. Anas moschata.

Gesn. Av. 122. Anas indica mas.

Aldr. Orn. l. 19. c. 26. Anas indica.

Will. Orn. 294. Anas lybica belionii.

Alb. Orn. 3. p. 92. t. 97. 98. Anas moschata.

Kept on the estates of noblemen, where it has been raised, but very rare.

DESCR. Twice as large as the domestic duck (*Boschas*);[153] variegated with white and black. Whole duck odorous. Male marked with red, naked papillae behind neck or medially on the neck and on the back.

119. ANAS *clypeata* [*Anas clypeata* Linnaeus, 1758. Eng. Northern shoveler, Sw. Skedand], distal part of bill dilated, rounded; claw curved. *It. Gotl.* 167. *Fn.* 102.

Gesn. Av. 120. Anas latirostra major.

Aldr. Orn. 3. p. 227. Anas latirostra major.

p. 224. Anas latirostra Taschenmaul.

Will. Orn. 283. t. 74. Anas platyrhynchos altera sive clypeata germanica.

Raj. Av. 143. Anas platyrhynchos altera sive clypeata germanica.

Alb. Orn. 1. p. 93. t. 97. 98. Anas clypeata germanica.

Occurs in Skåne and Gotland.

DESCR. Male: Head blue-black, shining. Pectus white. Abdomen dark brown. Wings variegated white and blue, with a green, silky macula. Remiges black; secondaries with white fasciae.[154] Rectrices white; middle ones black. Legs saffron yellow.

Female: Body colour entirely that of a snipe. Alar with bronze green macula, between two transverse white lines. Bill of both sexes widened and outwardly rounded; tips of bills[155] hooked and blunt, with ciliate margins and paleaceous denticles.

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[151] Lat. *maxilla superior.*

[152] Linnaeus only refers to *Scolopax*, see nos. 167–174.

[153] Linnaeus's own parenthesis. See no. 131.

[154] Lat. *fasciae alba* should be written as *fascia alba.*

[155] Lat. *maxillae.*

120. ANAS *platyrhynchos* [*Anas platyrhynchos* (Linnaeus, 1758). Eng. Mallard, Sw. Gräsand],[156] alar macula purple; black and white on each side; pectus red-brownish. *Fn.* 103.

Aldr. Orn. l. 19. c. 32. p. 232. Anas platyrhynchos, pedibus luteis.

Will. Orn. 284. Anas platyrhynchos, pedibus luteis.

Raj. Av. 144. n. 13. Anas platyrhynchos, pedibus luteis.

Rudb. Pict. Anas fluviatilis rufa mas, rostro superius virescente, inferius flavescente. (*Mas*).

Rudb. Pict. Anas fluviatilis rufa, rostro subviridi, pedibus miniaceis.

Occurs on rivers.

DESCR. Male: Shining violet alar macula; on each side black; outside the black, white on each side. Female: Alar macula as in the male, but medially bluer; pectus red-brownish in both sexes. Alar base and tip ash-grey. Tail white. Dorsum entirely fuscous with rusty brown margin; entirely rusty brown beneath with indistinctly fuscous maculae. Throat pale rusty brown, without maculae. Wings dusky ash-grey. Primary 10 feathers without maculae, longish; secondary 11–20 fuscous, apically white; outer side violet, shining. Of these 11–20 have fuscous tectrices that are white at tip; at the very tip black. Rectrices fuscous with thin, serpentine, pale lines with unequal winding. Legs reddening.

121. ANAS *strepera* [*Anas strepera* Linnaeus, 1758. Eng. Gadwall, Sw. Snatterand], alar macula red-brown, black, white. *Fn.* 101.

Gesn. Av. 121. Anas strepera.

Aldr. Orn. l. 19. c. 32. p. 233. Anas platyrhynchos, rostro nigro & plano.

Raj. Av. 145. n. 2. Anas platyrhynchos, rostro nigro & plano.

Will. Orn. 287. t. 72. The godwall or gray.

Inhabits freshwater bodies.

DESCR. Dorsum fuscous. Head blackish blue. Pectus whitish; belly becomes sordid through transverse, black maculae. Sides variegated with thin white and black lines. Rectrices mostly white. Remiges 1–10 fuscous; 11–13 with white tips; 14–17 small feathers black at outer stalk with white tips; 18–20 with outer tela at the stalk; 21–25 dusky red-brown.

122. ANAS *clangula* [*Bucephala clangula* (Linnaeus, 1758). Eng. Common goldeneye, Sw. Knipa],[157] variegated with black and white; head protuberant, black and green; sinus of mouth with a white macula. *Fn.* 100. *It. Oel.* 49.

Gesn. Av. 119. Clangula.

Aldr. Orn. l. c. 42. p. 224. Clangula Gesneri.
p. 225. Anas platyrhynchos mas.

Will. Orn. 282. t. 73. Anas plathyrynchos mas.

Raj. Av. 142. n. 8. Anas platyrhynchos mas.

Alb. Orn. 1. p. 92. t. 96. Clangula.

[156] See no. 131.

[157] See no. 123.

It. Oel. Anas clangula.
In Sweden: Knipa. In Skåne: Dopping.
Lives in water bodies, dives excessively; feeds on snails and mussels; nests in tree holes.
DESCR. Male: Head large, almost crested, violet-black; white macula almost rounded at the sinus of mouth. Dorsum black. Wings black, slightly white medially at tip, with a large, white macula, blackish ash-grey beneath. Tail blunt, black on each side. Neck, pectus, abdomen, and everything beneath (except for the head) white. Femora blackish. White line distinguishes dorsum from wings. Bill black. Feet red, with a black membrane. Eyes bronze coloured. Remiges 1–10 black; 11–13 black with a white tip; 14–21 white; 22–24 black.
Female: Head red-brownish with lavender blue. Dorsum, sides, and tail are fuscous. Wings whitish ash-grey; abdomen white; pectus anteriorly and laterally ash-grey with grey-white margins or thin transverse lines. Primary remiges blackish; secondary apically slightly white; middle ones snow-white, without maculae; outermost one white with outer side black; tectrices of posterior remiges variegated with white and black.
Trachea in middle part strongly ventricose; at base, before its bifurcation, it becomes rather less ventricose.

123. ANAS *glaucion* [*Bucephala clangula* Linnaeus, 1758. Eng. Common goldeneye, Sw. Knipa],[158] irises light yellow; head grey; collar white. *Fn.* 104.
Bell. Ic. 33. 6. Glaucion. Glaucus.
Aldr. Orn. l. 13. c. 38. Glaucion bellonii.
Will. Orn. 281. Glaucium bellonii.
In Sweden: Brunnacke.
Lives in maritime regions; abundant.
DESCR. Male: Head sordid black. Irises of eyes light yellow. Alar macula white.
Female: Head sordid fuscous. On the wings, at the position of the macula, 5 distinct, white feathers. Bill is blackish. Iris of the eye greyish blue. Collar white. Pectus to sternum cloudy. Tail and wings black. Dorsum dusky black. Legs and tibiae sordid; palms jet-black.

124. ANAS *penelops*[159] [*Anas penelope* Linnaeus, 1758. Eng. Eurasian wigeon, Sw. Bläsand], tail somewhat pointed, black beneath; head dark brown; frons white. *Fn.* 105.
Gesn. Av. 108. Penelope.
Aldr. Orn. l. 19. c. 39.
Will. Orn. 288. t. 72. Penelope.
Jonst. Orn. t. 49. Penelope.
Raj. Av. 146. n. 3. Penelope.
Alb. Orn. 2. p. 88. t. 99. Anas fistularis.
In Sweden: Wriand.
Lives at sea.

[158] See no. 122.

[159] The reading *penelops* has been kept to preserve the original impression. See, however, Ch. *A small fauna of Sweden*, where *penelope* is listed.

DESCR. Male: Head and neck dark brown. Frons white. Large alar macula white at alar base, after that black, then of an azureous colour, finally black. Bill and legs black. Dorsum undulated with ash-grey and black. Neck grey beneath. Tail somewhat pointed, short, black beneath. Denticles squamous, transverse. Tongue ciliate on each side.
Female: Cloudy ash-grey except for the white pectus and belly. Bill and legs ash-grey. No alar macula.

125. ANAS *hyemalis* [*Clangula hyemalis* (Linnaeus, 1758). Eng. Long-tailed duck, Sw. Alfågel], tail wedge-shaped; middle rectrices long; body white; temples, pectus, dorsum, and wings black.
Rudb. Pict. Anas cauda longa forcipata. *Fn.* 95.
Worm. Mus. 302. Anas islandica.
Edw. Av. 156. t. 156. Anas cauda acuta canadensis.
In Sweden: Winter-and.
Occurs in the northern provinces of Sweden. During very harsh winters it arrives at us, I do not know from where.
DESCR. Male. Head and neck white. Macula on head, bilateral, large, blackish. Dorsum black. Area around sternum black; this blackness is united with the black on the dorsum. Wings black without macula, ash-grey beneath. Tail wedge-shaped, black above, white beneath; rectrices pointed, some lateral ones white; rectrix in the middle twice as long as the others. Legs lead-grey. Bill convex, semi-cylindrical, blunt, black, medially flesh-coloured. Nostrils oblong. Margin of beaks[160] dentate with outspread squamae. Faux dentate. Tongue with trilobed, blunt tip; sides shortish, margin ciliate. Body white, but temples, pectus, wings, dorsum, and the four rectrices in the middle black; of these 5–5[161] pointed and longer; 6–6 wide-billed, the length of the body.

126. ANAS *acuta* [*Anas acuta* Linnaeus, 1758. Eng. Northern pintail, Sw. Stjärtand], tail acuminate, elongate, black beneath; occiput, with a white line on each side; dorsum ash-grey, wave-like.
Anas, tail wedge-shaped, pointed. *Fn.* 96.
Gesn. Av. 121. Anas cauda acuta.
Will. Orn. 289. t. 73. Anas cauda acuta.
Raj. Av. 145. n. 14. Anas cauda acuta.
In Sweden: Aler, Ahlfogel.[162]
Lives in maritime regions; abundant in Sweden.
DESCR. Head sordid. Dorsum very finely undulated with white and black. Sides of neck, pectus, and abdomen whitish. Remiges fuscous. Alar macula violet, anteriorly rusty brown, posteriorly black and white. Tail wedge-shaped, ash-grey, beneath black. Rectrices in the middle longer, black.

[160] Lat. *maxillae*.

[161] See the com. to no. 24.

[162] Linnaeus is obviously mistaken here. Both alfågel and stjärtand have long rod-like tail-feathers. But *Anas acuta* is undoubtedly the stjärtand.

127. ANAS *ferina* [*Aythya ferina* (Linnaeus, 1758). Eng. Common pochard, Sw. Brunand], wings without maculae, ash-grey; uropygium black. *Fn.* 107.

Gesn. Av. 116. Anas fera fusca vel media.
Aldr. Orn. l. 19. c. 40. Anas fera fusca.
Will. Orn. 288. t. 72. Anas fera fusca.
Raj. Av. 143. n. 10. Anas fera fusca.
Alb. Orn. 2. p. 87. c. 70. Anas fera fusca.
Lives in freshwaters.

DESCR. Upper beak[163] blunt, with a black claw; lower beak black. Irises of eyes yellowish red. Legs lead-grey. Head and neck red-yellow. Pectus medially white with whitish yellow fringes, inferiorly with thin, fuscous lines. 14 remiges blackish ash-grey. Rectrices unicoloured, dusky ash-grey. Uropygium, rump, and lowest part of neck are black. Dorsum undulated with small, fuscous and ash-grey lines. *Willugh.*

128. ANAS *querquedula* [*Anas querquedula* Linnaeus, 1758. Eng. Garganey, Sw. Årta],[164] alar macula green; white line above eyes. *Fn.* 108.

Gesn. Orn. 107. Kernell.
Ald. Orn. l. 19. c. 33. Kernell argentoratensis gesneri.
Will. Orn. 291. Querquedula prima.
t. 74. Querquedula altera.
Raj. Av. 148. n. 9. Querquedula prima.
Occurs on lakes.

DESCR. Almost the size of the following species. Bill black. Legs dark bluish grey. Vertex blackish. White line above eyes and ears to the middle of cervix from interior corner of eye. Throat black. Pectus undulated with black and ash-grey. Dorsum dusky purple. Femora undulated with black and white. Remiges 1–10 fuscous on anterior side, inner side mouse-grey; 11–21 apically white, anteriorly shining green. 14 fuscous rectrices, but at the outermost part with whitish red-brown maculae. Female is more discoloured; it lacks the black throat. *Willugh.*

129. ANAS *crecia* [*Anas crecca* Linnaeus, 1758. Eng. Eurasian teal or Common teal, Sw. Kricka], alar macula green; white line above and beneath eyes. *Fn.* 109.

Gesn. Av. 105. Querquedula.
Aldr. Orn. l. 19. c. 31. Phascas sive Querquedula minor.
Will. Orn. 290. Querquedula secunda.
t. 74. Querquedula.
Raj. Av. 147. n. 6. Querquedula secuda.
Alb. Orn. 1. p. 95. t. 100. Querquedula francia.
2. p. 91. t. 102. Querquedula francia faemina.

[163] Lat. *mandibula superior.*

[164] See no. 130.

In Sweden: Ärta.[165] In Västerbotten: Kraecka. Occurs on lakes and rivers; tastes most delicious.

DESCR. Body very small compared with other ducks. Head rusty brown, with a line extending from bill to eyes, where it is bifurcated, and ascending above the eye with one branch, but with the other descending beneath the eye; inside this bifurcation the blue, shining macula descends from eyes towards neck and is then united in a bluish colour on the back. Whole body undulated above with black and white lines. Remiges 1–10 fuscous; 11–18 apically white; anterior side black; 16–19 shining green on anterior side; 20 black on anterior side. Male with a black macula beneath uropygium, a white one on the sides, green, silky alar macula above and black beneath, anteriorly and posteriorly white. Lowest part of bill black. Legs black with pointed claws. Alar tectrices fuscous; lowest ones white. Pectus verging on white with round, black maculae. Abdomen whitish. Rectrices fuscous, white at margin. Thus the head is rusty brown. Green, silky macula descending from both eyes to nape, where it is united, and when descending it forms a shining blue plumose brush or crest. Alar macula green; black above and beneath, anteriorly and posteriorly white.

130. ANAS *circia* [*Anas querquedula* Linnaeus, 1758. Eng. Garganey, Sw. Årta],[166] alar macula variegated; white line above eyes; bill and feet ash-grey. *Fn.* 111.

Rudb. Pict. Anas fusca media, rostro & pedibus cinereis.

Will. Orn. 291. Anas circia Gesneri. *an*?[167]

Alb. Orn. 2. p. 92. t. 103. 104. Anas circia.

Occurs – – –[168]

DESCR. Sordid cloudy at sternum. Wings variegated; alar macula blue above, black beneath, anteriorly and posteriorly white.

131. ANAS *boschas* [*Anas platyrhynchos* Linnaeus, 1758. Eng. Mallard, Sw. Gräsand],[169] middle rectrices recurved; bill straight. *Fn.* 97.

Gesn. Av. 114. Anas fera torquata minor (*mas*).

115. Anas fera torquata major (*faemina*).

Aldr. Orn. l. 19. c. 35. Boschas major sive Anas torquata minor.

Jonst. Orn. t. 49. Anas fera Spiegel Endte.

Will. Orn. 284. t. 72. Boschas major.

Raj. Av. 145. n. 1. Anas toquata minor.

Alb. Orn. 2. p. 89. t. 100. Boschas major.

In Sweden: Gräs-and, Blånacke.

β *Will. Orn.* 293. t. 75. Anas domestica vulgaris.

Raj. Av. 150. n. 1. Anas domestica vulgaris.

Jonst. Orn. 143. t. 49. Anas domesticas.

Gesn. Av. 96. Anas cicur.

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[165] Sw. Årta is the species *Anas querquedula*. See no. 130.

[166] See no. 128.

[167] Linnaeus's own remark: "or?".

[168] Unfinished sentence.

[169] See no. 120.

Aldr. Orn. l. 19. c. 25. Anas domesticus mas.
In Sweden: Ancka.
Occurs on lakes and rivers; very abundant. Kept domesticated everywhere.
DESCR. Male: Head of an azureous colour. Pectus rusty brown. Collar white. Tail black beneath on the sides. Uropygium greenish, silky. 8 lateral rectrices, whitening ash-grey, on each side, but 4 middle ones, recurved, black. Pectus and abdomen whitish ash-grey, with minutely undulate striae that are crowded together. Wings weakly fuscous above, white beneath. Primary remiges 1–10 ash-grey; secondary 11–24 weakly fuscous above, of which 11–21 are apically white, but 12–20 medially violet, outwardly black, but white-tipped. Tectrices, of which 12–20 are ash-grey, medially white, black-tipped.

132. ANAS *fuligula* [*Aythya fuligula* (Linnaeus, 1758). Eng. Tufted duck, Sw. Vigg], tuft hanging down; body black; abdomen and alar macula white. *Fn.* 99.
Gesn. Av. 107. Anas fuligula prima.
Aldr. Orn. l. 19. c. 34. Querquedula cristata sive Colymbus bellonii.
Will. Orn. 280. t. 73. Anas fuligula prima.
Raj. Av. 142. n. 7. Anas cristata.
Alb. Orn. 1. p. 91. t. 95. Anas fuligula.
In Sweden: Wigge.
Inhabits the sea.
DESCR. Body entirely black except for the abdomen which is white from pectus towards tail. Alar macula transverse, similarly white. Bill and Legs black-greyish white.

133. ANAS[170] [*Nomen dubium*], tail the length of the legs; vertex fuscous; pectus cloudy whitish. *Fn.* 110. †
Rudb. Pict. Anas varia minor.
Occurs in Norrland, but rather rare. I have never seen it.
DESCR. Male: Pectus white, cloudy; vertex of head fuscous; tail the length of the legs. Moreover, owing to observations it greatly resembles the long-tailed.[171]
Female: No macula on the outside of wings. Pectus sordid. Bill greenish.

134. ANAS *rufa* [*Nomen dubium*], bill and legs ash-grey. *Fn.* 112. †
Rudb. Pict. Anas fluviatilis rufa, rostro & pedibus cinereis.
Occurs on rivers, but rather rare. I have never ever seen it.

[170] See Ch. *A small fauna of Sweden*, where it is given the species epithet *obscura*.

[171] This bird is obviously described from one of Olof Rudbeck the Younger's illustrations. Linnaeus only states name of genus, but suspects it to be *Anas hyemalis*. See no. 125.

Mergus

135. MERGUS *merganser* [*Mergus merganser* Linnaeus, 1758. Eng. Goosander or Common merganser, Sw. Storskrake], tuft hanging down; head bluish black; collar white. *Fn.* 113. *It. Goth.* 166. *Oel.* 49.
Aldr. Orn. l. 19. c. 63. Merganser.
Will. Orn. 253. t. 64. Merganser.
Raj. Av. 134. n. 1. Merganser.
Mars. Danub. 78. t. 37. Merganser.
Scheff. Lapp. 348. Knipa.
Gesn. Av. 134. Mergus cirratus sive longirostra major.
Will. Orn. 253. Merganser faemina.
Raj. Av. 134. n. 2. Merganser cirratus longiroster major.
Alb. Orn. 1. p. 83. t. 87. Merganser.
In Sweden: Wrakfogel, Kjörfogel. In Gotland: Ard. In Uppsala: Skraka.
Occurs on lakes and rivers.
DESCR. Male: Bill smoothly rounded, with curved, awl-shaped, denticles. Upper beak[172] with an elongate tip. Head slightly bluish black; tuft long, hanging down. Neck verging on white. Belly white. Pectus setaceous. Dorsum blackish ash-grey. Primary remiges black, secondary white, with two transverse, black lines. Rectrices 1–10 black; 11–14 black, white-tipped; 15–19 white and on lower parts black; 20–26 white, black-tipped. Area around uropygium ash-grey, undulated. Tail black. Legs and bill red.
Female: Ash-grey above; head grey-tufted; throat, neck, pectus, and abdomen white beneath.

136. MERGUS *serratus* [*Mergus serrator* Linnaeus, 1758. Eng. Red-breasted merganser, Sw. Småskrake], tuft hanging down; head black with rusty brown maculae; alar macula white, divided by a black line. *Fn.* 114. *It. Goth.* 271.
Gesn. Av. 133. Anas longirostra gesneri.
Aldr. Orn. l. 19. c. 60. Anas longirostra gesneri.
Will. Orn. t. 64. Mergus cirratus minor.
p. 255. Mergus cirratus fuscus.
Raj. Av. 135. n. 4. Mergus cirratus fuscus.
In Gotland: Pracka.
Occurs ubiquitously in water bodies.
DESCR. Male: Head black with rusty brown maculae. Pectus grey, with black spots. Belly white, sides with undulating white and black. Dorsum black. Remiges black. Alar tectrices white, inferior ones or those nearest base black; hence alar macula is white with a transverse line. Tail fuscous; tuft hanging down. Bill with recurved, awl-shaped denticles.

[172] Lat. *maxilla superior.*

137. MERGUS *albellus* [*Mergellus albellus* (Linnaeus, 1758). Eng. Smew (male), Sw. Salskrake (hane)],[173] tuft hanging down; body white; dorsum black; wings variegated.

Hasselq. It. 269. Mergus Tinus.

Raj. Av. 135. Mergus major cirratus.

Will. Orn. 254. t. 64. Albellus alter.

Occurs in Sweden, but very rare.

DESCR. Body white. Tuft of occiput black beneath. Dorsum black. Wings black with a large white macula medially and two white fasciae. Tail fuscous. Pectus and abdomen white.

138. MERGUS *minutus* [*Mergellus albellus* (Linnaeus, 1758). Eng. Smew (female), Sw. Salskrake (hona)],[174] head smooth, grey. *Fn.* 115.

Will. Orn. 261. t. 59. Mergus melanoleucos, rostro acuto brevi.

Raj. Av. 125. n. 5. Mergus melanoleucos, rostro acuto brevi.

Rudb. Pict. Mergus mimimus cinereus, capite semirufo.

Inhabits maritime regions.

DESCR.[175] Head sordid. Lower beak[176] and throat white. Belly and pectus white. Dorsum blackish ash-grey. Legs sordid. Alar macula black, at the front and in the rear white.

Alca

139. ALCA *torda* [*Alca torda* Linnaeus, 1758. Eng. Razorbill, Sw. Tordmule], bill with four furrows; white line on each side from bill to eyes. *Fn.* 120. *It. Gotl.* 286.

Will. Orn. 243. t. 64. f. 1. t. 65. f. 2. Alca.

Worm. Mus. 363. Alca.

Clus. Exot. 367. Alca.

Raj. Av. 119. Alca hojeri.

Alb. Orn. 3. p. 90. t. 95. Alca hojeri.

In Gotland: Tord. In Ångermanland: Tordmule.

Occurs on the Islands of Karlsö of Gotland and in the Island of Bonden of Ångermanland. Lays 1 egg only.

DESCR. The size of a crow.[177] Colour of entire front of body black. Pectus, abdomen, and lower alar tectrices white beneath. 11 primary remiges, black; 15 secondary, black, white-tipped. White line running from eyes on each side to outmost margin of bill. Feet tridactyl, palmate, black. Bill cultrated, markedly blunt, black, with 4 transverse furrows (in the upper beak, but 2 in the lower one),[178] of which second one is white; tip of upper beak curved.

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[173] See no. 138.

[174] See no. 137.

[175] I.e. of the female smew.

[176] Lat. *maxilla inferior.*

[177] Linnaeus only refers to *Cornix*, see no. 88.

[178] Lat. *maxilla superior* and *maxilla inferior,* resp.

140. ALCA *impennis* [*Pinguinus impennis* (Linnaeus, 1758). Eng. Great auk, Sw. Garfågel], bill compressed, two-edged, falcate; macula white, ovate in front of eyes. *Fn.* 119.

Barthol. Act. 1. p. 91. Avis garfuhl.

Will. Orn. 242. t. 65. Penguin nautis nostratibus dicta, quae goifugel hojeri videtur.

Clus. Exot. 101. Anser magellanicus.

Worm. Mus. 300. t. 301. Anser magellanicus sive Pinguin.

Raj. Av. 118. n. 1. Penguin.

Occurs in the Norwegian Sea, but rather rare.[179]

141. ALCA *arctica* [*Fratercula arctica* (Linnaeus, 1758). Eng. Atlantic puffin or Common puffin, Sw. Lunnefågel], bill compressed, two-edged, with four furrows; orbits of eyes and temples white. *Fn.* 118.

Gesn. Av. 725. Puphinus anglicus.

Aldr. Orn. l. 19. c. 37. Fratercula marina sive Pica marina.

Alb. Orn. 2. p. 73. t. 78. 79. Pica marina.

Mart. Spitzb. 53. t. k. f. c. Avis glacialis.

Clus. Exot. 104. Anas arctica.

Olear. Mus. t. 15. f. 5. Anas arctica.

Will. Orn. 244. t. 65. Anas arctica.

Raj. Av. 120. n. 5. Anas Arctica.

Worm. Mus. 302. Anas arctica clusii.

Barthol. Act. 1. p. 68. Lunda avis.

Oelig. Mus. 2. f. 11. n. 21. t. f. 21. Avis marina Lunda dicta.

On the Faroe Islands: Lunda.

Inhabits the cliffs and precipices of the mountains of the Atlantic Ocean, especially on islands, but it can only catch fish in a calm sea. Just as the following bird it nests on the bare cliff; only a single egg, which is characteristic of this genus.

OBS. The bill is more compressed than that of the razorbill;[180] upper beak[181] not hooked; the margins of the beaks do not extend beneath eyes in a rather long projection, as is the case with the razorbill.

142. ALCA *alle* [*Alle alle* (Linnaeus, 1758). Eng. Little auk, Sw. Alkekung], bill smooth, conical; whole abdomen white beneath; tips of posterior remiges white; legs black.

Alb. Av. 1. p. 81. *l.* 85. Columba groenlandica.

Edw. Av. 91. t. 91. Columba groenlandica.

[179] Globally extinct by hunting in 1844.

[180] See no. 139.

[181] Lat. *maxilla superior.*

Occurs in the Northern Ocean.

[DESCR.] White spot above eyes. Pectus and abdomen white, but not the lower part of neck; some small, white lines on dorsum.

Procellaria

143. PROCELLARIA *pelagica* [*Hydrobates pelagicus* (Linnaeus, 1758). Eng. European storm petrel, Sw. Stormsvala], black; uropygium white. *Act. Stockh.* 1745. p. 93. *Fn.* 249.

Alb. Orn. 3. p. 87. t. 92. Petrel.

Dampier Voyag. 3. p. 97. Petrel.

In Sweden: Stormwäders fogel.

Occurs at sea, skimming above the waves; during raging storm it seeks the prows and sterns of ships; thus it is a foreboding to the seamen of an imminent storm, which the small birds try to avoid.

DESCR. The size of a swallow[182] or wagtail,[183] entirely black, on dorsum more saturated, on pectus and abdomen darker, but the tectrices of the rectrices are white beneath and black-tipped above; hence the uropygium is white. 12 equal, black rectrices, shorter than wings, blunt. Primary remiges more pointed. Alar tectrices of the secondaries verge a little towards white at tip. Feet black, palmate; femora semi-naked. No hallux, but smallest claw sessile. Three palmate digits, connected with the black membrane, of which the innermost is shorter and consists of two joints; outer digit longer than inner digit and consisting of four joints; middle digit slightly longer than outer digit, but consisting of 3 joints. Claws ash-grey, black, almost equal. Bill black, slender, flattened, somewhat soft, black at tip. Upper beak with a hooked, pointed tip, not longer than lower beak.[184] Nostrils of bill medially gibbous, rather prominent (just as in a swallow[185]); openings of nostrils separated by a very thin membrane. Therefore, this bird is characteristic of the genus of petrels. Bill weakly flattened; beaks equal; upper beak with a hooked tip. Nostrils prominent, separated through a channel by a little membrane.

144. PROCELLARIA *glacialis* [*Fulmarus glacialis* (Linnaeus, 1761). Eng. Northern fulmar, Sw. Stormfågel], verging on white; dorsum greyish white.

Martens. Spitsb. 68. t. N. f. C. Mallemucke.

Anderson. Island. 173. n. 30. Laurus marinus maximus groenlandicus.

Occurs in the Northern Sea inside the Arctic Circle; scoffs from whales,[186] the fat from which it cuts out with the bill.

DESCR. Body the size of a domestic hen,[187] white, tinged with pinkish greyish white. Whole dorsum greyer white. Inner side of remiges growing whiter. Tail rounded, white. Legs red, situated behind the centre of gravity, palmate; posterior claw without digit. Nostrils consisting of a single

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[182] Linnaeus only refers to *Hirundo*, see nos. 270–273.

[183] Linnaeus only refers to *Motacilla*, see nos. 244–264.

[184] Lat. *maxilla superior* and *maxilla inferior*, resp.

[185] Linnaeus only refers to *Hirundo*, see nos. 270–273.

[186] *Ceti*, see nos. 48–53.

[187] See no. 199.

channel and not two openings, cordate. Bill red-brownish with fuscous nostrils, flattened. Beaks[188] of 5 small bones.

Pelecanus

145. PELECANUS *carbo* [*Phalacrocorax carbo* (Linnaeus, 1758). Eng. Great cormorant, Sw. Storskarv], tail rounded; body black; bill toothless.

Pelecanus, becoming white beneath; fourteen rectrices. *Fn.* 116.

Gesn. Av. 137. Carbo aquaticus.

Aldr. Orn. l. 19. c. 55. Corvus aquaticus.

Jonst. Orn. t. 47. Carbo aquaticus.

Will. Orn. 248. t. 63. Corvus aquaticus.

Raj. Av. 122. n. 3. Corvus aquaticus.

Mars. Dan. 16. t. 36. Corvus aquaticus.

In Sweden: Hafs-Tjäder.

Occurs on sea cliffs; rests in trees.

DESCR. The size of a goose. Whole body jet-black. Sinciput with small, longitudinal lines becoming white; area around eye and throat ash-grey. Bill verging on white, without teeth, straight, blackish brick-red with a hooked, pointed tip. Feet black, tetradactyl; all digits connected as one.

146. PELECANUS *aristotelis*[189] [*Gulosus aristotelis* (Linnaeus, 1761). Eng. European shag or Common shag, Sw. Toppskarv], fuscous beneath; twelve rectrices. *Fn.* 117.

Aldr. Orn. l. 19. c. 58. Graculus palmipes aristotelis sive Corvus aquaticus minor.

Will. Orn. 249. t. 63. Corvus aquaticus minor sive Graculus palmipes.

Raj. Av. 123. Corvus aquaticus minor, Graculus palmipes dictus.

Alb. Orn. 2. p. 74. t. 81. Corvus aquaticus.

Occurs in maritime regions; nests in trees.

DESCR. Whole body, just as throat, bill, and legs are those of the great cormorant.[190] But from throat to femora embellished beneath with brick-red and white spots. Perhaps this bird is either a young specimen or a female great cormorant.

147. PELECANUS *bassanus* [*Morus bassanus* (Linnaeus, 1758). Eng. Northern gannet, Sw. Havssula], tail wedge-shaped; bill scabrous; only primary remiges black; body white.

Will. Orn. 347. t. 63. Anser bassanus.

Raj. Av. 122. Anser bassanus.

Alb. Av. 1. p. 82. t. 86. Anser bassanus.

To seamen: Jaen von Gent.

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188 Lat. *mandibulae*.

189 See Ch. *A small fauna of Sweden*.

190 See no. 145.

Occurs in the Norwegian Ocean at Marstrand. Does not visit the shores, but is a bird of the open sea.

Colymbus

148. COLYMBUS *grylle* [C*epphus grylle* (Linnaeus, 1758). Eng. Black guillemot, Sw. Tobisgrissla], feet palmate, tridactyl; body jet-black; alar tectrices white. *Fn.* 124.

Martens Spitgs. 56. *l.* L. f. B. Columba.

Will. Orn. 245. Columba groenlandica.

Raj. Av. 121. n. 6. Columba groenlandica.

Occurs in the deep sea.

DESCR. Stature of body as that of the little auk,[191] but with the bill of a C*olymbus*; entirely jet-black except for the first alar tectrices; secondaries entirely white; hence alar macula ovate, white. Legs red.

149. COLYMBUS *troille* [*Uria aalge* (Pontoppidan, 1763). Eng. Common guillemot or Common murre, Sw. Sillgrissla], feet palmate, tridactyl; body black; pectus and abdomen snow-white; secondary remiges white-tipped.

Martens. Spitsb. 57. t. M. f. a. Lumbe.

Occurs in the deep Northern Sea. *A. Martin.*

DESCR. The size of the crow.[192] Bill awl-shaped, black. Upper beak[193] weakly cultrate, behind tip a scarcely visible tooth on each side. Head, neck, wings above, dorsum, remiges, and rectrices black. Pectus, whole abdomen, even laterally, and tips of secondary remiges are white.

150. COLYMBUS *arcticus* [*Gavia arctica* (Linnaeus, 1758). Eng. Black-throated loon, Artic loon or Arctic diver, Sw. Storlom], feet undivided, palmate; jugulum black-purplish. *Fn.* 121. *It. Goth.* 341.

C*lus. Exot.* 102. Mergus maximus farrensis sive arcticus.

Worm. Mus. 304. t. 305. Colymbus arcticus Lumme dictus.

Will. Orn. 259. t. 62. Colymbus arcticus.

Raj. Av. 125. n. 7. Colymbus arcticus Lumme wormio dictus.
n. 4. Colymbus maximus caudatus.
26. n. 8. Colymbus maximus gesneri.

Nieremb. natur. 216. Mergus maximus farrensis sive arcticus.

Merr. Pin. 180. Razorbill.

Oelig. Mus. 1. f. 11. n. 2. t. 1. f. 2. Colymbus a norvegis Lumme.

Barth. Act. 1. p. 90. Avis aquatica.

Besl. Gaz. t. 16. Hirundinis aquaticae exoticae singularis species.

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[191] See no. 142.

[192] Linnaeus only refers to C*ornix*, see no. 88.

[193] Lat. *mandibula superior.*

Scheff. Lapp. 348. Lom.
In Sweden: Lomm.
Occurs on Swedish lakes; common everywhere; nests on shores; lays two eggs.
DESCR. Almost the size of a graylag goose.[194] Whole body white beneath, undulating with white and black spots above. Head and neck grey-white; from throat continuously down to sternum a black-purplish macula[195] and shaped like an oblong shield.[196] The corium of this bird is very tough; hence it is used as protective holsters for rifles and also as brims of winter hats. I have seen such a prepared corium, which shows beautifully the insertions of the feathers with perforated pores, where the feathers are placed in groups of five, just as trees in a field, in order to fill a very small space; around each feather there are 12 plumes in a quadrate. There is another variety that is abundant with us, where the head and sides of the neck are ash-grey; the back of the neck has small, white and black lines, the dorsum of which is fuscous without white spots. Pectus anteriorly maculate with ash-grey and white. I think this specimen is a female.[197]

151. COLYMBUS *cristatus*[198] [*Podiceps cristatus* (Linnaeus, 1758). Eng. Great crested grebe, Sw. Skäggdopping], feet lobate; head red-brown; collar black; remiges black, secondaries white. *Fn.* 122.
Gesn. Av. 139. Colymbus major.
Aldr. Orn. l. 19. c. 52. p. 254. 255. Colymbus major cristatus.
Will. Orn. 257. t. 61. Colymbus cristatus & cornutus.
Raj. Av. 124. n. 2. Colymbus major cristatus & cornutus.
Merr. Pin. 180. Colymbus cristatus & cornutus.
Mars. Danub. 80. t. 38. Colymbus major cristatus.
Lives at sea.
DESCR. Crest bifid; head saffron yellow. Collar jet-black protruding beyond the other feathers. Body black, beneath white. Head rusty brown. Collar black. Primary remiges black, secondaries white. Anterior alar margin white. Feet trilobed, not bifid at base; pollex short.

152. COLYMBUS *auritus*[199] [*Podiceps auritus* (Linnaeus, 1758). Eng. Slavonian grebe or Horned grebe, Sw. Svarthakedopping], feet lobate; head black; ears crested, rusty brown. *Fn.* 123.
Gesn. Av. 140. Trapazorola vel Mergulus.
Aldr. Orn. l. 19. c. 52. t. 258. 252. Colymbus minor.
Will. Orn. 258. t. 61. Colymbus sive Podiceps minor.
Raj. Av. 125. n. 3. Colymbus sive Podiceps minor.

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[194] See no. 114.

[195] In this description, Linnaeus most certainly means the black-throated loon (Sw. storlom), but here he has confused the species. It is the red-throated loon (Sw. smålom) which has a red throat patch, the black-throated loon a pitch-black one.

[196] See the com. to no. 452.

[197] It is the red-throated loon (Sw. smålom), *Gavia stellata* (Pontoppidan, 1763) that Linnaeus describes here (see above).

[198] See *Fn. Su.* (1761), *Addenda*, p. 559.

[199] See *Fn. Su.* (1761), *Addenda*, p. 559.

Sloan. Hist. 2. p. 322. t. 271. f. 1. Colymbus sive Podiceps minor.
Mars. Dannub. 82. t. 39. Colymbus minor.
In Österbotten: Fiorna. In Västerbotten: Skraenlom.
Lives at sea. 4 to 5 eggs.
DESCR. It has long, dark brown ears. Head black. Neck dark brown. Bill pointed. Iris red. Double crest of black, slender plumes. Collar expanded, but contracted on the back, larger on sides, bifid underneath throat, blackish marginally, otherwise rusty brown; legs positioned behind the centre of gravity. Back of tibiae with double serrated margins. Three digits, semi-palmate, separated except for the smaller posterior one that is clawless. Vertex of head fuscous; throat fuscous, superior part of body also fuscous. Abdomen, throat, ears, and eyes towards bill white. 12–16 remiges white. Neck anteriorly whitish yellow. No tail whatsoever.
Male: Body and neck black. From eyes downwards to neck there is a rusty brown line descending from the longish feathers. Dorsum blackish. Primary remiges black; the more interior the whiter they are on the inner side. Secondary remiges white. Body rusty brown beneath wings. Almost no tail. Bill black. Female: Entirely grey as to bill, neck, and dorsum. Remiges a little more blackish, secondaries barely white.
Other remarks: Head blackish above. Throat white beneath eyes and at beginning of neck. Neck and pectus anteriorly rusty brown. Dorsum fuscous. No tail. Secondary remiges white. Feet tetradactyl. Tibiae posteriorly doubly serrated.
It builds a nest that is floating on the very water (but in the bays of the sea) and incubates the eggs while the nest is floating, as *Rud. Hast* has assured me.

153. LARUS *canus* [*Larus canus* Linnaeus, 1758. Eng. Mew gull or Common gull, Sw. Fiskmås], white; dorsum grey-white. *Fn.* 125.
Alb. Orn. 2. p. 77. t. 84. Larus albus.
In Sweden: Homåka. In Gotland: Mave. In Lapland: Straule.
Lives at the sea and on lakes.
DESCR. Body entirely white, but dorsum and wings watery ash-grey above including remiges, of which primary feathers 1, 2, 3 (sometimes more) are black towards the tips. A white macula medially in the conspicuous blackness; all feathers white at outer margin (except for the first ones). Tail entire, white. Feet light yellow, palmate, short at rear. Femora semi-naked. Iris of eyes ash-grey. Margins of eyelids naked, scarlet; upper beak[200] of bill almost like that of a crow,[201] convex, cultrate, curved; lower jaw gibbous. Corner of the mouth naked, scarlet. Tongue sagittate, tip bifid. Bill light yellow; palate denticulate. Almost the size of a domestic hen.[202] It is the male that I have described. Female lays 3 eggs.

154. LARUS *fuscus* [*Larus fuscus* Linnaeus, 1758. Eng. Lesser black-backed gull, Sw. Silltrut], white; body fuscous. *Fn.* 126.
Lives at sea and on lakes; along with the previous bird.
DESCR. All characteristics of the preceding species except neck and wings that are dusky ash-grey above. Secondary remiges (10–30 included) black, white-tipped. But primary remiges become whiter towards tip the closer they are to the origin, because the primary alar feather with a white

[200] Lat. *maxilla superior.*
[201] Linnaeus only refers to *Corvus*, see nos. 85–93.
[202] See no. 199.

tip cannot be observed in this bird. Lower beak,[203] where it is gibbous beneath, is tinged with saffron yellow. Its chicks are very different in colour; they do not change their colours until the first winter is over; they then get the plumage of their parents, which is why I would like to add the description of the chicks. Body colour entirely that of a woodcock[204] or maculate with an ash-grey, whitish, and pale colour. Legs ash-grey, not light yellow as in the preceding birds. Bill black, without any scarlet corner to the mouth, and it enjoys no scarlet ring of eyelids. Neck and pectus ash-grey. Remiges ash-grey with black tips, but outer remex does not bear a white macula below tip. Rectrices white with fuscous maculae, black at tip, upper part of margin white.

155. LARUS *marinus* [*Larus marinus* Linnaeus, 1758. Eng. Great black-backed gull, Sw. Havstrut], white; dorsum black. *It. Goth.* 214. *W:goth.* 156.
Alb. Av. 3. p. 89. t. 94. Larus nigrescens marinus.
Lives at sea.

156. LARUS *parasiticus* [*Stercorarius parasiticus* (Linnaeus, 1758). Eng. Parasitic jaeger, Arctic skua or Parasitic skua, Sw. Kustlabb], two rectrices in the middle, very long.
Sterna, rectrices very large, black. *Fn.* 129.
Mus. Dan. 1. f. 11. n. 20. Avis norvegica Kyuffwa vel Tjufva.
Mart. Spitz. 63. t. L. f. D. Struntjager.
Bart. Act. 1. p. 91. Truen sive Fur.
Raj. Av. 127. n. 2. Struntjager. i.e. Coprotherus.
In Sweden: Svartlasse. In Ångermanland: Labben. In Bohuslän: Elof.
Occurs in Ångermanland, Bohuslän, Finnmarken and elsewhere in maritime regions. For food and customs, see *It. W:goth.* 182.
DESCR. The size of a dove.[205] Body above eyes black. Throat, neck, and pectus are white and weakly whitish yellow. Dorsum and wings fuscous. Abdomen ash-grey. Remiges black; 1, 2 with a snow-white rachis. Tail black and rounded. The two middle rectrices sword-shaped, twice as long. Bill jet-black, shorter than head. Upper beak[206] curved, with a blackish cere and covered to the middle. Feet tetradactyl, posterior digit separate.

157. LARUS *tridactylus* [*Rissa tridactyla* (Linnaeus, 1758). Eng. Black-legged kittiwake, Sw. Tretåig mås], whitish; dorsum greyish white; tips of rectrices black except for the outermost one.
Raj. Av. 128. n. 4. Larus cinereus.
Alb. Av. 2. p. 80. t. 87. Larus hybernus.
This rarish bird occurs in our ocean. Femora semi-naked and pollex scarcely visible, without spines. These characteristics make this species unique.

[203] Lat. *mandibula inferior.*
[204] Linnaeus only refers to *Scolopax*, see nos. 167–174.
[205] Linnaeus only refers to *Columba*, see nos. 207 and 208.
[206] Lat. *mandibula superior.*

DESCR. The size of a rather large dove.[207] Bill fuscous; lower protuberance whitish yellow. Body verging on white. Head ash-grey between eyes. Neck blackish dorsally. Dorsum grey-white. Alar tectrices ash-grey, but the smaller ones blackish. Remiges white, but primary 4 black on outer side; 5, 6 black-tipped. Tail entire, snow-white. Rectrices widely black at tip, but outermost one entirely white.

Sterna

158. STERNA *hirundo* [*Sterna hirundo* Linnaeus, 1758. Eng. Common tern, Sw. Fisktärna], tail forficate; two outermost rectrices half white, half black.

Sterna, outermost rectrices very large, half white, half black. *Fn.* 127.

Gesn. Av. 53. Sterna.

Aldr. Orn. l. 19. c. 7. Sterna.

Will. Orn. 268. Hirundo marina. Sterna turneri.
t. 68. Hirundo marina major.

Jonst. Av. 130. t. 46. Larus minor, Sterna.

Raj. Av. 131. n. 1. Hirundo marina. Sterna turneri.

Alb. Orn. 2. p. 79. t. 90. Hirundo marina minor.

In Sweden: Tärna.

Occurs ubiquitously at lakes and swamps.

DESCR. Head jet-black above. Dorsum and wings quite grey-white above. Moreover pectus somewhat watery grey-white. Venter, tail, and wings white beneath. Tail forficate, white, with two rectrices on each side; outermost ones fuscous above at outer margin, of which the outermost is the longest. The closer the remiges are to the alar tip, the longer they are. Bill awl-shaped, compressed at tip, straight, scarlet, as also the legs. Nostrils oblong, linear; femora half naked. Feet palmate. 3 eggs.

159. STERNA *nigra* [*Chlidonias niger* (Linnaeus, 1758). Eng. Black tern, Sw. Svarttärna], tail forficate; body fuscous; head and bill black; legs red. *Fn.* 128.

Raj. Av. 131. Sterna fusca.

Alb. Av. 2. p. 82. t. 39. Hirundo marina minor.

Occurs at Ultuna close to Uppsala, in reed areas at the very small islets.

DESCR. Appearance and size almost of the previous bird. Head jet-black, moderately convex, somewhat flattened, acuminate. Nostrils oblong, penetrable, naked. Colour of whole bird grey-white above, as also throat, pectus, and abdomen. Lower alar tectrices snow-white, just as lower tectrices of tail. Primary remiges 1–10 acuminate; secondaries 11–25 blunt. Tail somewhat forficate; 12 rectrices, of which outer ones somewhat longer than inner; outermost ones are not the longest, unlike the condition in the preceding bird. All remiges and rectrices unicoloured and whitening beneath with a snow-white rachis. Feet semi-palmate, tetradactyl, red, posterior digit free; inner digit somewhat shorter than outermost; claws black, of which middle claw inwardly marginate.

[207] Linnaeus only refers to *Columba*, see nos. 207 and 208.

IV. GRALLAE

Platelea

160. PLATELEA *leucorodia* [*Platalea leucorodia* Linnaeus, 1758. Eng. Eurasian spoonbill or Common spoonbill, Sw. Skedstork], body white.
Anas, bill flat; tip dilated and rounded. *Fn.* 87.
Gesn. Av. 666. Pelecanus sive Platea.
Aldr. Orn. l. 20. c. 13. Leucorodios sive Platea, Pelecanus ornithologi.
Worm. Mus. 1. f. 2. n. 10. t. 11. f. 10. Platea ciceroni.
Anon. Orn. 134. f. 89. Spoonbill.
Olear. Mus. 23. t. 13. f. 4. Platina sive Cochlearia.
Jonst. Orn. t. 46. Platea sive Pelecanus.
Merr. Pin. 181. Platea sive Pelecanus.
Mars. Danub. 5. p. 28. t. 12. Platea sive Pelecanus.
Will. Orn. 212. t. 52. Platea sive Pelecanus, Leucorodius sive Albardeola.
Raj. Av. 102. n. 1. Platea sive Pelecanus.
In Sweden: Pelekan.
Occurs in Västerbotten and Lapland;[208] during summer rather rare.
DESCR. It is entirely white; neck very long; bill long above and entirely flat beneath as a plate; towards tip dilated into an almost rounded form.

Ardea

161. ARDEA *grus* [*Grus grus* (Linnaeus, 1758). Eng. Common crane or Eurasian crane, Sw. Trana], ash-grey; occiput naked, papillose; cap and remiges black; inner alar rectrices lacerate.
Ardea, vertex papillose. *Fn.* 131.
Bell. Ic. 41. b. Grus.
Gesn. Av. 529. Grus.
Aldr. Orn. l. 20. c. 5. Grus.
Jonst. Orn. 166. t. 54. Grus.
Blas. Anat. t. 41. f. 8. Grus.
Will. Orn. 200. t. 48. Grus.
Raj. Av. 91. n. 1. Grus.
Mars. Danub. 5. p. 6. t. 1. Grus.
Alb. Orn. 2. p. 60. t. 65. Grus.
In Sweden: Trana.
Inhabits rather damp fields everywhere.

[208] The European spoonbill is in fact found at the European Atlantic coasts, in the Mediterranean region including North Africa and across Asia to Japan.

DESCR. Body grey-white. Dorsum greyish. Cap of head black. Occiput naked, papillose. Jugulum fuscous from bill to middle of neck. Temples white; this whiteness descends towards the back of neck. Remiges black. Outermost tectrices longer, wider, hanging down, lacerate. Tail blackish. Femora semi-naked. Legs black. Bill straight, green.

162. ARDEA *ciconia* [*Ciconia ciconia* (Linnaeus, 1758). Eng. White stork, Sw. Vit stork], white; remiges black; skin blood-coloured. *Fn.* 136.

Bell. Ic. 45. a. Ciconia.
Lonic. Berb. 341. a. Ciconia.
Gesn. Av. 262. Ciconia.
Aldr. Orn. l. 20. c. 1. Ciconia.
Jonst. Orn. 147. t. 50. Ciconia.
Will. Orn. 210. Ciconia alba.
Raj. Av. 97. n. 1. Ciconia alba.
Mars. Dan. 5. p. 26. t. 11. Ciconia.
Alb. Orn. 2. p. 59. t. 54. Ciconia alba.
In Sweden: Storck.
Occurs in Götaland, especially in Skåne. Nests on roofs, towers, and in high, truncated trees; eats frogs and snakes, but not toads.

DESCR. Head, neck, venter, and tail are white; remiges black. Bill and legs red; face large, mostly white. Tongue very short. Skin entirely blood-coloured. Jugulum less red; anteriorly white. Eyelids black but blood-coloured at base.

163. ARDEA *nigra* [*Ciconia nigra* (Linnaeus, 1758). Eng. Black stork, Sw. Svart stork], pectus and abdomen white. *Fn.* 135.[209]

Aldr. Orn. l. 20. c. 2. Ciconia nigra.
Will. Orn. 211. Ciconia nigra.
Raj. Av. 97. n. 2. Ciconia nigra.
Gesn. Av. 273. Ciconia nigra.
Alb. Orn. 3. p. 77. t. 82. Ciconia nigra.
Rudb. Pict. Ardea fusca, pectore & cauda nigra, rostro & pedibus subviridibus.
In Sweden: Odenswala.
Occurs in Sweden; rather rare; migrates towards the Arctic; feeds on frogs.

DESCR. The size of its congeners. Colour of body black above; it is white beneath. Head, neck continuously down to sternum, dorsum, wings, and tail are black. But pectus and venter are white; femora semi-naked, green, just as bill. Feet semi-palmate and bill red. Colour of dorsum shining, but neck is ash-greyish.

[209] See Ch. *A small fauna of Sweden.*

164. ARDEA *stellaris* [*Botaurus stellaris* (Linnaeus, 1758). Eng. Eurasian bittern or Great bittern, Sw. Rördrom], head rather smooth; body brick-red with transverse maculae and oblong, fuscous maculae beneath.

Ardea, vertex black; pectus pale with longitudinal, blackish maculae. *Fn.* 134.
Gesn. Av. 215. Ardea stellaris minor.
Aldr. Orn. l. 20. c. 16. Ardea stellaris minor sive Oenus.
Will. Orn. 207. t. 50. 52. Ardea stellaris.
Raj. Av. 100 n. 11. Ardea stellaris.
Mars. Danub. 5. p. 16. t. 6. Ardea stellaris.
Alb. Orn. 1. p. 65. t. 68. Ardea stellaris.
In Sweden: Rördrum.
Lives at water bodies.

DESCR. Bill long, convex, indistinctly black, pointed. Nostrils oblong, covered with a little valve or scale on upper side, from which a channel or groove runs to tip of bill. Tongue slender, pointed, triangular. Femora semi-naked, watery green. Claws lightly arcuate, posterior one longer. 22 remiges on each wing. 12 rectrices, blunt. Colour of body red-brown tending to brick-red above, with oblong, transverse maculae, but beneath they are more diluted than the longitudinal maculae of the feathers. Head black from bill continuously to neck when exposed to light.

165. ARDEA *cinerea* [*Ardea cinerea* Linnaeus, 1758. Eng. Gray heron or Grey heron, Sw. Gråhäger], occiput tufted and pendant; dorsum bluish, beneath whitish; pectus with oblong, black maculae.

Ardea, tuft hanging down. *Fn.* 133.
Gesn. Av. 212. Ardea pulla sive cinerea.
Jonst. Orn. 151. t. 50. Ardea cinerea.
Aldr. Orn. l. 20. c. 9. Ardea cinerea major.
Will. Orn. 203. t. 49. Ardea cinerea major.
Raj. Av. 93. n. 1. Ardea cinerea major.
Mars. Danub. 5. p. 8. t. 2. Ardea cinerea major.
Alb. Orn. 1. p. 46. t. 67. Ardea cinerea major sive pulla.
In Sweden: Häger.
Lives at the shores of lakes; nests in trees.

DESCR. Bill compressed, pointed. Upper beak[210] black, lower beak light red. Crest small, hanging down, black. Whitish macula between eyes and bill on each side. Throat white. Neck on the back and dorsum bluish grey-white. Neck turning white beneath and embellished with longitudinal, black maculae. Pectus and venter whitish. Femora whitish yellow. 24 remiges, black. Tail (12) grey-white. Femora semi-naked, pinkish ash-grey. Legs blackish. Claw of middle digit outwardly serrate; outermost digit connected with the middle digit.

[210] Lat. *maxilla superior.*

166. ARDEA *alba* [*Ardea alba* Linnaeus, 1758. Eng. Great egret, Sw. Ägretthäger], head smooth; body white; bill red.[211] *Fn.* 132.
Raj. Av. 99. n. 4. Ardea alba major.
Will. Orn. 205. Ardea alba major.
Occurs in Skåne. It was seen at Araslöf.[212]
DESCR. Entirely snow-white; lacks tuft. Bill deep yellow.

Scolopax

167. SCOLOPAX *totanus*[213] [*Tringa totanus* (Linnaeus, 1758). Eng. Common redshank, Sw. Rödbena],[214] bill straight, red at base; legs scarlet; secondary remiges white.
Tringa, black bill, red at base; legs scarlet. *Fn.* 149.
Gesn. Av. Totanus.
Raj. Av. 107. n. 1. Totanus.
Alb. Orn. 3. p. 82. t. 87. Totanus.
Lives at marshes.
DESCR. Femora semi-naked; feet somewhat palmate. Tail whitish with black, transverse undulations. Outer remiges blackish, 11–21 white; dorsum blackish ash-grey, maculate, as also head and neck. Pectus white with black maculae. Abdomen white. Bill longer than head, awl-shaped, smooth.

168. SCOLOPAX *arquata* [*Numenius arquata* (Linnaeus, 1758). Eng. Curlew or Eurasian curlew, Sw. Storspov], bill arcuate; legs bluish; wings black with snow-white maculae. *Fn.* 139. *It. Scan.* 333.
Gesn. Av. 222. Numenius sive Arquata.
Aldr. Orn. l. 20. c. 21. Numenius.
Will. Orn. 216. t. 54. f. 1. 2. Numenius aldr. sive Arquata.
Raj. Av. 103. n. 1. Numenius sive Arquata major.
Alb. Orn. 1. p. 75. t. 79. Arquata.
Lives in marshes.
DESCR. Legs dusky weakly bluish. Bill arcuate, blackish, very long. Primary remiges black, secondaries maculate with white. Venter and uropygium are white. Feathers of body blackish, but ash-grey marginally, at back red-brownish, at pectus whitish, at throat whitish red-brownish. This female is the *Arquata* or *Numenius medius* of *Rudbeck*, although regarding colour he actually shows another, the head, neck, and pectus of which are watery grey with longitudinal, fuscous maculae, femora semi-naked, blue, and feathers of dorsum black with grey maculae.

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[211] See below; wrong for: deep yellow.
[212] Nowadays Åraslöv.
[213] See *Fn. Su.* (1761), *Errata*, p. 560.
[214] See no. 177.

169. SCOLOPAX *phaeopus* [*Numenius phaeopus* (Linnaeus, 1758). Eng. Whimbrel, Sw. Småspov], bill arcuate; legs bluish; dorsum with rhomboid, fuscous maculae. *Fn.* 140.

Gesn. Av. 500. Phaeopus altera.

Aldr. Orn. l. 20. c. 21. Arquata minor.

Will. Orn. 217. Arquata minor.

Raj. Av. 103. n. 2. Arquata minor.

In Sweden: Windspole. In Northern Sweden: Spof.

Inhabits marshes. Eggs greenish, covered with maculae.

DESCR. Bill strongly arcuate, black. Legs bluish. Head, neck, and pectus with longitudinal, acuminate maculae; lower maculae arcuate as a curve. Venter white; distinct maculae behind femora. Tail ash-grey with fuscous fasciae. Remiges blackish. Dorsum posteriorly white.

The female, which *Mr Leche* has given to me, I have described as follows: 26 remiges, black, of which 1 with a white rachis; 1–5 black at tips and outer margins; 6, and those that follow, not only with 5–12 maculae along outer margins, but also along inner margins. 14 rectrices with 8 palish maculae; just as many reciprocal darker maculae. Uropygium white with blackish lines. Head rather watery ash-grey with darker rachides, but it is dusky ash-grey above.

170. SCOLOPAX *rusticola* [*Scolopax rusticola* Linnaeus, 1758. Eng. Eurasian woodcock, Sw. Morkulla], bill straight, smooth; legs red; femora covered; claws of pollices indistinct.

Numenius, tip of bill smooth; black line on each side of head; rectrices black, white-tipped. *Fn.* 141.

Gesn. Av. 502. Rusticola sive Perdix rustica major.

Aldr. Orn. l. 20. c. 51. Scolopax sive Perdix rustica.

Will. Orn. 213. Scolopax.

Raj. Av. 104. n. 1. Scolopax, Gallinago maxima.

Alb. Orn. 1. p. 67. t. 70. Scolopax.

In Sweden: Morkulla. In English: The Woodcock.

Lives at suitable places, flying all night, as if along a most strict path; in the very air there is a constant departure and return. Overwinters in England, then leaves in spring having been joined in marriage. Feeds on worms. During summer it therefore leaves the southern countries and during winter the northern regions.

DESCR. Body grey above, with thin, transverse, somewhat thick, black lines together with black maculae often scattered here and there; then body becomes entirely white beneath, with thinner, black lines. Tail very short; black rectrices; tips grey-white above, snow-white beneath. Outer lateral margin of rectrices variegated with brick-red; from bill to eyes a black line extends. Bill straight, double the length of the digit, laterally wrinkled; on each side an excavated furrow; tip glabrous. Upper beak[215] with protracted tip, gibbous beneath. Legs ash-grey, covered at knees; venter maculate as the rest of body.

[215] Lat. *maxilla superior.*

171. SCOLOPAX *glottis* [*Tringa nebularia* (Gunnerus, 1767). Eng. Common greenshank, Sw. Gluttsnäppa], bill straight, red inferiorly at base; legs greenish.

Numenius, legs greenish; uropygium white; remiges with white lines and undulated with fuscous. *Fn.* 142.

Gesn. Av. 520. Glottis.

519. Limosa venetorum.

Aldr. Orn. l. 20. c. 66. Pluvialis major.

Will. Orn. 220. Pluvialis major.

t. 55. Glottis sive Pluvialis major.

Raj. Av. 106. n. 8. Pluvialis major.

Sloan. Jam. 2. p. 317. Glottis sive Pluvialis major.

In Sweden: Glutt.

Inhabits marshes.

DESCR. Legs lead-grey; venter white; pectus grey. Dorsum covered with black feathers, grey at margins, white at tips. Bill black, base of lower beak[216] red.

172. SCOLOPAX *limosa* [*Limosa limosa* (Linnaeus, 1758). Eng. Black-tailed godwit, Sw. Rödspov], bill straight, smooth; legs fuscous; remiges with a white macula; 4 primaries without maculae.

Numenius, uropygium white; rectrices black, at base white; remiges with a transverse, white macula except for the four primaries. *Fn.* 144.

Lives in reed areas.

DESCR. The size of a northern lapwing.[217] Head, neck, and pectus weakly whitish yellow, transversely maculate with fuscous. Bill straight, very long; tip glabrous. Abdomen verging on white, with ash-greyish whitish yellow maculae. Dorsum ash-grey with fuscous and brick-red maculae; sides ash-grey, without maculae. Upper and lower tail tectrices white. Rectrices 1–4 blackish, on inner side white, 8, etc. blackish with a transverse white macula. *Mr G. Wallerius* has communicated this information to me.

173. SCOLOPAX *gallinago* [*Gallinago gallinago* (Linnaeus, 1758). Eng. Common snipe, Sw. Enkelbeckasin], bill straight with a tuberculate tip; legs fuscous; four fuscous lines on frons.

Numenius, head with four longitudinal, fuscous lines; tip of bill full of swellings; femora semi-naked. *Fn.* 143.

Gesn. Av. 503. Gallinago sive Rusticola minor.

Aldr. Orn. l. 20. c. 53. Scolopax sive Gallinago minor.

Will. Orn. 214. Gallinago minor.

Raj. Av. 105. n. 2. Gallinago minor.

Alb. Orn. 1. p. 68. t. 71. Gallinago minor.

In Sweden: Horsgjök.

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[216] Lat. *maxilla inferior.*

[217] See no. 176.

Inhabits reed areas.

DESCR. Head pale brick-red, with four longitudinal, fuscous lines, of which the outer ones run through the eyes. Neck grey, with fuscous maculae. Sternum and venter white. Wings blackish ash-grey, with blackish feathers, outer margin longitudinally pale brick-red; disc punctate. Tail short. Rectrices black, white-tipped, with rusty brown fasciae; femora semi-naked. Posterior digit consisting of one very short segment, but middle digit of the same length as tibia. Bill pale, very long, outwardly jet-black, with unequal punctations at tip. Secondary remiges become white at tips forming a white, transverse line; hence wings are enclosed by a lateral, white line. First remex entirely white on anterior side.

174. SCOLOPAX *lapponica* [*Limosa lapponica* (Linnaeus, 1758). Eng. Bar-tailed godwit, Sw. Myrspov], bill weakly curved; legs black; pectus rusty brown. †

Recurvirostra, pectus saffron yellow. *Fn.* 138.

Rudb. pict. Scolopax rostro recurvo, pectore rufescente, pedibus nigris.

Occurs in Lapland.

DESCR. Bill long, hardly noticeably curved. Entirely saffron yellow beneath from bill to femora. Dorsum grey. Bill and legs fuscous.

Tringa

175. TRINGA *pugnax* [*Philomachus pugnax* (Linnaeus, 1758). Eng. Ruff, Sw. Brushane], bill and legs red; face with granulate, fleshy papillae; three lateral rectrices without maculae. *Fn.* 145.

Aldr. Orn. l. 20. c. 19. f. 1. 8. Avis pugnax.

Jonst. Orn. 152. t. 51. 52. Avis pugnax.

Will. Orn. 224. t. 56. Avis pugnax.

Raj. Av. 107. n. 3. Avis pugnax.

Mars. Danub. 52. t. 24. Avis pugnax.

Alb. Orn. 1. p. 69. t. 72. 73. Avis pugnax.

In Sweden: Brushane.

Occurs ubiquitously in Sweden, especially in Skåne.

DESCR. Dorsum brick-red, with shining bluish black maculae. Wings ash-grey above, white beneath. Pectus is white; feathers maculate with black. Abdomen white; tail fuscous; fasciae pale. 5 remiges, variegated with black and white on each side. Legs and posterior part red. Feathers of neck long, white. Face scattered with numerous, small, fleshy papillae.

Female: Body varying from brick-red to black, or colour of a snipe. Remiges fuscous. Secondaries white-tipped; 3 outer rectrices ash-grey, without maculae, white marginally, as in male; this is a species-specific character. Abdomen white.

176. TRINGA *vanellus* [*Vanellus vanellus* (Linnaeus, 1758). Eng. Northern lapwing, Sw. Tofsvipa], legs red; crest hanging down; pectus black. *Fn.* 148.[218]

Bell. Ic. 49. a. Capra, Capellus, Vanellus.
Gesn. Av. 764. Vanellus.
Aldr. Orn. l. 20. c. 63. Capella sive Vanellus.
Jonst. Orn. 164. t. 53. 27. Vanellus sive Capella.
Will. Orn. 228. t. 57. Capella sive Vanellus.
Raj. Av. 110. n. 1. Capella sive Vanellus.
Anonym. 138. t. 95. Lapving.
Alb. Orn. 1. p. 70. t. 74. Capella sive Vanellus.
In Sweden: Wipa, Kowipa. In Gotland: Blaecka.
Occurs ubiquitously in low-lying meadows; very common at Skanör.
DESCR. Male: Head black above, with long plumes, in the rear pendant, turned backwards into a tuft. Throat black downwards towards neck. Pectus black; temples white. Neck grey above. Dorsum glistening with dark brown, blue, green, and rusty brown. Pectus white. Alar rectrices of the same colour as neck but bluer. 24 remiges, black: primary 5 becoming white at tips; secondary becoming white at base. Tail entire. 12 rectrices, white, black from outer middle part, tips pale; outermost remex white on each side except for the black macula close to tip. Tail tectrices rusty brown outside and beneath. Bill black. Nostrils oblong, penetrable. Legs red.
Male: Throat black. Female: Throat white. Outermost remex of male white, a black macula beneath tip. Outermost remex of female is entirely white.

177. TRINGA *gambetta* [*Tringa totanus* (Linnaeus, 1758). Eng. Common redshank, Sw. Rödbena],[219] bill and legs red; body variegated with deep yellow and ash-grey, white beneath. *Fn.* 153.

Aldr. Orn. l. 20. c. 26. Gambetta.
Raj. Av. 107. Gambetta.
Inhabits deserted marshes.
DESCR. Body maculate with deep yellow and ash-grey. Pectus maculate with white and ash-grey.

178. TRINGA *interpres* [*Arenaria interpres* (Linnaeus, 1758). Eng. Ruddy turnstone, Sw. Roskarl], legs red; body variegated variously with black, white, and rusty brown; pectus and abdomen white. *Fn.* 154. *It. Gotl.* 217.

Edw. Av. 141. t. 141. Morinellus canadensis.
In Gotland: Tolk.
Occurs on the islands of Heligholmen and Klasen of Gotland.
DESCR. The size of a thrush.[220] Venter, pectus, tail beneath, wings beneath, and rear of dorsum white. Head mostly white, scattered with grey maculae. Neck or anterior part of pectus black, with a broad macula; from this macula runs another on each side towards upper part of neck, another

[218] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

[219] This bird is also described under no. 167, but with another name. The description, no. 177, is according to an illustration by Olof Rudbeck the Younger.

[220] Linnaeus only refers to *Turdus*, see nos. 215–221.

through eyes towards frons, and still another towards the sides of the lower beak.[221] The white macula of the throat divides the black markings; another white macula between bill and eyes, yet another near eyes, and yet another in sinciput. Tail short, fuscous. Rectrices white at base and tip except for the two in the middle. Wings ash-grey above. Remiges blackish, white towards base, but secondaries white both at base and tip. Dorsum covered by longer, broader, black feathers, with rusty brown maculae. Bill short, awl-shaped, blunt, black, the length of the digits. Nostrils oblong, penetrable. Legs blood-coloured, feet divided, tetradactyl, with black claws. Femora semi-naked.

179. TRINGA *lobata* [*Phalaropus lobatus* (Linnaeus, 1758). Eng. Red-necked phalarope, Sw. Smalnäbbad simsnäppa], bill awl-shaped, with curved tip; legs greenish, lobate; abdomen whitish.

Edw. Av. 143. t. 143. Tringa fusca, pedibus fulicae.

Occurs in Lapland. *P. Adlerheim.*

DESCR. Bill straight, black, longer than head, curved at tip, red at lower base. Throat and beneath neck fuscous, but dorsum with white spots and pectus with transverse, white lines. Abdomen dusky whitish. Remiges fuscous; secondaries maculate with white on both margins. Rectrices fuscous with many white fasciae; upper rectrix with indistinct fasciae; posterior part of dorsum white. The size of a turtle dove.

There is yet another snipe[222] that was brought from Lapland by *Mr Adlerheim*; I am not sure regarding sex; the throat has a white macula, posteriorly trilobed. Neck rusty brown beneath and also laterally. Pectus anteriorly ash-grey; otherwise, just as abdomen and lower tail tectrices, white. Rusty brown maculae medially in dorsum. Primary remiges fuscous with a white rachis. The first secondaries white marginally. Rectrices ash-grey with a white margin. Bill and legs black.

180. TRINGA *ocrophus*[223] [*Tringa ochropus* Linnaeus, 1758. Eng. Green sandpiper, Sw. Skogssnäppa], tip of bill punctate; legs greenish; dorsum dusky green, shining.

Fn. 146.

Bell. Av. Cinclus.

Gesn. Av. 517. Gallinae genus, quod nomine ignoto Sametes humbe nomino.
508. Rhodopus.
511. Ochrophus medius.

Aldr. Orn. l. 20. c. 39. p. 461. Gallinula Rhodopus sive Phaenicopus.
l. 20. c. 54. p. 481. Tringa.

Will. Orn. 222. t. 55 Tringa.

Raj. Av. 108. n. 7. Tringa.

Lives in reed areas and at river banks.

DESCR. Bill black. Legs lead-grey. Body fuscous above. Wings black beneath, with white, undulating lines. Venter white. Neck maculate. Tail with transverse maculae. Rectrices 1,1 entirely bright white. 2,2 with a white macula close to tip. 3,3 with a white duct not long from tip. 4,4 with two ducts. 5,5 with two and a half ducts. 6,6 with four ducts.

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[221] Lat. *maxillae inferiores* should be written as *maxillae inferioris*, see *Fn. Su.* (1746), no. 154.

[222] Linnaeus only refers to *Tringa*, se nos. 175–186.

[223] Misspelling of the original name *ochropus* in *Syst. nat.* (1758).

181. TRINGA *alpina* [*Calidris alpina* (Linnaeus, 1758). Eng. Dunlin, Sw. Kärrsnäppa], dusky brick-red; pectus blackish; rectrices whitish ash-grey; legs darkish.

Occurs in Lapland. *P. Adlerheim.*

DESCR. Body the size of a starling,[224] closely mixed grey and brown maculae. Sternum black. Abdomen white. Primary remiges fuscous, with a white rachis. Primary secondaries white-tipped at outer margin and inner side. Rectrices ash-grey. Bill scarcely longer than head.

182. TRINGA *hypoleucos* [*Actitis hypoleucos* (Linnaeus, 1758). Eng. Common sandpiper, Sw. Drillsnäppa], bill smooth; legs dark bluish grey; body ash-grey with black blotches, white beneath. *Fn.* 147.

Gesn. Av. 509. Gallinula aquatica hypoleucos.
617. Motacilla cujus iconem Kentmannus, descriptionem Fabricius ex Misnia dedere.

Aldr. Orn. 3. p. 469. Gallinula hypoleucos.

Will. Orn. 223. t. 35. Tringa minor.

Raj. Av. 108. n. 5. Tringa minor.

In Sweden: Snäppa. In Geneva: Beccasin.

Lives at lakes.

DESCR. This bird is perhaps the same as *Westman's* bird, called "Strandsittare",[225] which occurs on sandy shores ("Källstränder").[226] Tip of bill smooth. Legs and bill dark bluish grey, scarcely longer than head. Head, neck posteriorly, dorsum, wings, uropygium, and all above ash-grey with fuscous blotches and wavelets. Throat, abdomen, femora, and anal region white. Neck white beneath, with longitudinal, weakly fuscous lines. Four middle rectrices, entirely ash-grey; four lateral ones white-tipped, but 1,1 and 2,2 with fuscous fasciae on outer white side; 4–9 white-tipped, otherwise indistinctly ash-grey. Remiges fuscous; 1 without maculae; 2–20 fuscous, inner side with a white macula. 11–20 fuscous, apically white. No thin, undulate lines beneath. Outermost digit medially connected; white line above eyes. The size of the white wagtail.[227]

183. TRINGA *canutus* [*Calidris canutus* (Linnaeus, 1758). Eng. Red knot or Knot, Sw. Kustsnäppa], bill smooth; legs ash-greyish; primary remiges serrate.

Tringa, ash-grey; secondary remiges entirely white at base; four middle rectrices without maculae. *Fn.* 150.

Lives close to water bodies, where it runs around, constantly moving its tail like a wagtail.[228]

DESCR. Almost the size of a starling.[229] Head, dorsum, and neck undulated with dusky black and grey. Abdomen, pectus, throat, and lower part of neck white. 20 remiges, fuscous. Primaries medially white at rear; secondaries entirely white medially or on each side. Tips of these secondaries white, tips of primaries less distinctly white. Rectrices fuscous, 1, 2, 3, 4 variegated with white, but

[224] Linnaeus only refers to *Sturnus*, see nos. 213 and 214.

[225] Eng. "Beachsitter".

[226] Eng. "Spring beaches".

[227] See no. 252.

[228] Linnaeus only refers to *Motacilla*, see nos. 244–264.

[229] Linnaeus only refers to *Sturnus*, see nos. 213 and 214.

5, 6 (or the four middle ones) entirely void of whiteness and maculate with grey. Bill fuscous and somewhat longer than head. Feet ash-greyish, tetradactyl; the last digit medially connected to the lowest joint. Femora semi-naked. Wings beneath are embellished with a fourfold fascia; tectrices of upper wings, especially primaries, with whitish tips. Remiges 1, 2, 3, 4, 5, 6 are serrate at outer margin towards tip; white macula above eyes. Eight denticles at base of tongue, and in pharynx many denticles bent backwards.

184. TRINGA *glareola* [*Tringa glareola* Linnaeus, 1758. Eng. Wood sandpiper, Sw. Grönbena], bill smooth; legs greenish; body punctate with dusky white; pectus weakly whitish.

Tringa, black, punctate with white; pectus maculate; abdomen weakly whitish; legs greenish. *Fn.* 152.

Rud. Pict. Gallinula aquata minor, pedibus sordide viridibus.

Inhabits marshy forests.

DESCR. The size of the starling.[230] Dorsum fuscous, punctate with white. Uropygium white. Remiges fuscous, with the first rachis snow-white; secondary remiges white at apical margin. Rectrices with white and fuscous fasciae; lateral ones whiter and less fasciated. Abdomen whitish.

185. TRINGA *littorea* [*Nomen dubium*], bill smooth; legs and remiges fuscous; first rachis snow-white. *Fn.* 151.

Rud. Pict. Gallinula aquata minima, pedibus nigricantibus.

Inhabits marshes.

DESCR. Bill black, longer than head. Lower beak[231] paler towards base. Neck fuscous with oblique lines verging on white. Dorsum fuscous with rusty brown or grey maculae or spots. Uropygium white, but with blackish feathers at base. Upper alar tectrices of the same colour as dorsum but with spots or maculae that appear more watery. Lower alar tectrices whitish with transverse, ash-grey lines. Pectus and abdomen whitish. Lower tail tectrices white. Remiges black; secondaries whitening at tip. First remex enjoys a snow-white rachis. Rectrices maculate and undulated with fuscous and white; outer ones mostly white; middle ones mostly fuscous. Legs fuscous. The size of a turtle dove; area around eyes whitish; line between eyes and bill fuscous.

186. TRINGA *squatarola* [*Pluvialis squatarola* (Linnaeus, 1758). Eng. Grey plover or Black-bellied plover, Sw. Kustpipare], bill black; legs greenish; body grey, beneath whitish.

Tringa, dusky black, beneath white; bill black; legs greenish. *Fn.* 155.

Raj. Av. III. n. 3. Pluvialis cinerea.

Alb. Orn. 1. p. 72. t. 76. Pluvialis cinerea.

Leche's Tringa in the month of August.

Occurs in Skåne.

DESCR. Bill black; legs greenish ash-grey, with transverse notches. 24 remiges, of which 1 with a white rachis, 2–4 rather black; others more fuscous. All white, especially at apical margin; furthermore, tectrices also distinguished by transverse maculae. 12 white rectrices with transverse,

[230] See no. 213.

[231] Lat. *maxilla inferior.*

fuscous lines, well spaced, except for the two middle ones, on which there are broader lines placed closer to each other. Body dusky black. Pectus, abdomen, and uropygium white. Head and neck scattered with small, black maculae on the ash-grey. *Mr Leche.*

Charadrius

187. CHARADRIUS *hiaticula* [*Charadrius hiaticula* Linnaeus, 1758. Eng. Common ringed plover, Sw. Större strandpipare], pectus black; frons blackish with a white fasciole; vertex fuscous; legs deep yellow. *Fn.* 159.

Jonst. Orn. 166. t. 53. Charadrius.
Aldr. Orn. l. 20. c. 67. Charadrios sive Hiaticula.
Will. Orn. l. 230. t. 57. Charadrius sive Hiaticula
Raj. Av. 112. n. 6. Charadrius sive Hiaticula.
Marcgr. Bras. 199. Mutuiti brasiliensibus.
Sloan. Hist. 2. p. 314. t. 169. f. 2.
Alb. Orn. 1. p. 76. t. 80. Charadrius.
Rudb. pict. Charadrius sive Hiaticula flavipes.
In Sweden: Strandpipare. In Skåne: Grylle. In Halland: Trulls. In Lapland: Pago.
Occurs ubiquitously at river banks; abundant in the mountains of Lapland.
DESCR. Bill saffron yellow, black-tipped. Head dusky ash-grey; frons white above, with a jet-black fascia. Temples rather dark. Throat and collar white, then a large, black macula down to sternum. Dorsum, wings, and tail ash-grey. Venter and pectus white. Legs light yellow (in the other sex red-yellow). Remiges fuscous, of which 1 with white rachis, 5–19 with white tip. Rectrices fuscous, but 6,6 without maculae; 3, 4, 5 white-tipped; 2 white at tip and outer side, but 11 entirely white with a fuscous macula.

188. CHARADRIUS *morinellus* [*Charadrius morinellus* Linnaeus, 1758. Eng. Eurasian dotterel, Sw. Fjällpipare], pectus rusty brown; fascia of supercilia and pectus linear, white; legs black. *Fn.* 158.

Charadrius, abdomen red-brownish; pectus ash-grey; vertex fuscous. *Fn.* 160.
Alb. Orn. 2. p. 57. t. 61. 62. Morinellus.
In Lapland: Lahul.
Occurs in Särna in eastern Dalarna and in the mountains of Lapland. When migrating to these regions it passes Uppsala in the month of May.
DESCR. Neck and dorsum watery ash-grey. Pectus rusty brown. At base of sternum, a transverse, white line, running above a black one.[232] Venter blackish. But each feather anteriorly whitening. Throat white. Tail ash-grey, white marginally. Wings paler beneath. White line from bill surrounding whole head including the fuscous vertex. Outermost digit medially attached through a little membrane. Rectrices fuscous, of which 1, 2, 3 white-tipped; the others barely white in front of apical margin. Head blackish above. The size of a thrush.[233] Bill and legs black. Femora of male black.

[232] The black line is in fact above the white.

[233] Linnaeus only refers to *Turdus*, see nos. 215–221.

189. CHARADRIUS *apricarius* [*Pluvialis apricaria* (Linnaeus, 1758). Eng. European golden plover or Greater golden-plover, Sw. Ljungpipare],[234] pectus black; bill gibbous at base; legs ash-grey.

C*haradrius*, variegated with black and deep yellow; pectus black. *Fn.* 156. *It.* O*el.* 72.

Rudb. Pict. Pluvialis minor nigro-flavus.

Edw. Av. 140. t. 140. Pluvialis viridis maculatus; ventre nigro.

In Öland: Alwargrim. In Sweden: Åkerhöns. In Småland: Myrpytta. In Lapland: Huttich.

Inhabits the barren fields of Öland.

DESCR. The size of a dove.[235] Head, neck, dorsum, wings, and tail with white maculae, mixed with black and dusky deep yellow maculae; each feather black laterally with some dusky deep yellow maculae, paler towards tip; each feather with ash-grey wool at base. White fascia of frons extended above eyes to ears. Femora beneath wings and tail whitish. Sides of neck white at thorax. Pectus and abdomen black. Neck black beneath. Bill the length of the head, black, gibbous towards base. Femora semi-naked. Legs ash-grey. Outermost digit connected medially with a membrane extending to first joint. Remiges blackish: eight primaries, of which outermost are the longest; the others shorter, white, placed in a row, acuminate, medially close to rachis. Secondaries likewise fuscous, blunt, equal, white-tipped, just as also tectrices. Tail entire. 12 fuscous rectrices, eight lateral whitish yellow lines on each side.

190. CHARADRIUS *pluvialis* [*Pluvialis apricaria* (Linnaeus, 1758). Eng. European golden plover or Greater golden-plover, Sw. Ljungpipare],[236] legs ash-grey; body black and green, maculate beneath, whitish.

C*haradrius*, variegated with black and deep yellowish; pectus concolorous. *Fn.* 157.

Will. Orn. 229. t. 67. Pluvialis viridis.

Raj. Av. III. n. 7. Pluvialis viridis.

Sloan. Hist. 2. p. 313. t. 269. f. 1. Pluvialis viridis.

Alb. Orn. 1. p. 71. t. 75. Pluvialis viridis.

In Dalarna: Åkerhöna. In Lapland: Hutti.

Occurs in eastern Dalarna, close to the mountains, and in the fields of Öland. It has a whistling sound: "hvit, hvit".

DESCR. The size of a dove.[237] Body blackish, above scattered with small, oval, brick-red maculae, delineated in each feather at margin. Throat becoming white. Neck maculate beneath from throat to sternum with brick-red and fuscous. Pectus and venter white. Tail entire. 12 fuscous rectrices, variegated with setaceous maculae. Alar remiges dusky black; apical margin verging on white. Alar tectrices dusky black, white-tipped. Wings white beneath. Femora semi-naked, ash-grey. Outermost digit is connected with the first joint by a membrane. We have described another bird

[234] I.e. C*h. pluvialis*, see no. 190.

[235] Linnaeus only refers to C*olumba*, see nos. 207 and 208.

[236] Nos. 190 and 189 are synonyms, but no. 190 describes the golden plover in winter clothing.

[237] Linnaeus only refers to C*olumba*, see nos. 207 and 208.

like this: body greenish deep yellow, with dorsal, branched, black maculae. Pectus variegated with greenish light yellow. Venter white. Remiges fuscous, 1–9, medially verging on white at scape; 5 – etc. outwardly whitish at base.

Recurvirostra

191. RECURVIROSTRA *avosetta* [*Recurvirostra avosetta* Linnaeus, 1758. Eng. Pied avocet, Sw. Skärfläcka], variously black and white. *It. Oeland.* 89. *Fn.* 137.

Gesn. Av. 232. Avosetta, Recurvirostra.

Aldr. Orn. v. 3. *l.* 19. c. 64. Avosetta italis dicta.

Will. Orn. 240. t. 60. Recurvirostra, Avosetta italorum.

Raj. Av. 117. Recurvirostra, Avosetta italorum.

Mars. Danub. 5. p. 72. t. 34. Recurvirostra.

Alb. Orn. 1. p. 96. t. 101. Recurvirostra.

In Öland: Skärfläcka. In Gotland: Alfit.

Occurs at the outermost point of Öland, i.e. its most southern shore, on the Ottenby estate, and in Gotland; feeds on insects.

DESCR. Body white, but top of head, neck, dorsal sides, and wings black. Uropygium short, black. Remiges longer towards alar tip, shorter towards alar base; of these eight primaries black, but white at base in such a way that the shorter they are, the whiter, so that the eighth is marked with only a black macula at tip; all the other remiges white. Tectrices white except for the 5 primaries that are apically black. Rectrices very short, white. Legs weakly blue, two or three times as long as tail, feet entirely palmate, posterior digit smallest, with black claws. Femora semi-naked. A small white macula both below and above the eye on both sides. Bill black, flat and plain, and almost leathery, awl-shaped, strongly acuminate, bent upwards, minimally stiff, three times as long as head, membranous at tip. Nostrils oblong, transparent when exposed to light.

Haematopus

192. HAEMATOPUS *ostralegus*[238] [*Haematopus ostralegus* Linnaeus, 1758. Eng. Eurasian oystercatcher, Sw. Strandskata]. *Fn.* 161.

Bell. Obs. 18. Haematopus.

Aldr. Orn. l. 20. c. 31. Haematopus bellonii.

Barth. Act. 1. p. 90. Pica marina sive Kielder.

Will. Orn. 220. t. 56. Haematopus bellonii.

Raj. Av. 105. n. 7. Haematopus bellonii.

Alb. Orn. 1. p. 74. t. 78. Haematopus.

It. Oel. jun. 8. Strandskjura.

In Gotland: Marspitt. In Öland: Strandskjura.

Occurs on shores, especially those of Öland and Gotland.

DESCR. Bill blood-coloured, longer than head, flattened, especially at the wedge-shaped tip. Nostrils oblong, penetrable. Eyelids naked, with a scarlet circle. Iris red; pupil black. Head, neck

[238] Misspelling *ostrilegus*, but correct spelling in Ch. *A small fauna of Sweden.*

down to sternum, dorsum to the middle, and wings above black. Pectus, venter, dorsum posteriorly, and tectrices on each side of tail white. Rectrices white, from the middle to the tip black. But remiges black; on the medial rib a white line and inner side of remiges white. Secondary remiges black, white at base and white marginally; tectrices anomalous, white. Femora semi-naked. Feet flesh-coloured, tridactyl.

Fulica

193. FULICA *atra* [*Fulica atra* Linnaeus, 1758. Eng. Eurasian coot, Sw. Sothöna], frons bald; body black; digits lobate.

Fulica, frons uniform, bald. *Fn.* 130.
Bell. Ic. 36. b. Fulica.
Gesn. Av. 390. Fulica recentiorum.
Aldr. Orn. l. 19. c. 13. Fulica.
Lonic. 337. a. Fulica.
Will. Orn. 239. t. 59.
Raj. Av. 116. n. 1. Fulica.
Anon. Angl. Hoopoe.
Mars. Danub. 70. t. 33. Fulica.
Alb. Orn. 1. p. 79. t. 83.
In Sweden. Blås-klacka.
Lives in still water bodies. Feeds on fish, insects, and seeds.
DESCR. Body black above, fuscous beneath. Pectus embellished with greyish white undulations. Bill light red. Frons bald, whitish flesh-coloured. Bill short; nostrils oblong; upper beak[239] longer, pointed, straight, shaped as an arch. Tail very short. Feet long, tetradactyl, pointed with lateral membranes. Primary remiges black; secondaries dusky ash-greyish, whitish, almost white. Knees posteriorly red-yellow.

Rallus

194. RALLUS *crex* [*Crex crex* (Linnaeus, 1758). Eng. Cornkrake, Sw. Kornknarr], wings red-brown tending to rusty brown. *Fn.* 162.

Merr. Pin. 183. Crex aristotelis.
Aldr. Orn. l. 13. c. 23. Ortygometra.
Will. Orn. 522. t. 29. Ortygometra aldr.
Raj. Syn. 58. Ortygometra.
Alb. Orn. 1. p. 31. t. 33. Ortygometra.
In Uppland: Ängsnärpa, Kornknarr. In Gotland: Seydreifwer.
Lives during summer among grasses in very fertile meadows, where the double, stridulous sound "crex crex" can be heard continuously; eats earthworms.

[239] Lat. *maxilla superior.*

DESCR. The size of a magpie.[240] Head very small in relation to body. Head, neck, dorsum, and tail brick-red, covered with rather large maculae. Each feather is certainly black and its margin brick-red all over. Alar remiges and rectrices rusty brown above and beneath. Throat and macula behind eyes are grey-white. Pectus grey. Abdomen and sides rusty brown, covered with fuscous maculae (the colour is burnt), undulated with white, as also is the tail beneath. Femora naked above knees, dark bluish grey; crop not visible. Bill sinuate on each side at base, dark bluish grey. Nostrils oblong, penetrable. Eyes black, with red-brownish pupils; barely moves forward aided by the pollex. Wings more red-brown on inside than outside. Difficult to catch, though often heard. It can be characterised as having a bill similar to that of a domestic hen,[241] with penetrable nostrils, entire tongue, tetradactyl feet, and digits that are longer than the bill.

195. RALLUS *aquaticus* [*Rallus aquaticus* Linnaeus, 1758. Eng. Water rail, Sw. Vattenrall], wings grey, maculate with fuscous; hypochondriac regions maculate with white; bill deep yellow.

Will. Orn. 234. Rallus aquaticus.

Raj. Av. 113. Rallus aquaticus.

Alb. Av. 1. p. 73. t. 77. Rallus aquaticus.

Inhabits reed areas. Chick is jet-black.

DESCR. Bill fuscous; lower beak[242] red. Sides of head, neck beneath, and pectus are ash-grey. Dorsum, neck above, and head above are grey with fuscous maculae. Area around anus maculate with white and black. Wings and tail wedge-shaped, fuscous.

Otis

196. OTIS *tetrax* [*Tetrax tetrax* (Linnaeus, 1758). Eng. Little bustard, Sw. Småtrapp], head and jugulum smooth.

Alb. Av. 3. p. 33. t. 41. Anas campestris.

Occurs in Sweden, but rather rare during spring.

DESCR. The size of the black grouse;[243] the colour of a snipe; jugulum pale. Abdomen, femora, and wings beneath white. Primary remiges white, extremities fuscous; 7–10 with a black fascia beneath tip; 11–22 white with some black, linear spots; 23–28 same colour as dorsum. Tail short, rounded. 18 rectrices with two black, linear fasciae divided into three equal areas, of which the innermost is white; the other two white with undulate, black lines. Femora uncovered. Feet tridactyl, light yellow. Bill small, in form as that of an imbricate hen, black with a transversely white line, medially wave-like.

[240] See no. 92.

[241] See no. 199.

[242] Lat. *mandibula inferior.*

[243] See no. 202.

V. GALLINAE

Pavo

197. PAVO *cristatus* [*Pavo cristatus* Linnaeus, 1758. Eng. Common peafowl or Indian peafowl, Sw. Påfågel], head with an erect crest.
Pavo, tail long. *Fn.* 163.
Gesn. Av. 656. Pavo.
Aldr. Orn. l. 13. c. 1. Pavo.
Jonst. Orn. 56. t. 22. Pavo.
Valent. Mus. 464. Pavo.
Will. Orn. 112. t. 27. Pavo.
β *Raj. Av.* 51. n. 2. Pavo colore albo.
In Sweden: Påfogel.
It is kept around us, but rather rare; lives especially in aviaries of magnates; occurs naturally in Ceylon.

Meleagris

198. MELEAGRIS *gallopavo* [*Meleagris gallopavo* Linnaeus, 1758. Eng. Wild turkey, Sw. Kalkon], head with frontal caruncle and gular wattle; male with bearded pectus. *Fn.* 164.
Lonic. Herb. 337. a. Gallo-pavo.
Gesn. Av. 482. Gallo-pavo.
Aldr. Orn. l. 13. c. 4. Gallo-pavo.
Bell. Ic. 60 a. Meleagris.
Blas. Anat. t. 46. f. 11. Gallus africanus.
Jonst. Orn. 58. t. 24. Gallo-pavo mas.
Gallina indica.
Will. Orn. 113. t. 27. Gallo pavo sive Meleagris & Numidica-avis.
Raj. Av. 51. n. 3. Gallo-pavo sive avis numidica & meleagris quibusdam.
In Sweden: Kalkon.
It is kept ubiquitously around us. Originates from North America, where it is always black.
OBS. Pectus of male is bearded.

Phasianus

199. PHASIANUS *gallus* [*Gallus gallus* (Linnaeus, 1758). Eng. Domestic hen, Sw. Tamhöna],[244] tail flattened, erect.
Gallus, tail flattened, erect. *Fn.* 165.
Aldr. Orn. l. 14. c. 1. Gallus gallinaceus & Gallina.
Gesn. Av. 395. Gallus gallinaceus.
340. Gallina.
427. Capus.
Blas. Anat. t. 44. f. 9. Gallus gallinaceus.
f. 10. Gallina.
Will. Orn. 109. t. 26. Gallus gallinaceus.
Gallina domestica.
Raj. Av. 51. n. 1. Gallus gallinaceus.
In Sweden: Höns: Tupp and Höna.
β *Raj. Av.* 51. n. 1. Gallina crista in vertice plumosa densissima & undequaque diffusa spectabilis.
In Sweden: Tofshöns.
γ *Raj. Av.* 51. n. 1. Gallina cauda sive uropygio carens.
Will. Orn. 110. t. 26. Gallus e Persia.
In Sweden: Gumphöns.
δ *Will Orn.* 110. Gallina frislandica.
Raj. Av. 51. n. 1. Gallina crispa, nostratibus Frislandica pennis reflexis caput versus & velut inversis.
In Sweden: Kroll-Höna.
It is kept domesticated everywhere.

Tetrao

200. TETRAO *urogallus* [*Tetrao urogallus* Linnaeus, 1758. Eng. Western capercaillie, Sw. Tjäder], feet hirsute; outer rectrices rather short; axillae white. *Fn.* 166.
Gesn. Av. 491. Urogallus.
495. Grygallus major (*faemina*).
Aldr. Orn. l. 13. c. 6. Urogallus sive Tetrao major.
Urogallus faemina.
Will. Orn. 123. t. 30. Urogallus sive Tetrao major.
Raj. Av. 53. n. 1. Urogallus sive Tetrao major.
Nieremb. natur. 135. Tetrao.
Alb. Orn. 2. p. 28. t. 29. 30. Moscovian.

[244] *Gallus gallus*, red junglefowl, is a tropical member of the family Phasianidae, considered to be ancestral to the domestic hen, which is what Linnaeus describes here.

In Sweden: Kjäder.

Inhabits turfy marshes among coniferous trees as spruces and pines.

DESCR. Male: Ash-grey, covered with very thin, fuscous lines. Wings with the same kind of small, rusty brown lines. Pectus anteriorly shining with green, otherwise variegated with black and white. 18 rectrices, of which lateral ones become gradually shorter; all black, medially maculate with white. Black remiges; 2–16 white at outer margin. Wings white beneath; this whiteness extends to wings and forms a white macula.

201. TETRAO *hybridus* [*Lyrurus tetrix x Tetrao urogallus*. Eng. Rackelhahn, Rackelwild or Hybrid grouse, Sw. Rackelhane], tail bifurcate, punctate beneath with white. [*Fn.* 167.]

Act. Stockh. 1744. p. 181. Rackelhane rutenschöldii.

In Sweden: Racklehane. In Roslagen: Roslare.

Inhabits the forests of Roslagen and Småland.

OBS. I have seen this bird myself. It is a hybrid species of the preceding and following species. In size the same as the preceding female; colour of neck and structure of tail the same as the preceding species. It is far rarer than the preceding bird, more timid and different as to song and call.

202. TETRAO *tetrix* [*Lyrurus tetrix* (Linnaeus, 1758). Eng. Eurasian black grouse, Sw. Orre], feet hirsute; tail bifurcate; secondary remiges white towards base. *Fn.* 168.

Gesn. Av. 494. Urogallus minor.
496. Grygallus minor.

Aldr. Orn. l. 13. c. 7. Urogallus sive Tetrao minor.
Grygallus minor sive Tetrix nemesiani.

Will. Orn. 124. t. 31. Tetrao sive Urogallus minor.

Raj. Av. 53. n. 2. Tetrao sive Urogallus minor.

Scheff. Lapp. 350. Orrar.

Alb. Orn. 1. p. 22. t. 22. Tetrao sive Urogallus minor.

In Sweden: Orre.

Occurs ubiquitously in forests, especially those of Norrland. In fields and at moors it truly calls forth the females through a delightful sound and murmur.

OBS. Rectrices of male black, of which the outer 3 are outwardly recurved on each side, and thus the tail is bifurcate. Remiges blackish, but secondaries white from base to middle, as also their tips. Lower tectrices of remiges and rectrices white; dorsum black.

203. TETRAO *lagopus* [*Lagopus lagopus* (Linnaeus, 1758). Eng. Willow grouse or Willow ptarmigan, Sw. Dalripa], feet lanate; remiges white, rectrices black, apically white; middle two white. *Fn.* 169.

Gesn. Av. 577. Lagopus.
578. Lagopus varia.

Aldr. Orn. l. 13. c. 21. Perdix alba sive Lagopus.

Will. Orn. 121. t. 32. Lagopus avis.
127. Lagopus.
Raj. Av. 55. n. 5. Lagopus avis.
54. n. 3. Lagopus altera.
Scheff. Lapp. 351. t. 352. Lagopus.
In Sweden: Snöripa. In Lapland: Cheruna.
Inhabits the forests of Norrland, especially those of Lapland. Feeds especially on the dwarf birch; urinates in the snow; when frightened it laughs like a carrier.[245]
OBS. Varies in size; in the mountains much smaller;[246] varies as to colour; in the winter white, during summer whitish yellow. Twelve rectrices black, white-tipped, but two nevertheless over the middle ones entirely white. Remiges white.

204. TETRAO *bonasia* [*Tetrastes bonasia* (Linnaeus, 1758). Eng. Hazel grouse, Sw. Järpe], feet hirsute; rectrices ash-grey with black spots and a broad, black fascia, except for the two in the middle. *Fn.* 170.[247]
Gesn. Av. 229. Gallina corylorum sive Bonasia alberti.
Aldr. Orn. l. 13. c. 11. Gallina corylorum.
Will. Orn. 126. t. 21. Gallina corylorum.
Raj. Av. 55. n. 6. Gallina corylorum.
In Sweden: Hiärpe.
Lives especially among birches, on the catkins of which it feeds.
[DESCR.] Male: Head and neck ash-grey, with thin, transverse, fuscous lines; throat black; oblong, a white macula beneath eyes towards ears from bill. Wings rusty brown on the outside with black maculae. Dorsum ash-grey with black spots. Abdomen white, with large, cordate, and dusky rusty brown. Twelve ash-grey rectrices punctate with black, sc. 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, towards tip with a broad, black fascia, white-tipped, but 8, 9, without macula and fascia.
Female: Back grey-white with longitudinal, black maculae; the rest of dorsum anteriorly from head ash-grey, with transverse, fuscous lines. Wings above, towards base, maculate with rusty brown and black; 10 ash-grey primary remiges, of which 1–7 grey at anterior margin, the others not; 10 ash-grey secondary remiges, scattered anteriorly with watery rusty brown maculae, but remiges 8, 9, 10 without maculae. Throat black. Temples are whitish. 16 rectrices transversely maculate with ash-grey and black; black fascia surrounding all these rectrices towards tip except for the two in the middle. In female, throat is not black.

[245] Lat. *bajulus*, i.e. a low-value profession. Linnaeus probably wants to say that the snipe's laugh sounds like that of an uneducated person.

[246] Linnaeus probably means *Lagopus muta* (Montin, 1781), Eng. Rock ptarmigan, Sw. Fjällripa.

[247] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

205. TETRAO *perdix* [*Perdix perdix* (Linnaeus, 1758). Eng. Grey partridge, Sw. Rapphöna], feet naked; macula behind eyes naked and scarlet; tail rusty brown; sternum dark brown. *Fn.* 172.

Aldr. Orn. l. 13. c. 19. Perdix minor cinerea.
Jonst. Av. 68. t. 27. f. 1. *bona*. Perdix cinerea.
Will. Orn. 119. t. 29. Perdix cinerea.
Raj. Av. 57. n. 2. Perdix cinerea.
Alb. Orn. 1. p. 25. t. 27. Perdix.
In Sweden: Rapphöna.
Inhabits cultivated fields.

DESCR. Head grey above, scattered with oblong, whitish spots. Both nostrils covered with a scale; macula behind eye scarlet, papillose. Lower eyelids whitish. Pectus ash-grey and undulating with very thin lines. Dorsum grey with thin, undulating, dark brown linear maculae. Abdomen and femora whitish. Alar tectrices grey with dusky dark brown maculae; rachis white. 22 blackish ash-grey remiges with pale fasciae. Large sternal dark brown macula. Venter white. 16 rusty brown rectrices. Tibiae light yellow. Throat, area of eyebrows, and frons red-brown. Black sternal macula of male differs from that of female.

206. TETRAO *coturnix* [*Coturnix coturnix* (Linnaeus, 1758). Eng. Common quail, Sw. Vaktel], feet naked; body maculate with grey; eyebrows white; rectrices with rusty brown margin and crescent. *Fn.* 173.

Gesn. Av. 353. Coturnix.
Aldr. Orn. l. 13. c. 22. Coturnix latinorum.
Jonst. Orn. 69. t. 28. Coturnix.
Raj. Av. 58. n. 6. Coturnix.
Alb. Orn. 1. p. 28. t. 30. Coturnix.
In Sweden: Wachtel.
Inhabits cultivated fields.

DESCR. Eyelids red; feet pale light yellow. Entire body is covered with feathers marked with a light yellow rachis line and these feathers have black, brick-red apical spots. Pale, longitudinal line above eyes. Pectus and neck pale brick-red with blunt, solitary, bilateral maculae on each feather. Abdomen whitish. Outer remiges fuscous; inner ones paler with watery brick-red maculae on outer side. Rectrices fuscous with a white rachis, scattered with transverse, brick-red spots. Broad, long, blackish area beneath lower beak.[248]

[248] Lat. *mandibula inferior*

VI. PASSERES

Columba

207. COLUMBA *oenas* [*Columba oenas* Linnaeus, 1758. Eng. Stock dove, Sw. Skogsduva], bluish; neck bright green above; alar fascia and tip of tail[249] blackish. *Fn.* 174.
Aldr. Orn. l. 15. c. 7. Oenas sive Vinago.
Will. Orn. 136. t. 35. Oenas sive Vinago.
Raj. Av. 62. n. 10. Oenas sive Vinago.
Alb. Orn. 3. p. 39. t. 46. Columba vulgaris.
In Sweden: Skogsdufwa.
β *Will. Orn.* 130. t. 32. Columba domestica sive vulgaris.
Raj. Av. 51. n. 1. Columba domestica.
In Sweden: Dufwa, Hemdufwa.
γ *Will. Orn.* 121. t. 34. Columba gutturosa.
Raj. Av. 60. n. 2. Columba gutturosa.
In Sweden: Kroppdufva.[250]
δ *Will. Orn.* 132. Columba Turbita dicta.
Raj. Av. 60. n. 7. Turbitae.
ε *Will. Orn.* 133. t. 34. Columba barbarica sive numidica.
ζ *Raj. Av.* 60. n. 8. Barbaricae seu Numidicae.
Raj. Av. 60. n. 6. Columba cucullata sive Jacobea.
Gesn. Av. 279. Columba anglica vel russica.
η *Raj. Av.* 60. Columba percussor.
Inhabits forests; visits fields frequently. But the foreign varieties are cultivated and domesticated. I do not doubt that all of them β γ δ ε ζ η originate from this dove.
DESCR. *Oenas*, in forests: Body ash-grey. Neck shining blue above, purplish beneath. Alar fascia indistinct, blackish. Tail rounded. Rectrices ash-grey, medially blackish towards tip.

208. COLUMBA *palumbus* [*Columba palumbus* Linnaeus, 1758. Eng. Common wood pigeon, Sw. Ringduva], rectrices posteriorly jet-black; primary remiges whitish at outer margin; neck bilaterally white.
Columba, neck bilaterally white; macula fuscous at rear. *Fn.* 175.
Aldr. Orn. l. 15. c. 5. Palumbus major torquatus.
Will. Orn. 135. t. 35. Palumbus torquatus.
Raj. Av. 62. n. 2. Palumbus torquatus.

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[249] See *Fn. Su.* (1761), *Errata*, p. 560.

[250] Linnaeus means the pouter or cropper pigeon, the distinguishing feature of which is a large, inflatable crop. In his *Index of Swedish names*, Linnaeus calls it "Kropfdufva". Cf. Eng. "crop" or "ingluvies" and Germ. "Kropf". See also Linnaeus, *Methodus avium Sveticarum*, p. 49, and *SAOB*: Kropp 1) Kräva, kroppduva.

Alb. Orn. 2. p. 42. t. 46. Oenas.
In Sweden: Ringdufwa. In Öland: Siutut.
Inhabits forests ubiquitously.
DESCR. Head bluish ash-grey. Dorsal parts of neck sides shining. Pectus and abdomen red-brown tending to dark bluish grey. Dorsum and wings dusky ash-grey. Alar macula transverse, white. Remiges black, primaries whitish at outer margin. Rectrices equal, outwardly jet-black, at base fuscous, medially paler. Legs and bill red. Tongue fleshy, entire.

Alauda

209. ALAUDA *arvensis* [*Alauda arvensis* Linnaeus, 1758. Eng. Eurasian skylark, Sw. Sånglärka], the two outermost rectrices longitudinally white outwardly; middle ones rusty brown on inner side. *Fn.* 190.
Gesn. Av. 78. Alauda sine crista.
Adr. Orn. l. 18. c. 12. Alauda non cristata.
Will. Orn. 149. t. 40. Alauda vulgaris.
Raj. Av. 69. n. 1. Alauda vulgaris.
Alb. Orn. 1. p. 39. t. 46. Alauda vulgaris.
In Sweden: Lärka.
Inhabits cultivated fields; constantly flying:
"Behold its tirile tirile; it sings its tirile."
DESCR. Bill convex, thin. Beaks[251] subequal, not emarginate. Tongue sagittate, blunt, apically membranous, bifid at tip. Posterior claw exceeding the middle one in length, straight; lateral claws curved, middle one is fairly large. Tail bifurcate. 12 rectrices, 18 remiges, of which the 4 anterior ones are subequal. Whole body dusky brick-red; feathers fuscous with outermost margin pale brick-red. Abdomen verging on white. Remiges fuscous. Rectrices black, but the outermost white with a fuscous inner margin; the proximal fuscous with an outer margin longitudinally white. Primary remiges entire, secondaries emarginate with tips growing indistinctly white. Rectrices, including remiges, fuscous, but two longitudinally white on each side.

210. ALAUDA *pratensis* [*Anthus pratensis* (Linnaeus, 1758). Eng. Meadow pipit, Sw. Ängspiplärka], the two outermost rectrices inwardly white; eyebrows with a thin, white line. *Fn.* 191.
Aldr. Orn. l. 18. c. 15. Alauda pratorum bellonii.
Will. Orn. 150. Alauda pratorum aldr.
Raj. Av. 69. n. 3. Alauda pratorum.
Inhabits meadows; also sits in trees.
DESCR. Body above, including head, dorsum, alar tectrices, and pectus, snipe-coloured or maculate with grey and fuscous. Venter verging on white. Thin, white line above eyes. Remiges fuscous. Legs and bill pale. Posterior claw long. Rectrices equal, blackish, except for the two outermost ones (1, 2) which are longitudinally white at inner margin on each side.

[251] Lat. *maxillae*.

211. ALAUDA *arborea* [*Lullula arborea* (Linnaeus, 1758). Eng. Woodlark, Sw. Trädlärka], head circumscribed by a longitudinal, annular, white stripe.

Alauda, rectrices fuscous, first one obliquely and dimidiately white, second one with a wedge-shaped, white macula. *Fn.* 192.

Will. Orn. 149. Alauda arborea.

Raj. Av. 69. n. 2. Alauda arborea.

Lives in trees; flies in flocks singing.

DESCR. Bill black above. Whole bird grey above with fuscous maculae. Remiges and rectrices fuscous. Neck whitish yellow beneath with fuscous maculae. Neck almost surrounded by a white ring. Abdomen verging on white. Rectrices fuscous, short, but 1,1 dimidiate, obliquely though, and whole tip white; this whiteness is narrower at outer margin; rectrices 2, 3, 4, with white tip and wedge-shaped macula; spur longer than digit.

212. ALAUDA *campestris* [*Anthus campestris* (Linnaeus, 1758). Eng. Tawny pipit, Sw. Fältpiplärka], rectrices fuscous in the lower middle part except for the two middle white ones; throat and pectus whitish yellow.

Alauda, throat and pectus whitish yellow. *Fn.* 193.

Will. Orn. 150. Alauda minor campestris.

Raj. Av. 70. n. 6. Alauda minor campestris.

Inhabits fields.

DESCR. The size and appearance of the sparrow known as Ligurian.[252] Body above, head, and dorsum grey with black or fuscous maculae, as with woodcocks. Throat and pectus whitish yellow. A whitish yellow line above eyes is drawn from bill towards occiput. Abdomen verging on white. Alar tectrices dusky black and maculate with white. Remiges fuscous. Rectrices equal, fuscous. All white from base to the middle except for the two middle ones. Median posterior claw a little longer. Bill and legs black.

Sturnus

213. STURNUS *vulgaris* [*Sturnus vulgaris* Linnaeus, 1758. Eng. Common starling, Sw. Stare], bill whitish yellow; body black with white spots. *Fn.* 183.

Gesn. Av. 747. Sturnus.

Aldr. Orn. l. 16. c. 19. Sturnus.

Bell. Ic. 81. a. Sturnus.

Jonst. Orn. t. 40. Sturnus (*mas*).
Sturnus vulgaris (*faemina*).

Merr. Pin. 177. Sturnus cinereus (*mas*).
Sturnus vulgaris (*faemina*).

Will. Orn. 144. t. 37. Sturnus.

Raj. Av. 67. n. 1. Sturnus.

Alb. Orn. 1. p. 38. t. 40. Sturnus.

[252] See no. 237.

In Sweden: Stare.

Lives in tree holes, where it nests. Flies in flocks. After the middle of summer it leaves for the fields of Skåne. Feeds on earthworms and larvae; useful for gardens. *It. Scan.* 63.

DESCR. Bill straight, angled and flattened, rather blunt, whitish yellow; beaks[253] equal. Body black, tips of feathers whitish. Inner tail tectrices black, white marginally. Nostrils half covered each by a small scale. Posterior claw on foot larger. Remiges blackish and indistinctly rudimentary brick-red at outer margin. Tail entire. Rectrices black, at outer margin palish grey. Tongue bifid. It seems to adhere to the order of crows.

214. STURNUS *cinclus*[254] [*Cinclus cinclus* (Linnaeus, 1758). Eng. White-throated dipper or European dipper, Sw. Strömstare], black; pectus white.

Motacilla, pectus white; body black. *Fn.* 216.

Gesn. Av. 609. Merula aquatica sive Miliaria.

Jonst. Orn. t. 53. Merula aquatica.

Will. Orn. 104. t. 24. Merula aquatica.

Raj. Av. 66. n. 7. Merula aquatica.

Alb. Orn. 2. p. 36. t. 39. Merula aquatica.

Soc. Nat. Lips. 1747. p. 444. t. 8. f. 3. Turdus musicus palustris dumetorum arundinaceus.

In Sweden: Watnstare.

Occurs around us the whole year; endures winter in chasm of rivers and at cataracts where it dives in the water cascades and feeds on insects; ascends with the greatest dexterity, although the toes are divided.

DESCR. Body black. Head and neck pitch black; rest of body black, with pale undulations dorsally; thus each feather is whitish beneath the black tip. From bill to sternum this bird is snow-white. Remiges black, barely manifestly white at tip. Rectrices equal, short. Tibiae anteriorly whitish. Bill black. Tail bifurcate. Nostrils naked, covered with a small scale.

Turdus

215. TURDUS *pilaris* [*Turdus pilaris* Linnaeus, 1758. Eng. Fieldfare, Sw. Björktrast], rectrices black, outermost ones growing white at inner apical margin; head and uropygium grey-white. *Fn.* 188. *It. Goth.* 258.

Gesn. Av. 753. Turdus pilaris.

Aldr. Orn. l. 16. c. 1. Turdus pilaris.

Will. Orn. 138. t. 37. Turdus pilaris.

Raj. Av. 64. n. 3. Turdus pilaris.

Alb. Orn. 1. p. 34. t. 36. Turdus pilaris.

Charl. Onom. 83. Turdus trichas.

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[253] Lat. *mandibulae*.

[254] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

Merr. Pin. 76. Trichas.

In Sweden: Kramsfogel. In Uppland: Snöskata.

Inhabits forests; nests in very big trees; eats juniper berries. It was nourished in Stockholm by a vintner. It used to drink wine from a glass together with the guests. The head moulted. But then after having been caged for a year and having had no wine to drink the plumage of the head recuperated.

DESCR. Size of a typical thrush. Head above grey-white, just as area of uropygium. Dorsum and alar tectrices dusky rusty brown. Remiges and rectrices fuscous. Pectus weakly rusty brown from throat to sternum, scattered with black maculae, of which those closer to throat are oblong and smaller but those closer to sternum broader. Venter white with a few fuscous maculae. Bill light yellow and moderately convex. Upper beak[255] barely longer than lower one, with a black tip, emarginate on each side. Lower beak[256] mostly light yellow. Nostrils ovate. Eyelids naked. Tongue cartilaginous, sagittate, bifid. Blackish macula between eyes and bill. Tail bifurcate. Alar tectrices white beneath. Remiges blackish and with palish ash-grey outer margin. Rectrices black, but inner margin of outermost lateral rectrix verging on white towards tip. Legs blackish.

216. TURDUS *viscivorus* [*Turdus viscivorus* Linnaeus, 1758. Eng. Mistle thrush, Sw. Dubbeltrast], wings whitish yellow beneath; three lateral rectrices apically white.

Turdus viscivorus major. Will. Orn. 137. *Raj. Av.* 64.

In Sweden: Biörk-Trast.[257]

Inhabits birch thickets.

DESCR. Entirely grey above; light yellow-rusty brown beneath with round, fuscous maculae. Bill black, at base whitish yellow. Tectrices white, upper ones verging on white at tip. Remiges fuscous at the more slender, white base. Rectrices fuscous, 1, 2, 3 white-tipped on each side. Legs light yellow.

217. TURDUS *musicus* [*Turdus philomelos* C.L. Brehm, 1831. Eng. Song thrush, Sw. Taltrast], remiges rusty brown at inner base.

Turdus, simply called *Turdus viscivorus minor.*

Will. Orn. 138. t. 37. *Raj. Av.* 64.

Inhabits forests.

218. TURDUS *iliacus* [*Turdus iliacus* Linnaeus, 1766. Eng. Redwing, Sw. Rödvingetrast], wings rusty brown beneath; eyebrows verging on white. *Fn.* 189.

Turdus iliacus. Will. Av. 139. *Raj. Av.* 64. *Alb. Av.* 1. t. 35.

Turdus minimus. Frisch. Av. t. 28.

In Småland: Klera.[258] In Östergötland: Klädra. In Västmanland: Tall-Trast.

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[255] Lat. *mandibula superior.*

[256] Lat. *mandibula inferior.*

[257] Nowadays the Swedish common name for *Turdus pilaris*, see no. 215.

[258] See *SAOB*: "klädra", "kledra", "klera". These names are primarily used about the taltrast, but also about the rödvingetrast, and dubbeltrast. But Linnaeus seems to believe this dialectal name to refer only to the rödvingetrast. When then the rödvingetrast is also called taltrast he brings even more confusion. But in

Inhabits coniferous forests; sings beautifully from the highest top during springtime; nests in the middle of bushes or hedges. 6 eggs, blue-green with various black maculae.

DESCR. Body entirely dusky ash-grey above. Straight, white line drawn above eyes from bill. Pectus pale whitish yellow with fuscous maculae. Venter white with few maculae. Tail blunt, barely forcipate. Nostrils half covered. Tongue with a bifid, lacerate tip. Bill black, whitish yellow at base. Rectrices fuscous, without maculae, unicoloured. Lower tail tectrices white. Remiges fuscous, on inner side towards base red-brownish. Lower tail tectrices rusty brown.

219. TURDUS *roseus* [*Pastor roseus* (Linnaeus, 1758). Eng. Rosy starling, Sw. Rosenstare], weakly flesh-coloured; head, wings, and tail black; occiput crested.

Alb. Orn. l. 16. c. 5. Merula rosea.

Will. Orn. 143. Merula rosea.

Raj. Av. 67. Merula rosea.

Occurs in the mountains of Lapland.[259] *Adlerheim.*

DESCR. Body pale flesh-coloured. Bill whitish, with lower base black. Head and neck black and weakly violet; longish feathers of occiput hanging down towards crest. Wings entirely black. Black tail barely divided. Lower tail tectrices white-tipped.

220. TURDUS *merula* [*Turdus merula* Linnaeus, 1758. Eng. Eurasian blackbird or Common blackbird, Sw. Koltrast], jet-black; bill and eyelids red-yellow. *Fn.* 184.

Bell. Ic. 30. b. Merula nigra.

Gesn. Av. 603. Merula.

Aldr. Orn. l. 16. c. 6. Merula.

Alb. Orn. 35. t. 37. Merula.

Will. Orn. 140. t. 37. Merula vulgaris.

Raj. Av. 65. n. 1. Merula vulgaris.

In Sweden: Trast, Kohltrast.

Inhabits dense forests and also small woods, thickets of juniper trees, and furthermore neglected gardens.

DESCR. Bill red-yellow. Palpebral margin red-yellow. Legs dusky black. Colour entirely jet-black, but 24 remiges fuscous.

221. TURDUS *torquatus* [*Turdus torquatus* Linnaeus, 1758. Eng. Ring ouzel, Sw. Ringtrast], blackish; adorned with a white collar; bill whitish yellow. *Fn.* 185.

Gesn. Av. 607. Merula torquata.

Aldr. Orn. l. 16. c. 11. Merula torquata.

Jonst. Orn. 106. t. 39. Merula torquata.

Will. Orn. 143. t. 37. Merula torquata.

Raj. Av. 65. n. 2. Merula torquata.

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those days it was probably impossible for people in general to distinguish between these three.

[259] Actually, it lives in southern Europe to Asia minor. There are only stray birds in Sweden.

Alb. Orn. 1. p. 37. t. 39. Merula torquata.

β *Turdus*, blackish; adorned with a fuscous collar; bill whitish yellow.[260] *Fn.* 186.
Will. Orn. 144. t. 30. Merula montana.
Raj. Av. 65. n. 3. Merula saxatilis.
Inhabits mountain forests.
DESCR. Bill whitish yellow, black-tipped. Colour of body black. A white ring surrounds neck. Remiges 1, 2, 3, 4, 5, 6, 7, 8 with a thin white line from outer side. Abdomen, femora, and uropygium covered with feathers encircled by a thin, whitening line. I should think that the β variety is not a distinct species.

Loxia

222. LOXIA *coccothraustes* [*Coccothraustes coccothraustes* (Linnaeus, 1758). Eng. Hawfinch, Sw. Stenknäck], alar line simple, white; rectrices white at inner base. *It. Scan.* 332.
Gesn. Av. 276. Coccothraustes.
Aldr. Orn. l. 16. c. 20. Coccothraustes ornithologi.
Jonst. Orn. t. 37. Coccothraustes.
Charl. Onom. 84. f. 85. Coccothraustes vulgaris.
Will. Orn. 178. t. 44. Coccothraustes vulgaris gesneri & aldrovandi.
Raj. Av. 85. n. 1. Coccothraustes vulgaris.
Alb. Orn. 1. p. 54. t. 56. Coccothraustes vulgaris.
In Sweden: Stenkneck.
Inhabits the cherry orchards of Skåne, the most recent visitor to these fields, where it extracts the kernels of cherries; detested in gardens.

223. LOXIA *enucleator* [*Pinicola enucleator* (Linnaeus, 1758). Eng. Pine grosbeak, Sw. Tallbit], double white alar line; all tectrices blackish. *Fn.* 176.
Edw. Orn. 123. t. 123. Rubicella maxima canadensis.
In Sweden: Tallbit, Swänsk Papgoja. In Västerbotten: Natt-waka.
Occurs in Västerbotten; moves to the southern parts of Sweden during winter; feeds by removing the kernel from the cones of Scots pine.
DESCR. Dorsum and pectus red or deep yellow. Black down covers nostrils. Blackish wings with two oblique, whitish lines from wing coverts. Tail blackish.

224. LOXIA *curvirostra* [*Loxia curvirostra* Linnaeus, 1758. Eng. Red crossbill, Sw. Mindre korsnäbb], bill forficate. *Fn.* 177.[261]
Gesn. Av. 592. Loxia.
Charl. Onom. 68. t. 68. *opt.* Loxia sive Curvirostra.
Will. Orn. 181. t. 44. Loxia.

[260] Obviously refers to juvenile individuals.
[261] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

Raj. Av. 86. Loxia.
Rudb. Lapp. 75. Conirosor.
Alb. Orn. t. p. 58. t. 61. Loxia.
In Sweden: Korssnäb, Kiägelrifvare.
Inhabits coniferous forests; feeds on cones of spruce. With its bill it first dislodges as many cones as possible from the tree. When the cones have been detached from the tree, it grabs as many as possible; then it holds each one with its feet as does a parrot or tree squirrel. With its forficate bill, it pierces every scale and searches for seeds. Considering the magnitude and colour of every cone, which is entirely that of a fir, and the structure of the bill of this bird, seems created only for the purpose of eating these cones, although it can also eat the seeds of hemp and further the berries of juniper, common rowan, and nuts of hazel. This little bird shows extreme strength, since with short delay and without any trouble at all it cuts with its woodworking tools, which are thick as a digit. The upper beak[262] of this bird is mobile, as in the congeners.
DESCR. Tail and wings are ash-grey. Remiges and rectrices black above, light yellow in female; pectus, ventral sides, and loins verging on white in male. Venter, dorsum, and head cloudy ash-grey and the colour of sulphur (in female) or red-yellow (in male). Bills of both beaks[263] acuminate, oblique, crossed, projecting. Tongue entire.

225. LOXIA *pyrrhula* [*Pyrrhula pyrrhula* (Linnaeus, 1758). Eng. Eurasian bullfinch, Sw. Domherre], limbs black; tail tectrices and posterior remiges white. *Fn.* 178.
Gesn. Av. 733. Rubicilla sive Pyrrhula.
Aldr. Orn. l. 17. c. 31. Pyrrhula sive Rubicilla.
Jonst. Orn. 122. t. 43. Pyrrhula sive Rubicilla.
Will. Orn. 130. t. 43. Rubicilla sive Pyrrhula.
Raj. Av. 86. n. 5. Rubicilla sive Pyrrhula.
Alb. Orn. 1. p. 59. (*mas*) 60 (*femina*) Rubicilla.
In Sweden: Domherre.
Inhabits forests. Eagerly eats erupting buds of trees; easily becomes tame and having been taught it sings beautifully. When the male has grasped a spider, he holds it in the mouth for a long time, and then gives it to the female.
DESCR. Head of male black. Temples, throat, pectus, and venter red. Neck and dorsum bluish ash-grey. Tail entire, black, bluish on top. Area around tail white on top and beneath. Bill black, very thick, bilaterally gibbous. Both beaks[264] mobile. Tongue entire. Nostrils wide open, covered with small setae. Wings black with a transverse line verging on white. 16 remiges black, towards inner margin white. 12 rectrices black, without maculae. Alar tectrices blackish, but 9–16 white-tipped.
Female: Head down to eyes continuously black. Throat white. Wings black, white beneath, as also with tail. Area behind femora white. Uropygium white. Dorsum ash-grey. Pectus ash-greyish. Caudal base white on top and beneath. Bill very short and very thick, convex on all sides. Tongue

262 Lat. *maxilla superior.*
263 Lat. *utraque maxilla.*
264 Lat. *maxilla utraque.*

oval, carnose, and tip lacerate with fine hairs; from eyes, through neck and pectus to femora, ash-grey. Remiges and rectrices jet-black; tectrices of posterior remiges and tail white at tip.

226. LOXIA *chloris* [*Chloris chloris* (Linnaeus, 1758). Eng. European greenfinch, Sw. Grönfink], greenish yellowish; primary remiges anteriorly deep yellow; four lateral rectrices, deep yellow at base. *Fn.* 202.

Gesn. Av. 259. Chloris.

Will. Orn. 129. t. 44. Chloris.

Raj. Av. 85. n. 4. Chloris.

Alb. Orn. 1. p. 56. t. 58. Chloris.

In Sweden: Swenska.

Lives in hedges. Six eggs, spotted with blood-coloured maculae.

DESCR. Bill conical. Tongue entire, carnose. Body ash-grey tending to brick-red, deeper yellow beneath, but male green during summer; abdomen light yellow. Wings and tail black. 7 primary remiges anteriorly deep yellow, more so towards lower part of feathers; at rear and at tip they all verge towards white. Rectrices 1, 2, 3 on each side medially deep yellow towards base, blackish towards tip, but 4, 5, 6 blackish, at outer margin whitish yellow. Pectus of male light yellow.

Emberiza

227. EMBERIZA *nivalis* [*Plectrophenax nivalis* (Linnaeus, 1758). Eng. Snow bunting, Sw. Snösparv], remiges white, primaries outwardly black, rectrices black with three laterally white. *Fn.* 194.

α *Mart. Spitzb.* 53. t. K. f. B. avis nivalis.

Acad. Stockh. 1740. p. 368. t. 1. f. 9. Alauda remigibus albis, primoribus extrorsum nigris; rectricibus nigris, lateralibus tribus albis.

Act. Ups. 1736. p. 11. n. 16. Passer alpino-Lapponicus sive nivalis.

Alb. Orn. 2. p. 50. t. 54. Pied Chaffinch.

In Sweden: Snösparf. In Lapland: Alaipg. In Dalarna: Illwärsfogel. In Uppland Hårdvärsfogel.

Occurs during summer in the mountains of Lapland. During winter it occasionally flies down to us. Meat very tasty. Runs around and does not sit in trees; also feeds on oats.

DESCR. Head, pectus, and neck white or whitish brick-red. Body white beneath or verging on white. Dorsum black. Varies according to sex and time of year from white to brick-red colours, but the blackness is constant. Wings apically white when folded up, black when facing the ground, and also with a black macula at inflexion.

Remiges 1–8 white towards base, black towards tip, the more inwards, the less white.
9–15 entirely white; 16 entirely black, apically white or brick-red.

Rectrices 1, 2, 3, 10, 11, 12 white; linear, black macula towards tip of rachis.
4, 9 longitudinally white on outer side, black on inner.
5, 6, 7, 8 black.

OBS. The bill suits the bunting very well. Claw of pollex longish. And since it runs around on the ground, it looks similar to the lark.

β *Alb. Orn.* 3. p. 67. t. 71. Fringilla montana.
Gesn. Av. 709. Avis ignota a Piperino missa.
Aldr. Orn. l. 8. t. 357. t. 15. f. 1. Fringilla albicans.
Will. Orn. 187. t. 77. Montifringilla calcaribus alaudae sive major.
Raj. Av. 88. Montifringilla calcaribus alaudae sive major.
In Skåne: Sjölärka.
Inhabits shore meadows in Skåne.
OBS. It is very similar to the preceding species, but smaller and of a more brick-red colour, just as the preceding species in summer. But differs as to habitat. Thus I suggest that it should be further examined by others; perhaps it is only a variety of the preceding species. *J. Leche* has decided that this bird belongs to the same species as the preceding one.

228. EMBERIZA *calandra* [*Emberiza calandra* Linnaeus, 1758. Eng. Corn bunting, Sw. Kornsparv], maculate with grey and black. *Fn.* 206.
Gesn. Av. Emberiza alba.
Aldr. Orn. Alaudae congener.
Raj. Av. 93. n. 1. Emberiza alba.
Will. Orn. 195. t. 40. Emberiza alba.
Alb. Orn. 2. p. 46. t. 50. Emberiza alba.
In Sweden: Kornlärcka.
Inhabits fields and cultivated regions of Skåne. *Mr Leche.*
DESCR. Bill as that of the preceding species but larger. Dorsum rusty brown, maculate with black, and with pointed maculae. Remiges blackish with outer whitening margin. Rectrices dusky black, whitening marginally. Neck and pectus whitening with linear, black maculae.

229. EMBERIZA *hortulana* [*Emberiza hortulana* Linnaeus, 1758. Eng. Ortolan bunting, Sw. Ortolansparv], remiges black; three primaries whitish marginally; rectrices black, two lateral ones, outwardly white. *Fn.* 208.
Gesn. Av. 567. Hortulana.
Jonst. Orn. t. 37. Hortulanus.
Will. Orn. 197. t. 40. Hortulanus.
Raj. Av. 94. n. 6. Hortulanus.
Occurs in Sweden; migrates in March.
DESCR. Body variegated with black and brick-red. Pale ring circumscribing eyes. Neck greenish. Venter brick-red. Throat light yellow. Pectus pale. 16 remiges black, three primaries whitish at margin. 12 black rectrices, two outwardly white on each side.

230. EMBERIZA *citrinella* [*Emberiza citrinella* Linnaeus, 1758. Eng. Yellowhammer, Sw. Gulsparv], rectrices blackish; outermost two with an acuminate, white macula on inner side. *Fn.* 205.
Bellon. Av. Hortulanus.
Aldr. Orn. Luteae alterum genus.
Turn. Hist. Chloris sive Lutea aristotelis.

Gesn. Av. 653. Emberiza flava.
Merr. Pin. 176. Citrinella.
Will. Orn. 16. t. 40. Emberiza flava.
Raj. Av. 93. n. 2. Emberiza flava.
Alb. Orn. 1. p. 63. t. 66. Emberiza flava.
In Sweden: Gröning. In Småland: Golspinck.
Occurs ubiquitously around us. Nests in swampy meadows. Removes larvae from cabbage.
DESCR. Body grey, becoming light yellow. Head light yellow. Rectrices blackish, of which the two lateral ones inwardly tipped with white on each side. Uropygium rusty brown. Body light yellow beneath. Upper beak[265] black, lower pale. Stray hairs on occiput of male. Primary remiges weakly whitish yellow at outer margin. Rectrices blackish: 1,1 outer margin longitudinally whitish; 2,2 with a large, white, wedge-shaped macula on lower side of tip.

231. EMBERIZA *schoeniclos* [*Emberiza schoeniclus* (Linnaeus, 1758). Eng. Common reed bunting, Sw. Sävsparv], head black; body grey and black; outermost rectrices with a wedge-shaped, white macula.
Fringilla, head black; beaks[266] red-brown; collar white; body blackish red-brown. *Fn.* 211.
Gesn. Av. 652. Passer aquaticus sive Schoeniclos.
Raj. Av. 93. Passer torquatus in arundinetis nidificans.
In Sweden: Säf-Sparf.
Inhabits reed areas; rather rare.
DESCR. Bill black. Head and throat black. Sides of neck whitish. Body variegated with grey and black above. Abdomen white. Remiges fuscous with outer rusty brown margin. Rectrices black: 1, 1 whole of outer side white and half of inner side white; 2, 2 tip of inner side with a cuneate, white macula, outer margin also white. Uropygium grey.

Fringilla

232. FRINGILLA *coelebs* [*Fringilla coelebs* Linnaeus, 1758. Eng. Common chaffinch, Sw. Bofink], limbs black; remiges bilaterally white, the three primary without maculae; two rectrices obliquely white. *Fn.* 199.
Gesn. Av. 387. Fringilla.
Aldr. Orn. l. 13. c. 6. Fringilla.
Will. Orn. 186. t. 45. f. 4. Fringilla.
Raj. Av. 88. Fringilla.
Alb. Orn. 1. p. 60. t. 63. Fringilla.
β *Fringilla sylvatica*, limbs, remiges, and rectrices black; the two outermost ones outwardly white on each side from the middle. *Fn.* 200.

[265] Lat. *maxilla superior.*
[266] Lat. *maxillae.*

In Sweden: Fincke, Bofinck.

Occurs ubiquitously in Sweden; nests in small trees. Female migrates during winter, male stays. *J. Leche.*

DESCR. This species differs from the following one through its purple maculae.

Male differs from female through his reddish pectus.

Bill blunt. Head grey-white. On the back some hairs longer than feathers; posterior part of dorsum greenish ash-grey, but anterior grey; but area around eyes, throat, pectus, and sides rusty brown. Neck is circumscribed by the same red colour. Black wings with a triple white macula, i.e. one at alar inflexion, and another in the middle of rectrices and, beneath this one, a third very small macula on remiges.

Alar tectrices black, white-tipped; they are also white at base.

All remiges blackish, white on inner side, especially towards base except for the three primaries that are all marked with a white macula towards base on the outer side; also secondary remiges are exarate with a white or whitish yellow line above the middle at outer margin.

Rectrices almost equal, black, of which the outer 2 bear an oblique white macula on the outermost larger feather. A pair of the middle rectrices is ash-grey.

The female, if I am not mistaken, is as follows: Bill blunt. Whole body greenish ash-grey above, verging on white beneath. Remiges blackish; all (except for the three primaries) bilaterally white at base and becoming white at inner margin. Tail forcipate. Rectrices blackish, with a greenish middle pair, but outermost ones 1, 2 with a wedge-shaped, oblique white macula towards tip, of which outer one is larger.

233. FRINGILLA *montifringilla* [*Fringilla montifringilla* Linnaeus, 1758. Eng. Brambling, Sw. Bergfink], markedly light yellow beneath alar base.[267] *Fn.* 198.

Rudb. Pict. Carduelis angermannica.

Jonst. Orn. 99. t. 38. Montifringilla mas.

Will. Orn. 187. t. 45. f. 5. Fringilla montana sive Montifringilla.

Raj. Av. 88. Fringilla montana.

Alb. Orn. 3. p. 60. t. 64. Montifringilla.

In Sweden: Norrquint.

Inhabits coniferous forests, especially in Norrland.

DESCR. Male black above, with indistinctly rusty brown margins of feathers. Abdomen white. Pectus red-yellow tending to rusty brown or orange coloured, including outermost alar base, but alar base is a densely saturated red-yellow beneath. Beneath anus indistinctly rusty brown. Remiges black, with outer margin whitish. 4th and following ones towards base on outer side, dimidiately white. Rectrices black, but 1,1 white at outer margin, especially towards base. Outermost digit barely longer than middle one.

Female fuscous whereas male is grey-white; female ash-grey whereas male is red-brown; beneath alar base female also becomes bright yellowish; female indistinctly rusty brown behind anus. Rectrices and remiges as in male.

[267] Cf. no. 234.

234. FRINGILLA *lulensis* [*Nomen dubium*], fuscous; pectus and shoulders red-brown, black wings[268] with a red macula.[269] *Fn.* 197.[270]

Rudb. Pict. Carduelis Lulensis.

Occurs in Luleå in Västerbotten.

DESCR. Body blackish ash-grey including dorsum and tail. Chin with a white macula. Venter verging on white. Pectus red-brown. Red-brown alar base, which is marked with a transverse, black macula, after that a red-brown macula, then again a black, and finally a white one. Remiges darken. Bill fuscous.

235. FRINGILLA *lapponica* [C*alcarius lapponicus* (Linnaeus, 1758). Eng. Lapland longspur or Lapland bunting, Sw. Lappsparv], head blackish, maculate; macula above eyes white. *Fn.* 196.

Alb. Orn. 3. p. 59. t. 63.

Rudb. Pict. Carduelis Lapponica.

Occurs in Torneå.

DESCR. Bill deep yellow, black-tipped. Head black, with a white line beginning above eyes, descending incurved towards neck. Neck rusty brown at back. Dorsum, wings, and tail fuscous with rusty brown blotches. Pectus whitish with a longitudinal, black macula. Tail bifid. Rectrices black: 1,1 oblique and dimidiately white with a wedge-shaped, black macula at tip. 2,2 with a wedge-shaped, black macula. Remiges fuscous with outer margin pale.

236. FRINGILLA *carduelis* [C*arduelis carduelis* (Linnaeus, 1758). Eng. Eurasian goldfinch or European goldfinch, Sw. Steglits], remiges antrorsely deep yellow, outermost without maculae; two outermost rectrices entirely white and the others white-tipped. *Fn.* 195.

Gesn. Av. 242. Carduelis.

Aldr. Orn. l. 18. c. 3. Carduelis.

Jonst. Orn. 97. t. 37. Carduelis.

Will. Orn. 189. t. 46. Carduelis.

Raj. Av. 89. n. 1. Carduelis.

Merian. Europ. t. 173. Carduelis.

Aldr. Orn. 1. p. 61. t. 64. Carduelis.

In Sweden: Stiglitza.

Inhabits juniper thickets.

DESCR. Bill verging on white, black-tipped. Head close to bill blood-coloured; vertex black. Temples brick-red and white. Wings black and white-tipped; large, deflexed, light yellow macula medially on the wing. Remiges black, of which 1 entirely black; 2–10 black, antrorsely deep yellow; 11–13 antrorsely white. Rectrices black, of which 1,1 the outermost, medially white on inner side; the others white-tipped. During autumn remiges and rectrices become white apically, but during spring they are black. Scapules of male are black, those of female ash-grey. *Kram.*

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[268] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[269] Cf. no. 233. Both species epithet and description indicate that it is the same species.

[270] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

237. FRINGILLA *spinus* [*Spinus spinus* (Linnaeus, 1758). Eng. Eurasian siskin or European siskin, Sw. Grönsiska], remiges medially deep yellow, four primaries without maculae; rectrices light yellow at base, black-tipped. *Fn.* 203.
Gesn. Av. 1. Achantus avicula.
Aldr. Orn. 353. t. 14. f. 28. Spinus sive Ligurinus.
Jonst. Orn. t. 37. Ligurinus spinus.
Charl. 79. Spinus sive Ligurinus.
Will. Orn. 192. t. 46. Spinus sive Ligurinus.
Raj. Av. 91. n. Spinus sive Ligurinus.
Alb. Orn. 3. p. 71. t. 76. Ligurinus.
In Sweden: Siska, Grönsiska.
Inhabits juniper thickets. Its nest is very seldom found. *Kram.*
DESCR. Body greyish deep yellow above so that every feather is inwardly ash-grey but outwardly blackish with a deep yellow macula. Body whitish ash-grey beneath with a blackish macula on each feather. Throat is white-yellowish. Remiges black, around base anteriorly light yellow, posteriorly whitish; hence alar macula deep yellow, but primary four feathers entirely black. Rectrices deep yellow, black-tipped, but outermost on each side and the two middle rectrices entirely black.

238. FRINGILLA *flammea* [*Acanthis flammea* (Linnaeus, 1758). Eng. Common redpoll, Sw. Gråsiska],[271] fuscous; tuft flame-coloured. *Rudb. Pict.*
Occurs in Norrland. *Fn.* 201.[272]

239. FRINGILLA *flavirostris* [*Linaria flavirostris* (Linnaeus, 1758). Eng. Twite, Sw. Vinterhämpling], fuscous; bill yellowish. *Rudb. Pict.* Fn.* 204.[273]
In Sweden: Riska.
DESCR. Body blackish ash-grey, nevertheless anteriorly rather watery fuscous. Legs black. Tail bifurcate.

240. FRINGILLA *cannabina* [*Linaria cannabina* (Linnaeus, 1758). Eng. Common linnet, Sw. Hämpling], primary remiges and rectrices black, white marginally. *Fn.* 209.
Will. Orn. 191. t. 46. Linaria rubra major.
Raj. Av. 90. n. 2. Linaria rubra major.
Alb. Orn. 3. p. 63. t. 72. 73. Linaria rubra major.
In Sweden: Hämpling.
Inhabits forest groves.
DESCR. Head ash-grey. Dorsum grey. Body pale beneath. Pectus and vertex blood-red. Remiges black: primaries, 1–9, white marginally, but secondaries fuscous at anterior margin and whitish at tip. Tail bifurcate. Female without the blood-coloured macula of vertex and head. Rectrices black,

[271] See no. 241.
[272] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.
[273] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

white marginally, excepting 6,6 fuscous marginally. Tongue entire, pointed. Scapules of males are more red-brownish, scapules of females more ash-grey.

241. FRINGILLA *linaria* [*Acanthis flammea* (Linnaeus, 1758). Eng. Common redpoll, Sw. Gråsiska],[274] remiges and rectrices fuscous, indistinctly pale marginally; alar blotch whitish. *Fn.* 210.

Gesn. Av. 591. Linaria rubra.
Aldr. Orn. l. 18. c. 9. Linaria rubra.
Will. Orn. 191. Linaria rubra minor.
Raj. Av. 91. n. 3. Linaria rubra minor.
Charl. Onom. 80. Linaria rubra.
Alb. Orn. 3. p. 70. t. 75. Linaria rubra minor.
In Sweden: Gråsiska.
Inhabits alder thickets.
DESCR. Male differs from female by the blood-coloured pectus and vertex. Body dusky ash-grey and indistinctly white. Frons scarlet, shining. Rectrices fuscous, indistinctly pale marginally. Remiges fuscous, indistinctly pale at outer margin. Coverts constitute a transverse alar blotch verging on white.

242. FRINGILLA *domestica* [*Passer domesticus* (Linnaeus, 1758). Eng. House sparrow, Sw. Gråsparv], remiges and tectrices fuscous; body grey and black; alar fascia solitary, white.

Fringilla, remiges and tectrices fuscous; throat black; temples rusty brown. *Fn.* 212.
Gesn. Av. 643. Passer.
Will. Orn. 182. t. 44. Passer domesticus.
Raj. Av. 86. Passer domesticus. Struthos.
Alb. Orn. 1. p. 59. t. 92. Passer domesticus.
In Sweden: Tätting, Gråsparf. In Småland: Hamp-Spink.
Lives in gardens and near houses.
DESCR. Dorsum sordid brick-red. Head grey-white above. Throat black. Venter verging on white. Remiges fuscous. Tail bifurcate. Male dark brown near ears. Rectrices fuscous, without maculae. Head of female ash-grey. Throat pale ash-grey. Macula whitish behind eyes. Only shoulders grey.

243. FRINGILLA *montana* [*Passer montanus* (Linnaeus, 1758). Eng. Eurasian tree sparrow, Sw. Pilfink], remiges and rectrices fuscous; body grey and black; alar fascia double, white.

Aldr. Orn. l. 15. c. 15. Passer montanus.
Raj. Av. 87. Passer montanus.
Inhabits forests and occurs in Lapland.

[274] See no. 238.

DESCR. Head of a bright brown colour. Dorsum varies with grey and black. Uropygium of a bright brown colour. Throat black. Pectus and abdomen verging on white. Remiges fuscous, at outer margin inclining to deep yellow. Caudal rectrices entire, fuscous. Alar tectrices with a double row of the same colour as remiges; tips mostly whitish. Legs pale. It differs from the preceding species by its greenish and not brick-red uropygium. Black macula at ears and not white behind eye.

Motacilla

244. MOTACILLA *luscinia* [*Luscinia luscinia* (Linnaeus, 1758). Eng. Thrush nightingale, Sw. Näktergal], red-brown tending to ash-grey; rings around knees ash-grey. *Fn.* 221.

Gesn. Av. 592. Luscinia.

Aldr. Orn. l. 18. c. 2. Luscinia.

Jonst. Orn. t. 45. Luscinia.

Will. Orn. 161. t. 41. Luscinia sive Philomela.

Raj. Av. 73. n. 2. Luscinia sive Philomela.

Alb. Orn. 3. p. 49. t. 53. Luscinia.

In Sweden: Näcktergahl.

Inhabits small woods of Öland, 59, 67, Gotland, Skåne 93, Svartsjölandet, Fullerön, Uppsala, Sigtuna and elsewhere. What a voice in such a small body! Such energy! The energy ends before the song. According to *Pliny* it sings most beautifully in the evening, and is a very pleasant bird.[275] How to capture it, see *It. Scan.* 389.

DESCR. Dusky brick-red on top; this colour becomes more red-brownish on the wings and still more so at the tail. Throat, pectus, and abdomen ash-grey. Tail verging on white beneath. Femora white. Knees surrounded by almost ash-grey rings.

OBS. *Luscinia minor,*[276] *Aldr. Orn.* 754. *Jonst. Orn.* t. 45, can be found delineated by *Rudbeck* among the birds of Sweden. I have never seen this bird.

245. MOTACILLA *modularis* [*Prunella modularis* (Linnaeus, 1758). Eng. Dunnock, Sw. Järnsparv], dusky ash-grey above; alar tectrices white-tipped; pectus bluish ash-grey. *Fn.* 223.

Frisch. Av. l. 21. f. 3. Curruca cantu lusciniae.

In Sweden: Järnsparf.

Inhabits reed areas; visible especially in September; during spring it sings excellently in caves and runs around with great agility eating hempseeds.

DESCR. Head and dorsum scattered with blackish, pointed maculae, which are smaller and more abundant at head and neck than dorsum. Eyes purplish. Colour of throat and pectus, above eyes and ears, bluish ash-grey. Remiges fuscous, on outer side rusty brown; secondaries with an oblong,

[275] Pliny the Elder describes the nightingale in his work *Naturalis historia*, 10. 43. According to the localities mentioned Linnaeus talks about *Luscinia luscinia*, but when he refers to Pliny he does not realize that Pliny bears upon another species, i.e. the southern common or rufous nightingale *Luscinia megarhynchos* C.L Brehm, 1831.

[276] *Nomen dubium.*

macula verging on white at tip of outer side. Rectrices fuscous, setaceous marginally. Uropygium brick-red tending to ash-grey. Colour beneath tail white, with pointed, fuscous maculae.

246. MOTACILLA *schoenobaenus* [*Acrocephalus schoenobaenus* (Linnaeus, 1758). Eng. Sedge warbler, Sw. Sävsångare], dusky brick-red; pale brick-red beneath; head maculate. *Fn.* 222.

Schoenobaenus. *Mr Leche.*

Inhabits bulrush areas in Skåne.

DESCR. The size of the goldcrest.[277] Iris dusky black. Legs weakly fuscous. Inner digit connected to the middle one. Tibiae with 17 notches. Colour of dorsum, head, and uropygium dusky brick-red, but maculate on dorsum and especially on head. Throat, abdomen, femora, and tail pale brick-red beneath. Tail entire, fuscous. Wings fuscous with outer margin brick-red.

247. MOTACILLA *curruca* [*Sylvia curruca* (Linnaeus, 1758). Eng. Lesser whitethroat, Sw. Ärtsångare], fuscous above, whitish beneath; rectrices fuscous; outermost one with inner margin white. *Fn.* 233.

Gesn. Av. 370. Curruca.

Jonst. Av. Hippolais sive Curruca.

Aldr. Orn. l. 17. c. 34. Hippolais sive Curruca.

Will. Orn. 157. Curruca eliolae.

Raj. Av. 79. n. 6. Curruca.

In Sweden: Kruka.

Lives especially on argillous land; lays ash-grey eggs with rusty brown maculae.

DESCR. Body dusky ash-grey above, white beneath. Remiges fuscous with the thinner margins whitening. Tail entire. Rectrices fuscous, but 1,1 longitudinally white at outer margin.

248. MOTACILLA *hippolais* [*Hippolais icterina* (Vieillot 1817). Eng. Icterine warbler, Sw. Härmsångare], greenish ash-grey; whitish yellow beneath; abdomen whitish; limbs[278] fuscous. *Fn.* 234.

Raj. Av. 79. n. 7. Ficedula septima aldrovandi.

Lives in trees.

DESCR. The preceding species might be a female. Body ash-grey above, ash-grey verging on white beneath. Neck and especially wings greenish beneath. Throat white. Wings closed, rusty brown above. Remiges are rusty brown at outer margin. Rectrices are coequal or outer ones slightly shorter; all fuscous, but 1. outwardly pale; 2. apically pale; the others are not obviously pale.

[277] See no. 262.

[278] Lat. *artus*. See Ch. *Technical Terms*.

249. MOTACILLA *salicaria* [*Nomen dubium*], ash-grey; white beneath; eyebrows white.
Alb. Av. 3. p. 56. t. 60. Salicaria gesneri.
Inhabits forests.
DESCR. Body ash-grey above; barely greenish. Abdomen whitish. Pectus and lower alar tectrices whitish yellow. Remiges fuscous, at posterior margin whitish. Rectrices of the same colour as remiges. Whitish line above eyes. This bird is very closely related to *M. sylvia*,[279] but it is not an obvious matter of sex.

250. MOTACILLA *sylvia* [*Nomen dubium*], ash-grey above, white beneath; primary rectrix longitudinally dimidiately white; second one white-tipped. *Fn.* 228.
In Sweden: Skogsknetter, Mesar.
Inhabits forests and small woods.
DESCR. Head, neck, dorsum, wings, uropygium, and tail (in short the whole bird above) ash-grey. Throat, neck, abdomen, pectus, and tail beneath (i.e. the whole bird beneath) white. Remiges dusky ash-grey. Rectrices dusky ash-grey, but outermost dimidiately white along the entire length from outer side. Secondary rectrix white-tipped, the others without maculae. Barely larger than a willow warbler.[280]

251. MOTACILLA *ficedula* [*Nomen dubium*], weakly fuscous, white beneath; pectus maculate with ash-grey. *Fn.* 231.
Will. Orn. 163. Ficedula quarta.
Raj. Av. 81. n. 12. Ficedula.
List. Apic. 125. Ficedula.
Charl. Onom. t. 81. t. 81. Ficedula.
Alb. Orn. 3. t. 25. 26. Ficedula cannabina.
Inhabits gardens and cultivated areas; rather rare.
DESCR. Colour on top entirely dusky chestnut, beneath white or whitish ash-grey.

252. MOTACILLA *alba* [*Motacilla alba* Linnaeus, 1758. Eng. White wagtail, Sw. Sädesärla], pectus black; two lateral rectrices, dimidiately and obliquely white. *Fn.* 214.
Bell. Ic. 88 b. Motacilla, Culicilega, Susurada.
Gesn. Av. 618. Motacilla, quam nostri albam cognominant.
Jonst. Orn. 120. t. 43. Motacilla alba.
Anon. Angl. 127. Water wagtail.
Will. Orn. 171. t. 42. Motacilla alba.
Raj. Av. 75. n. 1. Motacilla alba.
Alb. Orn. 1. p. 49. t. 49. Motacilla alba.
In Sweden: Ärla, Sädesärla. In Södermanland: Isspiärna. In Österbotten: Wästräckia.

[279] See no. 250.
[280] See no. 264.

Occurs ubiquitously. 6 white eggs, densely covered with fuscous maculae.

DESCR. Head black from vertex to nape. Frons, sides of head, and throat white. Neck beneath from throat to sternum is circumscribed with a large, black macula. Dorsum grey-white. Pectus and venter whitish mixed with ash-grey. Wings fuscous, of which 1–5 longer, entire, but 6–14 almost equal, blunt, emarginate; 15, which is longer, and 16 are both white at anterior margin. Rectrices equal, fuscous: 1, 2 dimidiately white, obliquely towards tip; 3, 4, 5 fuscous, without maculae; 6 narrower and more pointed (at outer margin some are longitudinally white). Tibiae and feet black; posterior claw largest. Bill slender, black. Beaks[281] subequal, upper one emarginate on each side; openings oblong, naked. Tongue sagittate, membranous; tip lacerate with many bristles.

253. MOTACILLA *flava* [*Motacilla flava* Linnaeus, 1758. Eng. Yellow wagtail, Sw. Gulärla], pectus and abdomen light yellow; two lateral rectrices, dimidiately and obliquely white. *Fn.* 215.

Gesn. Av. 618. Motacilla flava.
Aldr. Orn. l. 17. c. 24. Motacilla flava.
Will. Orn. 172. t. 63. Motacilla flava.
Raj. Av. 75. n. 2. Motacilla flava.
Merr. Pin. 178. Motacilla flava, rostro longiusculo nigricante.

β *Motacilla cinerea.*
Raj. Av. 75. n. 3.
Edw. Av. 105. *l.* 259. *Femina est.*
In Södermanland: Sädesärla.

Lives ubiquitously around us in hedges; nests in cornfields; 5 eggs with fuscous maculae and lines.

DESCR. Throat, pectus, and abdomen from bill to tail, saturated light yellow beneath. Head grey-white above, mixed with green. Uropygium green. White line drawn from bill through eyes. Wings fuscous. Remiges 1–5 longer, more pointed, gradually shorter; 6–14 equal, blunt, shorter, emarginate, but 15 similar to the 5th in size and form, but 16 similar to the 1st in length; anterior margin white. Rectrices equal, dusky blackish, of which 1–2 dimidately and obliquely white towards tip, but the front tip of 3 barely antrorsely verging on white; the others 4, 5, 6 without maculae, dusky black. Bill awl-shaped, black. Tongue divided into four or five setae, acuminate. Legs fuscous. Posterior claw twice as long as all the others.
Head of male greenish ash-grey; small, white line above eyes; temples greenish ash-grey.
Head of female dark ash-grey; whitish line behind eyes; temples black beneath eyes.

254. MOTACILLA *oenanthe* [*Oenanthe oenanthe* (Linnaeus, 1758). Eng. Northern wheatear, Sw. Stenskvätta], dorsum grey-white; frons white; fascia of eyes black. *Fn.* 217.

Will. Orn. 168. t. 41. f. 4. Oenanthe sive Vitiflora?
Jonst. Av. 123. t. 45. f. 13. Oenanthe aristoteli & plinio.
Raj. Av. 75. n. 1. Oenanthe sive Vitiflora.
Ald. Orn. 1. p. 53. t. 57. Oenanthe.

[281] Lat. *maxillae.*

In Sweden: Stensquetta.

Lives among stones. 6 eggs bluish with sparse, fuscous spots.

DESCR. The size of the European greenfinch.[282] Mouth, moustaches, legs, claws, and pharynx black. Head and dorsum are ash-grey or grey-white, although greenish towards uropygium; abdomen white. Frons whitish. Broad, black line from bill through eyes to ears; above eyes (in male), a white macula. Beneath throat and neck becoming very slightly whitish yellow. All remiges fuscous, without maculae. Rectrices fuscous from middle towards tip, white towards base, but this whiteness is longer than the blackness, but rectrices 6, 7 (the middle ones) enjoy a longer blackness than whiteness. Uropygium white on each side.

We have seen a variety of this bird with jet-black wings and secondary remiges white-tipped.

255. MOTACILLA *rubetra* [*Saxicola rubetra* (Linnaeus, 1758). Eng. Whinchat, Sw. Buskskvätta], blackish; eyebrows white; alar macula white; throat and pectus whitish yellow. *Fn.* 218 & 230.

Aldr. Orn. 735. Muscicapa tertia.

Bellon. Rubetra … Rubetra.

Raj. Av. 76. n. 4. Oenanthe nostra tertia.

Will. Orn. 169. t. 41. f. 5. Muscicapa nostra tertia.

Occurs throughout the countryside.

DESCR. Bill black. Head fuscous. Line from nostrils through eyes white, beneath which a black fascia. Throat white. Neck and pectus watery rusty brown beneath. Abdomen white. Dorsum and uropygium composed of fuscous feathers that are grey marginally. On the wings, a large, white macula, outwardly black. Remiges fuscous; primaries 1–8 white at posterior margin and base. Rectrices fuscous, white from middle towards base except for the two middle ones that are entirely fuscous. The size of a house sparrow.[283] Outermost rectrix is white at outer margin almost continuously to tip.

OBS. *Raj. Av.* 76. Our second [specimen of] Northern wheatear[284] or European robin[285] barely differs from this species.

256. MOTACILLA *atricapilla* [*Sylvia atricapilla* (Linnaeus, 1758). Eng. Eurasian blackcap, Sw. Svarthätta], brick-red; palish ash-grey beneath; cap dark. *Fn.* 229.

Aldr. Orn. l. 17. t. 36.

Jonst. Av. t. 45. Atricapilla sive Ficedula.

Will. Orn. 162. t. 41. Atricapilla sive Ficedula.

Raj. Av. 79. n. 8. Atricapilla sive Ficedula

Occurs especially in Skåne.

DESCR. Male is blackish at vertex. Dorsum brick-red, ash-grey beneath.

Female red-brownish with a deep yellow vertex; whole body light yellow tending to red-brownish; watery whitish beneath.

[282] See no. 226.

[283] See no. 242.

[284] See no. 254.

[285] See no. 260.

257. MOTACILLA *phoenicurus* [*Phoenicurus phoenicurus* (Linnaeus, 1758). Eng. Common redstart, Sw. Rödstjärt],[286] throat black; abdomen red-brown; head and dorsum grey-white. *Fn.* 224.[287]

Raj. Av. 78. n. 5. Ruticilla.

Will. Orn. 159. Ruticilla, Phaenicurus graec.

Alb. Orn. 1. p. 48. t. 50. Ruticilla.

In Sweden: Rödstjert.

Lives in leafy trees. Nests in cavities of trees and walls of houses. Sings excellently. Hides during winter.

DESCR. Pectus, uropygium, and tail red-brown. Head, neck, and dorsum ash-grey. Frons white. Throat and beaks[288] black beneath eyes. Two fuscous middle rectrices. Female ash-grey at head and neck, paler at pectus. Abdomen white. Remiges fuscous. Tail of male very similar.

258. MOTACILLA *erithacus* [*Phoenicurus phoenicurus* (Linnaeus, 1758), female. Eng. Common redstart, Sw. Rödstjärt],[289] dorsum and rectrices ash-grey; abdomen and rectrices red, of which two are ash-grey. *Fn.* 225.

Lives in trees in meadows. 9 eggs, green-blue.

DESCR. Head grey-white above. Dorsum, wings, and remiges ash-grey. Throat, thorax, abdomen, uropygium, and rectrices red-brown or rusty brown. Two middle rectrices ash-grey and becoming slightly red-brown in the middle of outer margin. Legs black. No macula beneath throat or on sinciput and no white eyebrows. Could it be a female of the preceding species?

259. MOTACILLA *suecica* [*svecica*] [*Luscinia svecica* (Linnaeus, 1758). Eng. Bluethroat, Sw. Blåhake], pectus rusty brown, with a blue fascia; rectrices fuscous, towards base rusty brown.

Motacilla, pectus blue, with a whitish yellow macula surrounded by whiteness. *Fn.* 220.

Rud. Pict. Avis Carolina mas.

Gesn. Av. 796. Wegstecklin.

Aldr. Orn. 749. Phoenicuro similis ornithologo.

Will. Orn. 160. Ruticilla 3. Wegstecklin.

Raj. Av. 78. Ruticilla 3. Wegstecklin.

β *Gesn. Av.* 796. Wydengyckerlin.

Rud. Pict. Avis Carolina faemina.

Occurs in Torneå and elsewhere in thickets of willows and alders of Västerbotten and Lapland.

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[286] See no. 258.

[287] See Ch. *A small fauna of Sweden.*

[288] Lat. *maxillae.*

[289] I.e. a female of no. 257, as Linnaeus indicates in his last sentence.

DESCR. Male: The size of the Eurasian siskin.[290] Head, dorsum, and tail grey. Remiges fuscous, white at the very small tip. Rectrices fuscous with a weakly brick-red tip, rusty brown from base to middle; middle rectrices entirely fuscous. Whitish line above eyes. Pectus red-yellow tending to brick-red; blue fascia in the middle of pectus. Venter and pectus are whitish; anus becomes deep yellow beneath. Legs ash-grey.

Female similar to the preceding male, but with a weaker colour; furthermore, there is no macula at the corner of the eye but at the position of the eyebrows an oblong, ash-grey macula from throat to sternum, but medially white; beneath this macula near sternum it is quasi-cloudy dusky grey.

260. MOTACILLA *rubecula* [*Erithacus rubecula* (Linnaeus, 1758). Eng. European robin, Sw. Rödhake], grey; throat and pectus red-yellow. *Fn.* 226.

Alb. Orn. 1. p. 49. t. 51. Rubeculus.

Will. Orn. 160. t. 38. Rubecula sive Erithacus.

Raj. Av. 78. n. 3. Rubecula sive Erithacus.

In Sweden: Rotgel.

Lives in leafy trees at marshes. Sings best when alone (two specimens of the robin cannot be found in one tree); very pugnacious and fond of the berries of spindle tree.

DESCR. Deep yellow tending to red-brown from bill to sternum. Dorsum, wings, and tail grey. Venter verging on white. Posterior claw longer. Remiges and rectrices dusky ash-grey; six tectrices (of posterior remiges) with rusty brown maculae at tip. Tail uniform. Bill and legs fuscous.

261. MOTACILLA *troglodytes* [*Troglodytes troglodytes* (Linnaeus, 1758). Eng. Eurasian wren, Sw. Gärdsmyg], grey; wings undulating with black and ash-grey. *Fn.* 232.

Gesn. Av. 651. Passer troglodytes.

Aldr. Orn. l. 17. c. 4. Passer troglodytes bellonii.

Will. Orn. 162. t. 42. Passer troglodytes.

Raj. Av. 80. Passer troglodytes.

Occurs around us, rather rare; nests on the ground and in hedges.

DESCR. This bird is chestnut-coloured above, paler beneath. Abdomen undulated with small, transverse, fuscous lines. Tail entire. Wings blackish ash-grey, undulated with black.

262. MOTACILLA *regulus* [*Regulus regulus* (Linnaeus, 1758). Eng. Goldcrest, Sw. Kungsfågel], secondary remiges light yellow at outer margin, medially black. *Fn.* 235.

Gesn. Av. 643. Parus sylvaticus.

Aldr. Orn. l. 17. c. 1. Regulus.

Jonst. Orn. t. 42. Passerculus troglodytes.

Will. Orn. 163. t. 41. Regulus cristatus.

Raj. Av. 79. n. 9. Regulus cristatus.

Alb. Orn. 1. p. 51. t. 53. Regulus cristatus.

[290] See no. 237.

In Sweden: Kongsfogel.

Often lives in trees; the smallest of our birds.

DESCR. Body greenish grey above, more watery beneath. Remiges fuscous, 1, 2, 3, 4, 5 barely whitish yellow at outer margin; the others, 6–16, black in the middle of outer margin, from the middle towards the outside greenish light yellow. All remiges becoming white at posterior margin, and of these 12–16 also at tips. Rectrices fuscous, at outer margin light yellow. Bill awl-shaped, black. Tongue lacerate; posterior claw bigger. Male with a large, light yellow macula at vertex, medially red-yellow, laterally black.

263. MOTACILLA *acredula* [*Phylloscopus trochilus acredula* (Linnaeus, 1958). Eng. Northern willow warbler, Sw. Nordlig lövsångare], dorsum greenish ash-grey; remiges fuscous, seventh, eighth, ninth white-tipped. *Fn.* 237.

Occurs in Uppsala.

DESCR. This small bird, which I would like to assign to this species, enjoys the following colour. Bill slender, whitish yellow, darker above. Nostrils ovately oblong; moustaches with three setae on each side. Head, neck, dorsum, uropygium, and alar tectrices change somewhat from ash-grey to green. At alar inflection, especially beneath, the green colour tending to whitish yellow is more saturated than on the rest of the body. Throat, pectus, and abdomen white, but lower part of neck becomes greenish whitish yellow. Legs pale fuscous, like the bill. Rectrices fuscous and tail forficate. Remiges similarly fuscous, but feathers 7, 8, 9 not conspicuously white at outermost tips. Tongue equipped with two setae; pharynx light yellow. Above eyes, from the outermost point of the base of bill, a thin, pale whitish yellow line on each side. Appearance as that of the Eurasian siskin[291] but twice as small. It is constantly in motion in the trees and always jumps to and fro.

264. MOTACILLA *trochilus* [*Phylloscopus trochilus* (Linnaeus, 1758). Eng. Willow warbler, Sw. Lövsångare], greenish ash-grey; lower alar tectrices whitish yellow; eyebrows deep yellow. *Fn.* 236.

Aldr. Orn. l. 17. c. 2. Regulus alius non cristatus.

Will. Orn. 164. t. 42. Regulus non cristatus.

Raj. Av. 80. n. 10. Regulus non cristatus.

Alb. Orn. 2. p. 55. t. 59. Regulus non cristatus.

Inhabits willow thickets; 5 white eggs with red maculae.

DESCR. Body dusky greenish ash-grey. Weakly deep yellow line from nostrils above eyes to occiput. Body white inclining to deep yellow beneath. Lower tectrices of remiges greenish whitish yellow. Remiges fuscous, with greenish margin. Rectrices similar to remiges. *Will.*

[291] See no. 237.

Parus

265. PARUS *major* [*Parus major* Linnaeus, 1758. Eng. Great tit, Sw. Talgoxe], head black; temples white; nape deep yellow. *Fn.* 238.

Gesn. Av. 640. Parus major.
Bell. Ic. 95. a. Parus major.
Aldr. Orn. l. 17. c. 13. Parus major.
Merr. Pin. 178. Parus major.
Will. Orn. 174. Fringillago sive Parus major.
Raj. Av. 73. n. 3. Fringillago sive Parus major.
Alb. Orn. 1. p. 44. t. 46. Fringillago sive Parus major.
In Sweden: Talg-oxe.
Lives among alders. During very cold winters it approaches windows.
DESCR. Body black, glistening. Temples white beneath eyes. Chin black; this blackness merges beneath temples through the macula of the head. Macula of throat forms a black appendix hanging down straightly towards pectus and venter; nape deep yellow. Area of scapulae greenish deep yellow. Pectus and venter light yellow. Wings and tail quite grey-white. Remiges blackish, at outer margin verging on white, except for the first remex. Transverse, oblique, white line, running through wing. Rectrix 1. longitudinally white towards the outside, but sixth one bilaterally bluish. The others longitudinally bluish towards outside and blackish towards inside.

266. PARUS *cristatus* [*Lophophanes cristatus* (Linnaeus, 1758). Eng. European crested tit, Sw. Tofsmes], head crested. *Fn.* 239.

Gesn. Av. 642. *f. med.* Parus cristatus.
Aldr. Orn. . . . Parus cristatus.
Will. Orn. 175. t. 43. Parus cristatus.
Raj. Av. 74. n. 6. Parus cristatus.
Alb. Orn. 2. p. 53. t. 57. f. 2. Parus cristatus.
In Sweden: Tofsmyssa, Tofstita. In Uppland: Meshatt.
Inhabits low stony forests.
DESCR. Dorsum dusky ash-grey. Wings and tail blackish ash-grey. Venter white; plumes inwardly black. Head enjoys longish and somewhat erect feathers at vertex; colour of head is a mixture of white and black; plumes are namely black with white tips. Plumes of crest larger than the others, blackness behind eyes. Throat with a large, black macula; collar black. Legs blue.

267. PARUS *caeruleus* [C*yanistes caeruleus* (Linnaeus, 1758). Eng. Blue tit, Sw. Blåmes], remiges bluish, primaries white at outer margin; vertex blue. *Fn.* 240.

Bell. Ic. 96. a. Parus caeruleus.
Gesn. Av. 641. Parus caeruleus.
Merr. Pin. 178. Parus caeruleus minor.
Will. Orn. 175. Parus caeruleus.
Aldr. Orn. l. 17. c. 17. Parus caeruleus.
In Sweden: Blåmees.

Inhabits alder thickets.

DESCR. Frons white. Vertex blue. Temples white. The line running from bill through eyes towards nape merges into a bluish macula, which circumscribes the neck and constitutes the blackish macula of throat. Secondary remiges white-tipped; hence alar fascia white. Pectus, abdomen, and sides whitish yellow. Abdomen posteriorly verging on white. Alar tectrices bluish, white-tipped. Rectrices blackish, at outer margin bluish of which 1,1 white at outer margin. Tail bluish. Neck verging on white above. Dorsum greenish. Legs black.

268. PARUS *ater* [*Periparus ater* (Linnaeus, 1758). Eng. Coal tit, Sw. Svartmes], head black; dorsum ash-grey; occiput and pectus white. *Fn.* 241.

Gesn. Av. 641. Parus ater.
Aldr. Orn. l. 17. c. 19. Parus ater.
Merr. Pin. 178. Parus ater sive carbonarius.
Will. Orn. 175. t. 45. Parus ater.
Raj. Av. 73. n. 2. Parus ater.

Inhabits alder thickets.

DESCR. Head black from bill to nape. Temples white. Area around sternum black. Pectus and abdomen whitish. Dorsum and uropygium ash-grey. 17 remiges fuscous, but white at inner margin; double white fascia across wings; 12 rectrices fuscous. Legs bluish.

269. PARUS *palustris* [*Poecile palustris* (Linnaeus, 1758). Eng. Marsh tit, Sw. Entita], head black; temples white; dorsum ash-grey. *Fn.* 242.

Gesn. Av. 642. Parus palustris.
Aldr. Orn. – – Parus palustris.
Will. Orn. 175. t. 43. Parus palustris.
Raj. Av. 73. n. 3. Parus palustris.
Alb. Orn. 3. p. 54. t. 58.

In Sweden: Entita, Tomlinge.

Inhabits juniper thickets.

DESCR. Head black above eyes from bill to nape. Temples beneath eyes white. Body ash-grey above, bright whitish ash-grey beneath, but all plumes black; only tips show a visible colour. Remiges blackish with outer margin whitish; no fascia across wings. Rectrices and tectrices concolorous with dorsum. Bill black. Legs lead-grey. Rectrix 1,1 with exterior margin white.

Hirundo

270. HIRUNDO *rustica* [*Hirundo rustica* Linnaeus, 1758. Eng. Barn swallow, Sw. Ladusvala], rectrices marked with a white macula except for the innermost pair. *Fn.* 244.

Gesn. Av. 548. Hirundo domestica.
Aldr. Orn. l. 17. c. 6. Hirundo domestica.
Jonst. Av. 115. t. 42. Hirundo.
Merr. Pin. 177. Hirundo.

Will. Orn. 155. t. 39. Hirundo domestica.
Raj. Av. 71. n. 1. Hirundo domestica.
Alb. Orn. 1. p. 43. t. 45. Hirundo domestica.
In Sweden: Ladu-Swala.
Lives in houses under the roofs.
DESCR. Male: Body blue-black, shining, above. Venter, pectus, and lower alar rectrices white. Frons and throat dark brown. Neck bluish beneath. Remiges black; the true ones 1–9 gradually longer the closer they are to the tip, but secondaries longer the closer they are to body; these are emarginate. Tail black, bifurcate. 12 rectrices, outermost ones the longest; each rectrix marked with a white macula except for the innermost pair or the sixth one. Bill very small, flattened; pharynx[292] ample, light yellow. Nostrils ovate, naked. Tongue bifid, pointed. Legs naked.

271. HIRUNDO *urbica* [*Delichon urbicum* (Linnaeus, 1758). Eng. Common house martin, Sw. Hussvala], rectrices without maculae; dorsum bluish black. *Fn.* 245.
Gesn. Av. 564. Hirundo sylvestris.
Aldr. Orn. l. 17. c. 7. Hirundo agrestris sive rustica Plinio dicta.
Merr. Pin. 178. Hirundo agrestris sive rustica plinii.
Jonst. Orn. 117. Hirundo agrestris.
Will. Orn. 155. Hirundo agrestris plinii sive rustica.
Raj. Av. 71. n. 2. Hirundo rustica sive sylvestris.
It. Oeland. 41. Hirundo dorso nigro-caerulescente.
Alb. Orn. 2. p. 52. t. 56. f. A. Hirundo agrestris.
In Sweden: Hus-swala.
Lives beneath the eaves of the roof; these eaves project beyond the highest part of the outer house wall.
DESCR. Bill black, short, flattened. Nostrils naked. Body black above, but head and dorsum bluish black above; between eyes and bill jet-black. Remiges fuscous, primaries pointed, but secondaries emarginate. 12 fuscous rectrices; exterior ones gradually longer. Uropygium, throat, pectus, venter, and lower tectrices of rectrices white. Legs covered with white wool. Tongue marginate. The house sparrow[293] often enters the nest of this bird and takes it over. But the mistress of the house befriends other house martins, which then close the entrance with mud. And soon they all fly away exultantly. This having been done, and if the nest is opened by hand, the captive is found suffocated.

272. HIRUNDO *apus* [*Apus apus* (Linnaeus, 1758). Eng. Common swift, Sw. Tornseglare], blackish; throat white, all four digits facing forward. *Fn.* 246.
Hirundo, entirely black; throat verging on white.
Bell. Ic. 100. a. Apus, Cypselus minor.
Gesn. Av. 166. Apus.
Aldr. Orn. l. 17. c. 19. Apus.
Jonst. Orn. 119. t. 42. Apus.

[292] With *faux*, Linnaeus here undoubtedly means the outside and front of the neck (*gula*), but he writes *faux*, which is the inside, the *pharynx*. Cf. however, for example, no. 274, where *faux* really is *pharynx*.
[293] See no. 242.

Merr. Pin. 178. Hirundo apus.
Will. Orn. 156. t. 39. Hirundo apus.
Raj. Av. 72. n. 4. Hirundo apus.
Alb. Orn. 2. p. 51. t. 55. Hirundo apus.
In Sweden: Ring-swala.
Lives in towers, temples, and fortresses, and also in forests and tree holes. Cretan children pierce a cicada in the middle with a hairpin curved like a fishhook and hold the end of the thread in their hands. The cicada pinned in this way still flies in the air and is seen by the swallow. It attacks the cicada and eats it together with the hook. In this way it is caught and retained. Such is also the case with the common kingfisher.[294] *Bell. Obs.* 16.
DESCR. Almost the size of the European nightjar,[295] dusky blackish. Throat white. Tongue emarginate. No moustaches. Wings very long. Tail forcipate with only 10 rectrices. Legs red-brown, carnose, tetradactyl; all digits turned forwards, the innermost the shortest.

273. HIRUNDO *riparia* [*Riparia riparia* (Linnaeus, 1758). Eng. Sand martin or Bank swallow, Sw. Backsvala], ash-grey; throat and abdomen white. *Fn.* 247.
Gesn. Av. 656. Hirundo riparia sive Drepanis.
Aldr. Orn. l. 17. c. 8. Drepanis sive riparia.
Jonst. Orn. t. 42. Hirundo riparia.
Merr. Pin. 178. Hirundo riparia.
Will. Orn. 156. t. 39. Hirundo riparia.
Raj. Av. 71. n. 3. Hirundo riparia.
Alb. Orn. 2. p. 52. t. 96. f. B. Hirundo riparia.
In Sweden: Strand-Swala, Back-Swala.
Lives underground in steep banks or sandy precipices, where it digs deep horizontal tunnels.
DESCR. Whole bird including remiges and rectrices ash-grey. Throat and venter white.

Caprimulgus

274. CAPRIMULGUS *europaeus* [*Caprimulgus europaeus* Linnaeus, 1758. Eng. European nightjar, Sw. Nattskärra], tubes of nostrils indistinct.
Hirundo, tail entire; mouth ciliate with setae. *Fn.* 248.
Bell. Ic. 28. a. Strix, Caprimulgus, Fur nocturnus.
Gesn. Av. 242. Caprimulgus Aegothelus.
Jonst. Orn. 53. t. 20. Caprimulgus.
Will. Orn. 70. t. 14. Caprimulgus.
Raj. Av. 26. n. 1. Caprimulgus.

[294] Linnaeus here refers to "Ispida", i.e. *Alcedo ispida* in *Syst. nat.* (1758). He has however not included it in *Fn. Su.* (1761).

[295] See no. 274.

Albin. Ornith. 1. p. 10. t. 10. Caprimulgus.

In Sweden: Nattskräfva, Nattskärra. In Småland: Qvällknarren.

Occurs throughout Sweden. Appears only at night; easily reveals itself by its continuous humming. Nests at precipitous and shady sides of large rocks. *It. W:goth.* 27.

DESCR. The size of the common cuckoo.[296] Body grey-white above; only very slightly undulated with black, white, and fuscous, with a mixture of maculae. Moreover, this colour is irrorated with small, longitudinal, black maculae. Abdomen pale brick-red with rather thick, black wavelets. Pectus with the same wavelets but smaller. Head large compared with the body. Ears ample. Bill slender, flat and plain, moderately curved, black. Legs small, hirsute. Middle digit twice as long. Tail long, entire. 10 rectrices. All feathers loose, soft, equal. Middle claw is marked with pectinated scales at inner margin. Remarkable in this bird are the moustaches at margin of the upper beak;[297] they are formed of 8 projecting, rigid rays or setae so that the bird can feed more easily on moths and insects. Pharynx[298] most ample; ten times ampler than the opening of the bill, as in the congeners. Nostrils prominent, with an elevated channel. Tongue very small, strongly pointed, absolutely entire, and attached to the palate. Scull pellucid. Head large, with big ears (*It. W:goth.* 215), though not projecting, with big eyes, characteristics that it has in common with other nocturnal birds. Middle claw squamous. The male enjoys a large, white macula almost in the middle of remiges 2 and 3, which the female lacks, and the tips of rectrices 1, 2 are white in the male.

[296] See no. 96.

[297] Lat. *maxilla superior.*

[298] Cf. the com. to no. 270.

Class III

AMPHIBIA

I. REPTILIA

Rana

275. RANA *bufo* [*Bufo bufo* (Linnaeus, 1758). Eng. European toad or Common toad, Sw. Vanlig padda],[299] body ventricose, verrucose, dirt brown and fuscous.
Rana, forefeet tetradactyl, divided; hindfeet hexadactyl, palmate, with shortish pollex. *Fn.* 253. *It. Oel.* 142.
Raj. Quadr. 252. Bufo sive Rubeta.
Rond. Aquat. 2. p. 221. Bufo.
Charl. Onom. 24. Bufo.
Bradl. Nat. 1. t. 21. f. 2. Bufo.
Jonst. Quadr. 132. Bufo.
In Sweden: Padda. In Småland: Tåssa.
Lives in shady and mountainous places, especially those rich in baneberry and stinking chamomille; appears at night.
DESCR. Forefeet tetradactyl, divided; digits subequal. Hindfeet hexadactyl, palmate; first and last digits the longest. Body black, hispid with warts; at ears as if inflated with a blister. Throat light yellow. Abdomen ventricose, pale, scattered with black maculae, just as the fuscous femora.

276. RANA *rubeta* [*Bufo bufo* (Linnaeus, 1758). Eng. European toad or Common toad, Sw. Vanlig padda],[300] body verrucose; anus blunt, punctate beneath. *It. W:goth.* 261.
Occurs in Värmland. Abundant in the Garden of Drottningholm after rains.

277. RANA *bombina* [*Bombina bombina* (Linnaeus, 1761). Eng. European fire-bellied toad, Sw. Klockgroda], body verrucose; abdomen maculate with deep yellow and black; guttural fold.
Rana, abdomen red-yellow. *Fn.* 251.
In Sweden: Kläck-Groda. In Skåne: Sädes-Pompa.
Occurs in the hollows of the plains of southern Skåne. *It. Scan.* 122, 244, 272.

[299] See no. 276.
[300] See no. 275.

278. RANA *temporaria* [*Rana temporaria* Linnaeus, 1758. Eng. Common frog, European frog or Grass frog, Sw. Vanlig groda], dorsum rather plain, somewhat angular.
Rana, forefeet tetradactyl, divided; hindfeet hexadactyl, palmate; pollex longish. *Fn.* 250. *It. Oel.* 154.
Aldr. Ovip. 89. Rana.
Raj. Quadr. 247. Rana aquatica.
Bell. Aquat. 54. Rana.
Charl. Onom. 24. Rana temporaria.
Schonef. Ichth. 59. Rana.
Bradl. Nat. 21. f. 1. Rana.
Gesn. Ovip. 46. Rana aquatica sive innoxia.
Jonst. Quadr. 130. Rana aquatica.
In Sweden: Groda. In Småland: Frö. In Österbotten: Klåssa.
Occurs in spring in water bodies and ditches everywhere, except for possibly those of Lapland.
DESCR. Forefeet tetradactyl, 2nd and 4th digits shorter. Hindfeet hexadactyl, semi-palmate; digits 1 and 5 longer. Dorsum plain, distinct; on each side an elevated, pale line from tip of snout through upper eyelid towards tail. Temples black; upper jaw white marginally. Rest of the body entirely dark bluish grey tending to ash-grey marked with black blotches. Femora pale, with transverse, black blotches.

279. RANA *esculenta* [*Pelophylax esculentus* (Linnaeus, 1758). Eng. Edible frog, Sw. Ätlig groda], body angular, transversely gibbous; abdomen marginate.
Roes. Ran. 51. t. 13. Rana viridis aquatica.
Occurs in springs of Småland and elsewhere.

280. RANA *arborea* [*Hyla arborea* (Linnaeus, 1758). Eng. European tree frog, Sw. Lövgroda], body smooth, tubercular beneath with contiguous spots, feet divided; claws orbicularly dilated. *Amoen. Acad.* 1. p. 135.
Rana, green. *Fn.* 252.
Charl. Onom. 24. Ranunculus viridis.
Jonst. Quadr. 133. Ranunculus viridis.
Raj. Quadr. 251. Rana arborea sive Ranunculus viridis.
Aldr. Ovip. 434. Rana viridis.
Gesn. Ovip. 60. Ranunculus viridis sive Dryopetes.
Occurs in the garden of Toppeladugård Castle in Skåne.

Lacerta

281. LACERTA *palustris* [*Lissotriton vulgaris* (Linnaeus, 1758). Eng. Smooth newt or Common newt, Sw. Mindre vattensalamander],[301] tail lanceolate, divided into two parts; feet without spines, divided; forefeet tetradactyl. *Fn.* 256.

Raj. Quadr. 273. Salamandra aquatica.

Pet. Mus. 18. n. 111. Lacerta aquatica major mas sive verrucis albis adspersis, membranula serrata in dorso extante.

Lacerta aquatica major, faemina, sive verrucis albis adspersis, dorso plano.

Wurffbain. Salamandrol. 52. t. 2. f. 3. Salamandra aquatica.

Charl. Onom. 26. Salamandra aquatica.

Seb. Thes. 1. p. 141. t. 89. f. 4. 5. Lacerta americana.

In Dalarna: Skrot-abborre, Skratt-abborre.

In Persberg: Grufgrabbe.

Lives in ditches, fishponds, and still water bodies.

DESCR. Body fuscous. Abdomen verging on white or saffron yellow, with fuscous maculae. Snout blunt. Tail flattened, divided into two parts, with perpendicular, sharp edge. Dorsum and abdomen dentate in male. Genitals prominent in both sexes. Throat of male scattered with blackish blotches. Feet 4–5[302] divided, with shortish sides; hindfeet (in males) are equipped with membranous lateral margins.

282. LACERTA *aquatica* [*Lissotriton vulgaris* (Linnaeus, 1758). Eng. Smooth newt or Common newt, Sw. Mindre vattensalamander],[303] tail smooth, moderately rounded; feet without spines, divided; forefeet tetradactyl; hindfeet pentadactyl. *Fn.* 257.

Pet. Mus. 18. n. 113. Lacerta aquatica minor mas sive laevis lituris nigris adspersa.
Lacerta aquatica minor faemina, sive laevis flavescens.

Gesn. Ovip. 31. Lacertus aquaticus.

Lives along with the preceding species.

283. LACERTA *vulgaris* [*Lissotriton vulgaris* (Linnaeus, 1758). Eng. Smooth newt or Common newt, Sw. Mindre vattensalamander],[304] tail smooth, moderately rounded; feet having claws divided; forefeet tetradactyl; hindfeet pentadactyl. *Fn.* 254.

Raj. Quadr. 264. Lacertus vulgaris.

Petiv. Mus. 19. n. 116. Lacerta vulgaris velox.

Inhabits forests.

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[301] Nos. 281, 282, and 283 are the same species.

[302] See the com. to no. 33.

[303] See the com. to 281.

[304] See the com. to 281.

OBS. It is pale dark bluish grey. Fuscous line runs from head on each side along dorsum. Abdomen whitish yellow, sometimes punctate with black maculae. Tail rather smoothly rounded, the length of the body; no claws on foot.

284. LACERTA *agilis* [*Lacerta agilis* Linnaeus, 1758. Eng. Sand lizard, Sw. Sandödla], tail verticillate, longish, with pointed scales; collar distinctly decorated beneath with scales.

Lacerta, tail smoothly rounded, verticillate, the length of the body; feet pentadactyl, having claws. *Fn.* 1352.

β Lacertus viridis. *Aldr. Quadr.* 264.

γ Lacertus dorso punctis albis duplici serie.

In Sweden: Ödla. In Småland: Fyrfot.

Occurs ubiquitously.

DESCR. Variety β very rare. I have not seen it myself. Variety γ was once collected at the church of Jokkmokk in Luleå in Lapland and also once close to Uppsala.

II. SERPENTES

Coluber

285. COLUBER ♂ *chersea* [*Vipera berus* (Linnaeus, 1758). Eng. commonly called Red-brown viper, Sw. commonly called Rödbrun huggorm or Äsping],[305] 150 abdominal scutes; 34 subcaudal scales. *Act. Holm.* 1749, p. 246. t. 6. *It. Scan.* 413.

Anguis, small, red-brownish, called "Äsping". *Fn.* 261.

Inhabits willow thickets in Småland; rather rare.

OBS. The people of Småland talk about the ghastly and dreadful death this serpent causes. They say that it is found especially in the shrubs of willows. It inflicts wounds that are entirely lethal with a horrendous swelling of the body. I have myself seen that this serpent is small and not a span-long.[306] It was then of a red-brown or rusty brown colour, entirely different from the Caecilian serpent.[307]

286. COLUBER ♂ *berus* [*Vipera berus* (Linnaeus, 1758). Eng. European viper or European adder, Sw. Huggorm], 146 abdominal scutes; 39 caudal scales. *Fn.* 260. *Amoen. Acad.* 1. p. 113. n. 1.

Raj. Quadr. 285. Vipera.

Charl. Onom. 30. Vipera.

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[305] Nos. 285, 286, and 287 are the same. The trivial names for this species are Eng. European viper or European adder, Sw. Huggorm, respectively, just as is the case with nos. 286 and 287. Linnaeus's description relates to the young, red-brown specimens of this species, which he, however, considers to be a species of its own.

[306] Lat. *spithama* (from Gr. *spithamē*): the distance between the thumb and the little finger of the extended hand, approximately nine inches..

[307] See no. 289.

Pet. Mus. 17. n. 103. Vipera anglica fusca, dorso linea undulata nigricante conspicua.

Act. Ups. 1736. p. 11. n. 4. Anguis cinerea, macula dorsi fusca longitudinali dentata.

It. Oel. 23. Vipera.

In Sweden: Hugg-orm.

Occurs in Sweden; abundant. Its bite is very poisonous and sometimes lethal.

DESCR. Body ash-grey. Dorsum longitudinally governed by a linear, fuscous macula that is dentate on each side. On the sides of this macula, another bluish macula is interposed within each single denticle of the dorsal line. Venter purplish with a black spot at tip of every scale. Throat pale. Upper lip is white along the margin. Iris of the eyes flame-coloured; pupil black. Angle pointed, blue, distinguishing the longitudinal macula of dorsum from head.

287. COLUBER ♂ *prester* [*Vipera berus* (Linnaeus, 1758). Eng. commonly called Black viper, Sw. commonly called Svart huggorm],[308] 153 abdominal scutes; 32 caudal scales.

Pet. Mus. 17. n. 104. Vipera anglica nigricans.

In Småland: Bose.

Inhabits forests; rather rare.

DESCR. Body jet-black; scales in 21 rows, subcarinate, lanceolate; sides ovate and distinct; skin black; when contracting, reticulate, white, wrinkles appear between scales. Tail very short. The mouth is armed with a dreadful venom.

288. COLUBER *natrix* [*Natrix natrix* (Linnaeus, 1758). Eng. European grass snake, Sw. Vanlig snok], 170 abdominal scutes; 60 scales. *Fn.* 259. *Amoen. Acad.* 1. p. 116. n. 3. *It. Gotl.* 227. *W:Goth.* 146.

Raj. Quadr. 334. Natrix torquata.

Gesn. Serp. 43. Anguis.

Aldr. Serp. 287. Natrix torquata

Charl. Onom. 33. Natrix torquata.

Merr. Pin. 204. Anguis Coluber.

Pet. Mus. 17. n. 101. Anguis vulgaris fuscus, collo flavescente, ventre albis maculis distincto.

It. Gottl. 226. Serpens.

It. Oel. 6. 154. Coluber.

In Sweden: Tomt-orm. In Skåne: Snok. In Småland: Ring-orm.

DESCR. Body black. Sides of venter marked with white maculae or ventral scales laterally white. Throat white. Area around ears whitish yellow. Temples white, with transverse, black lines. Double row of teeth, equal. Dorsal scales marked medially with an elevated stria (the colour varies; in some the dorsal scales are ash-grey and the tip blackish here and there; in others all scales are black). Nostrils not prominent. In some, the area of ears convex, blackish with a large, white macula. Venter black, shining. Mouth unarmed.

[308] Cf. the com. to no. 285. Linnaeus here describes the black morph of the viper as a species of its own.

Anguis

289. ANGUIS *fragilis* [*Anguis fragilis* Linnaeus, 1758. Eng. commonly called Deaf adder or Slow-worm, Sw. Kopparödla], 135 abdominal and caudal scales. *Fn.* 258. *It. Gotl.* 306. 326.
Raj. Quadr. 289. Caecilia Typhlinus Graecis.
Charl. Onom. 31. Caecilia Typhlos.
Gesn. Serp. 60. Caecilia Typhlos Graecis.
Aldr. Serp. 243. Caecilia.
Merr. Pinn. 208. Typhlos Caecilia.
Pet. Mus. 17. n. 10. Caecilia anglica cinerea, squamis parvis mollibus compactis.
In Sweden: Ormslå, Koppar-orm.
Occurs in Sweden; fairly abundant.

III. NANTES

Petromyzon

290. PETROMYZON *fluviatilis* [*Lampetra fluviatilis* (Linnaeus, 1758). Eng. European river lamprey, Sw. Flodnejonöga],[309] posterior dorsal fin angular. *Fn.* 273.
Art. Gen. 64. *Syn.* 89. *Spec.* 99. Petromyzon unico ordine denticulorum minimorum in limbo oris, praeter inferiores, majores.
Rudb. Pisc. 2. p. Lampetra parva & fluviatilis.
Salv. Aqu. 63. Lampetra minor.
Gesn. Aqu. 598, 706. Lampetra parva & fluviatilis.
Aldr. Pisc. 581. Lampetra fluviatilis gesneri.
Charl. Pisc. 159. Lampetra fluviatilis.
Schonef. Ichth. 41. Lampetra fluviatilis.
Jonst. Pisc. t. 28. f. 10. Lampetra fluviatilis.
Will. Ichth. 104. Lampetra parva & fluviatilis.
Mars. Danub. 4. p. 2. t. f. 1. Lampetra fluviatilis.
In Sweden: Nein-öga. In Västerbotten: Nätting.
Occurs in rivers of Norrland, especially those of Västerbotten and Österbotten.

291. PETROMYZON *branchialis* [*Lampetra fluviatilis* (Linnaeus, 1758). Eng. European river lamprey, Sw. Flodnejonöga],[310] posterior dorsal fin linear; lip of mouth with a posterior lobate side. *Fn.* 274.
Art. Gen. 64. *Syn.* 90. Petromyzon corpore annuloso, appendicibus utrinque duabus in margine oris.

[309] See no. 291.
[310] See no. 290.

Will. Ichth. 107. Lampetra caeca sive oculis carens.
Raj. Pisc. 36. Lampetra caeca sive oculis carens.
In Sweden: Lin-åhl.
Occurs in River Dalälven; abundant in Dalarna. Often seen among flax since it is softened by the water.[311] Often found between the gills[312] of the cod 291.
DESCR. In thickness it scarcely surpasses the common earthworm,[313] in length barely a span-long.[314] Posterior dorsal fin is by no means dilated into an angle, as in the previous species, but it is moderately convex; no cirri at mouth, but the lips on each side hang down posteriorly, dilated into a lacinia or lobe. It is marked with infinite striae.

292. PETROMYZON *marinus* [*Petromyzon marinus* Linnaeus, 1758. Eng. Sea lamprey, Sw. Havsnejonöga], mouth inwardly papillose; posterior dorsal fin separated from tail.
Petromyzon, maculate, about 20 rows of teeth. *Art. Gen.* 61. *Syn.* 90.
Occurs in the sea, caught in Kalmar; rather rare. *Dr Wahlbom.*
Fleshiness of the gills[315] in the specimen I have seen.

Raja

293. RAJA *clavata* [*Raja clavata* Linnaeus, 1758. Eng. Thornback ray or Thornback skate, Sw. Knaggrocka], aculeate; teeth tuberculous; abdominal cartilage transverse. *Art. Gen.* 71. *Syn.* 99. *Spec.* 103. *Fn.* 268. *It. W:Goth.* 175.*
Rond. Pisc. 353. Raja clavata.
Salv. Aquat. 149. Raja.
Gesn. Aqu. 795. Raja clavata.
Aldr. Pisc. 460. Raja clavata rondeletii.
Jonst. Pisc. t. 11. f. 2. Raja clavata.
Charl. Pisc. 130. Raja clavata.
Schonef. Ichth 57. Raja.
Bell. Aqu. 80. Raja.
Will. Ichth. 74. Raja clavata.
Raj. Pisc. 26. Raja clavata.
Dal. Pharm. 411. Raja.
In Sweden: Råcka.
Occurs ubiquitously in the West Sea. Found in fishponds. *It. W:goth.* 193.

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[311] In Sweden "linål" (Eng. "flax eel") is a term for the larval stage of the European river lamprey, since it often occurs in water where the decaying of flax takes place.
[312] See *Fn. Su* (1761), *Errata*, p. 560.
[313] See no. 2073.
[314] See the com. to no. 285.
[315] Lat. *brachii* should be written as *branchiae.*

Chimaera

294. CHIMAERA *monstrosa* [*Chimaera monstrosa* Linnaeus, 1758. Eng. Rabbit fish or Ratfish, Sw. Havsmus], nose coated with folds beneath.
Chimaera. Mus. Adolp. Fr. 1. p. 53. t. 25.
Clus. Exot. 136. t. 137. Genus Galei.
Occurs in the Norwegian Ocean; rather rare.

Squalus

295. SQUALUS *acanthias* [*Squalus acanthias* Linnaeus, 1758. Eng. Piked dogfish or Spiny dogfish, Sw. Pigghaj], no anal fin; body rather smoothly rounded. *Art. Gen.* 66. *Syn.* 94. *Spec.* 102. *Fn.* 269. *It. Wgoth.* 174.*
Rond. Pisc. 1. p. 373. Galeus acanthias.
Salv. Aquat. 135. t. 136. Mustelus spinax.
Gesn. Aquat. 607. Galeus acanthias.
Aldr. Pisc. 399. Galeus acanthias sive spinax.
Jonst. Pisc. 27. t. 8. f. 5. Galeus acanthias.
Charl. Pisc. 128. Galeus acanthias.
Schonef. Ichth. 29. Canis marinus aut Galeus.
Bell. Aquat. 69. Mustelus spinax.
Will. Ichth. 56. Galeus acanthias sive spinax.
Raj. Pisc. 21. Galeus acanthias sive spinax.
In Sweden: Haj.
Occurs in the West Sea.

296. SQUALUS *spinax* [*Etmopterus spinax* (Linnaeus, 1758). Eng. Velvet belly, Sw. Blåkäxa], no anal fin; dorsum spinose; nostrils terminal. *Art. Gen.* 67. *Syn.* 95.
Will. Ichth. 57. Galeus acanthias sive spinax fuscus.
Raj. Pisc. 21. Galeus idem.
Occurs in the Norwegian Ocean. *Martin*: "When young it is still weakly villous."

297. SQUALUS *pristis* [*Pristis pristis* (Linnaeus, 1758). Eng. Largetooth sawfish or Common sawfish, Sw. Sydlig sågfisk],[316] snout lentiform; bone flat; on each side dentate. *Art. Gen.* 66. *Syn.* 93. *Fn.* 270.
Rond. Pisc. 1. p. 487. Pristis.
Gesn. Aquat. 930. Serra marina.
Aldr. Cet. 693. Pristis sive Serra.
Clus. Exot. 136. Pristis sive Serra piscis.
Charl. Pisc. 168. Pristis Serra.

[316] A tropical or subtropical fish not occurring in Sweden.

Olear. Mus. 41. t. 25. f. 1. Pristis sive Serra.
Will. Ichth. 61. Pristis sive Serra piscis.
Raj. Pisc. 23. Pristis sive Serra piscis.
In Sweden: Sågfisk.
Occurs in the West Sea.

Lophius

298. LOPHIUS *piscatorius* [*Lophius piscatorius* Linnaeus, 1758. Eng. Angler, Sw. Marulk], flat; head rounded.
Lophius, mouth with a thin, tendril-like appendage. *Art. Gen.* 63. *Syn.* 87. *It. Scan.* 327.*
Rana piscatrix. Charl. Onom. 199. t. 201. *Olear. Mus.* 37. t. 23. f. 4.
Occurs in the Western Ocean, at Kullen.

Acipenser

299. ACIPENSER *sturio* [*Acipenser sturio* Linnaeus, 1758. Eng. European sea sturgeon, Sw. Europeisk stör], four cirri; eleven dorsal scales. *Mus. Adolp. Fr.* 1. p. 54. t. 18. f. 2.
Acipenser, body covered with spiny tubercles. *Art. Gen.* 65. *Syn.* 91. *Fn.* 271.[317] *It. Scan.* 187.*
Rond. Pisc. 1. p. 410. Acipenser.
Gesn. Aqu. 2. Acipenser.
Aldr. Pisc. 517. 526. Sturio.
Jonst. Pisc. 106. t. 23. f. 89. Sturio.
Schonef. Ichth. 9. Acipenser.
Charl. Pisc. 152. Sturio.
Salv. Aquat. 113. t. 102. Sturio sive Silurus.
Will. Ichth. 239. Sturio.
Raj. Pisc. 112. Sturio.
In Sweden: Stör.
Occurs both in the East Sea and the West Sea; rather rare.

300. ACIPENSER *ruthenus* [*Acipenser ruthenus* Linnaeus, 1751. Eng. Sterlet sturgeon, Sw. Sterlett], four cirri; fifteen dorsal scales. *Mus. Adolph. Fr.* 1. p. 54. t. 27. f. 2. & t. 28. f. 1.
Acipenser, five longitudinal rows of osseous scales, with fifteen medial ossicles. *Fn.* 272.
Klein. Miss. 4. p. 13. t. 1. & forte Sturio alter, gedanensis ejusdem.

[317] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

In Sweden: Sterlett.

Occurs in Lake Mälaren. His Royal Majesty King Adolf Fredrik had the fish introduced in this lake when it had been brought from Russia.

OBS. There are 5 rows of ossicles in the skin, but only the middle row, which consists of about 15 small ossicles, is angular, the individual scale of which, surely, resembles a saddle-shaped cavity, rising along the middle of the back along its entire length in a delicate and cutting process, terminating posteriorly in a hook. The lateral ossicles, as well as the ventral rhomboids, are also almost flat. Every lateral row contains almost 60 ossicles; every ventral one 10 or 11. *J. G. Gmelin.*

Class IV

PISCES

I. APODES

Muraena

301. MURAENA *anguilla* [*Anguilla anguilla* (Linnaeus, 1758). Eng. European eel, Sw. Ål], lower jaw shorter; body unicoloured. *Art. Gen.* 24. *Syn.* 39. *Spec.* 66. *Fn.* 290.

Rond. Pisc. 2. p. 198. Anguilla.
Salv. Pisc. 66. Anguilla.
Gesn. Pisc. 40. Anguilla.
Aldr. Ichth. 544. Anguilla.
Jonst. Pisc. 114. t. 24. f. 7. Anguilla.
Schonef. Ichth. 14. Anguilla.
Charl. Onom. 153. Anguilla.
Will. Ichth. 109. Anguilla.
Raj. Pisc. 37. Anguilla.
Mars. Danub. 4. p. 4. t. 1. f. 3. Anguilla.
In Sweden: Åhl.
Occurs ubiquitously in lakes and rivers, most abundantly in Skåne. 83, 127. Nocturnal. *It. Scan.* 383, 326. Pond fish. *It. Goth.* 340.

Ammodytes

302. AMMODYTES *tobianus* [*Ammodytes tobianus* Linnaeus, 1758. Eng. Lesser sandeel, Sw. Kusttobis]. *Art. Gen.* 16. *Syn.* 29. *Spec.* 55. *Fn.* 303. *It. Scan.* 142. *It. Oel.* 87.

Salv. Pisc. 70. t. 69. Piscis Sandilz dictus.
Gesn. Paral. 3. Ammodytes piscis.
Aldr. Ichth. 252. Sandilz anglorum.
Jonst. Pisc. t. 21. f. 1. Sandilz anglorum.
Schonef. Ichth. 14. Tobianus.
Charl. Onom. 146. Anguilla de arena.
Will. Ichth. 113. Ammodytes gesneri.
Raj. Pisc. 38. Ammodytes gesneri.
In Sweden: Tobis.
Occurs in the Baltic Sea, abundantly at the southern angle of Öland, and at the city of Simrishamn in Skåne.

OBS. I have counted more rays of the fins than the ichthyologist,[318] sc. 60 dorsal; 15 pectoral; 32 anal; 14 caudal ones.

Xiphias

303. XIPHIAS *gladius* [*Xiphias gladius* Linnaeus, 1758. Eng. Swordfish or Broadbill, Sw. Svärdfisk]. *Art. Gen.* 30. *Syn.* 47. *Fn.* 288.
Rond. Pisc. 251. Xiphias.
Gesn. Pisc. 379. f. 1049. Xiphias sive Gladius piscis.
Aldr. Ichth. 332. Gladius.
Jonst. Pisc. l. 4. f. 2. Xiphias sive Gladius.
Salv. Pisc. 127. t. 126. Gladius.
Charl. Onom. 124. Xiphias.
Schonef. Ichth. 135. Gladius 1. Xiphias.
Olear. Mus. 40. t. 24. f. 3. Gladius.
Will. Ichth. 161. Xiphias piscis, latinis Gladius.
Raj. Pisc. 52. Xiphias piscis, latinis Gladius.
In Sweden: Swerd-fisk.
Occurs in the Baltic Sea; rather rare.

II. JUGULARES

Callionymus

304. CALLIONYMUS *lyra* [*Callionymus lyra* Linnaeus, 1758. Eng. Common dragonet, Sw. Randig sjökock], rays of first dorsal fin the length of the body.
Trachinus, upper jaw longer; first dorsal fin very tall. *Fn.* 283.
Gron. Act. Upsal. 1740. p. 121. t. 8. Cottus ossiculo pinnae dorsalis primo longitudine corporis.
Pet. Gaz. t. 22. f. 2. Lyra harvicensis, pinna dorsali longissima, maculis caerulescentibus.
Occurs in the Strait of Öresund; more abundant in Norway.

Trachinus

305. TRACHINUS *draco* [*Trachinus draco* Linnaeus, 1758. Eng. Greater weever, Sw. Fjärsing]. *It. Scan.* 325.*
Trachinus, lower jaw longer, destitute of cirri. *Art. Gen.* 42. *Syn.* 70. *Fn.* 282.
Salv. Pisc. 71. Draco marinus 1. Draco sive Araneus piscis.
Rond. Pisc. 301. Draco marinus sive Araneus.
Gesn. Pisc. 77. Draco sive Araneus plinii.

[318] I.e. Peter Artedi.

Aldr. Ichth. 258. Araneus aldrovandi alter.
Schonef. Ichth. 16. Araneus vel Draco marinus.
Charl. Onom. 146. Draco.
Act. Haffn. 3. p. 154. Piscis Fösing.
Will. Ichth. 288. Draco sive Araneus plinii.
Raj. Pisc. 91. Draco sive Araneus plinii.
In Sweden: Färsing, Fiässing.
Occurs in the West Sea.
[DESCR.] The sharp points of the dorsal fin injure by means of a venomous puncture.

Gadus

306. GADUS *aeglefinus* [*Melanogrammus aeglefinus* (Linnaeus, 1758). Eng. Haddock, Sw. Kolja],[319] tripterygian, cirrate, verging on white; upper jaw longer; tail bilobed. *Art. Gen.* 20. *Syn.* 36. *Fn.* 297. *It. Scan.* 325.
Art. Spec. 64. Gadus cirratus albicans, maxilla superiore longiore, cauda subbifida.
Charl. Onom. 121. Callaris, Galerida.
Gesn. Pisc. 86. Eglefinus tertia asellorum species.
Aldr. Ichth. 282. Asellus major.
Schonef. Ichth. 16. Asellus minor.
Will. Ichth. 170. Onos sive asinus antiquorum.
Raj. Pisc. 55. Onos sive asinus antiquorum.
In Sweden: Kolja. In Holland: Schelvis. In Norway: Hyss.
Occurs in the West Sea.
[DESCR.] Lateral line fuscous and a fuscous macula behind and above pectoral fins.

307. GADUS *callarias* [*Gadus morhua* Linnaeus, 1758. Eng. Atlantic cod, Sw. Torsk],[320] tripterygian, cirrate, varied; upper jaw longer; tail equal. *Art. Gen.* 20. *Syn.* 35. *Spec.* 63. *Fn.* 293. *It. Scan.* 221.*
Jonst. Pisc. t. 46. f. 4. Asellus varius.
Schonef. Ichth. 19. Asellus varius & striatus.
Will. Ichth. 172. Asellus varius & striatus.
Raj. Pisc. 57. Asellus varius & striatus.
In Sweden: Torsk. *It. Oel.* 87.
Occurs ubiquitously in the sea, both in the Baltic Sea and the West Sea; abundant around Gotland and Öland.
DESCR. Dorsum ash-grey, with grey maculae; abdomen white with very small black spots.
Fin dorsal I. rays 14. II. 19. III. 17.
Fin anal I. rays 20. II. 16.
Fin ventral. rays 6; pectoral 17.

[319] See no. 307.
[320] See no. 306.

Beneath the tip of the lower jaw the cirrus is lumbriciform, awl-shaped, flexible.

308. GADUS *morrhua*[321] [*Gadus morhua* Linnaeus, 1758. Eng. Atlantic cod, Sw. Torsk], tripterygian, cirrate; tail subequal; first anal ray spiny. *Art. syn.* 35. *Fn.* 295. *It. Wgoth.* 177.*
Rond. Pisc. 280. Molua.
Gesn. Pisc. 88. 102. Mollua vel Morrhua altera minor.
Aldr. Ichth. 289. Morrhua sive Molua altera.
Jonst. Pisc. t. 2. f. 1. Molua, Morrhua.
Schonef. Ichth. 18. Asellus major.
Charl. Onom. 121. Asellus major.
Will. Ichth. 165. Asellus major vulgaris, belgis Cabliau.
Raj. Pisc. 53. Asellus major vulgaris
In Sweden: Cabbliå.
Occurs in the West Sea.

309. GADUS *virens* [*Pollachius virens* (Linnaeus, 1758). Eng. Pollock or Coalfish, Sw. Gråsej], tripterygian, without barbel; body greenish. *Fn.* 296.
Schonef. Ichth. 20. t. 2. Asellus virescens.
In Norway: Sey. In Bohusland: Gråsik.
Occurs most abundantly in the Atlantic Ocean, and it very eagerly snatches a hook even without a barb.
DESCR. Fish the size of a perch, glabrous. Body black, greenish; otherwise entirely silvery white, soft and fat, with the minutest scales. First dorsal fin with 13 rays, second 20, third 19. First anal fin with 24 rays, second 20, ventral 5, pectoral 17.

310. GADUS *merlangus* [*Merlangius merlangus* (Linnaeus, 1758). Eng. Whiting or Merling, Sw. Vitling], tripterygian, without barbel, white; upper jaw longer. *Art. Gen.* 19. *Syn.* 34. *Spec.* 62. *Fn.* 294. *It. Scan.* 316. *Wgoth.* 176.
Gesn. Pisc. 85. 99. Secunda asellorum species, Merlanas.
Aldr. Ichth. 287. Asellus minor alter.
Jonst. Pisc. t. 2. f. 3. Asellus mollis.
Schonef. Ichth. 78. Asellus candidus primus.
Charl. Onom. 121. Asellus minor & mollis.
Will. Ichth. 170. Asellus mollis major sive albus.
In Sweden: Hwitling, Widding. In Skåne: Hwitling. In Holland: Molenaar.
Occurs in the Norwegian Sea.

[321] I.e. orthographic inadvertence.

311. GADUS *barbatus* [*Trisopterus luscus* (Linnaeus, 1758). Eng. Bib, Pout whiting, Pouting or Pout, Sw. Skäggtorsk], tripterygian, cirrate; lower jaw with seven spots on each side.
Gadus, dorsum tripterygian; mouth cirrate; anal fin with 30 ossicles. *Art. gen.* 21. *Syn* 37. *Spec.* 65.
Gadus, with an excavated line behind head. *It. Wgoth.* 177. 178.
In Sweden: Små-Torsk. In Holland: Bolk.
Occurs in the ocean.

312. GADUS *pollachius* [*Pollachius pollachius* (Linnaeus, 1758). Eng. Pollack, Atlantic or European pollock, Sw. Lyrtorsk], tripterygian, without barbel; lower jaw longer; lateral line curved. *Art. Gen.* 20. *Syn.* 35. *It. Wgoth.* 177.*
In Sweden: Lyrblek or Zaj.
Occurs in the ocean.

313. GADUS *molva* [*Molva molva* (Linnaeus, 1758). Eng. Common ling, Drizzie, Ling cod or Molva, Sw. Långa], dipterygian, cirrate; upper jaw longer. *Art. Gen.* 22. *Syn.* 36. *It. Wgoth.* 177.*
In Sweden: Långa.
Occurs in the ocean.

314. GADUS *merluccius* [*Merluccius merluccius* (Linnaeus, 1758). Eng. European hake, Sw. Kummel], dipterygian, cirrate; lower jaw longer. *Art. Gen.* 22. *Syn.* 36.
Occurs in the Western Ocean.
[DESCR.] Tail almost entire. Posterior part of dorsal fin longer, with 15 rays. Posterior part of anal fin longer, with 23 rays.

315. GADUS *lota* [*Lota lota* (Linnaeus, 1758). Eng. Burbot or Eelpout, Sw. Lake], dipterygian, cirrate; jaws equal. *Art. Gen.* 22. *Syn.* 38. *Fn.* 292.
Art. Spec. 107. Silurus cirro unico in mento.
Rond. Pisc. 2. p. 164. Lota.
Gesn. Pisc. 599. Lota Gallis dicta Stinsia sive Botarissa.
Aldr. Ichth. 618. Lota rondeletii.
577. Mustela fluviatilis & lacustris.
Jonst. Pisc. 146. t. 28. f. 6. Mustela fluviatilis & lacustris.
168. t. 29. f. 10. Lota gallorum.
Salv. Pisc. 213. Triscus Bortatriae.
Schonef. Ichth. 49. Mustela fluviatilis.
Charl. Onom. 159. Mustela fluviatilis.
Will. Ichth. 125. Mustela fluviatilis. Lota.

Raj. Pisc. 67. Mustela fluviatilis.
68. Lota.
In Sweden: Lake.
Occurs in the lakes of Dalarna (Siljan), where it is the largest and most superior fish, furthermore in other major lakes.

Blennius

316. BLENNIUS *raninus* [*Raniceps raninus* (Linnaeus, 1758). Eng. Tadpole fish or Lesser forkbeard, Sw. Paddtorsk], ventral fins with six rays beneath; cirrus gular. *Syst. nat.* 10. p. 258.
In Sweden: Åhlkussa.
Occurs in lakes in southern Sweden. When storms begin, it swims to the shores, whereas other fish withdraw. Detestable to most people and not edible.

317. BLENNIUS *viviparus* [*Zoarces viviparus* (Linnaeus, 1758). Eng. Viviporous blenny or Viviporous eelpout, Sw. Tånglake], mouth with two tentacles. *Mus. Ad. Frid.* 69.
Blennius, head and dorsum dusky whitish yellow with black blotches; anal fin light yellow. *Art. Syn.* 45.
In Sweden: Tånglake. *Act. Holm.* 1748. p. 32. t. 2.
Occurs in the Gulf of Bothnia.

318. BLENNIUS *gunellus* [*Pholis gunnellus* (Linnaeus, 1758). Eng. Rock gunnel or Butterfish, Sw. Tejstefisk],[322] dorsal fin with 10 small, black eyes. *Mus. Ad. Fr.* 69.
Blennius, 10 black maculae; white borders on each side of dorsal fin. *Art. Gen.* 37. *Syn.* 45.
Occurs in the ocean.

Ophidion

319. OPHIDION *imberbe* [*Pholis gunnellus* (Linnaeus, 1758). Eng. Rock gunnel or Butterfish, Sw. Tejstefisk],[323] jaws without barbel; tail weakly blunt.
Ophidion, lacking cirri. *Art. Gen.* 25. *Syn.* 42. *Act. Stockh.* 1744. p. 129. *Fn.* 289.
Schonef. Ichth. 53. Ophidion flavum & imberbe.
Will. Ichth. 113. *Raj. Pisc.* 39. Ophidion alterum flavum & imberbe.
Occurs in the Baltic Sea and in the ocean. Often found among shells of oysters.

[322] See no. 319.
[323] See no. 318.

OBS. The appearance of a European eel.[324] Branchiostegal membrane with 5 rays. Dorsal fin with 79 rays, extended from head to tail; some black maculae whitish marginally, equal space in-between, aculeate. Pectoral fins 11. Ventral fins none. Anal fins 41. Caudal fins about 18 or 20. This fish could be referred to the genus *Blennius*, it is related to the previous species through the ten maculae.

III. THORACICI

Cyclopterus

320. CYCLOPTERUS *lumpus* [*Cyclopterus lumpus* Linnaeus, 1758. Eng. Lumpsucker or Lumpfish, Sw. Sjurygg], body angular, with osseous scales. *Mus. Ad. Fr.* 57.
Cyclopterus. Art. Gen. 62. *Syn.* 87. *Fn.* 275. *It. Scan.* 188.*
Gesn. Paral. 1284. Lumpus anglorum.
Aldr. Pisc. 479. Lumpus anglorum.
Jonst. Pisc. 42. t. 13. f. 1. Lumpus anglorum.
Charl. Pisc. 131. Lumpus anglorum.
Schonef. Ichth. 41. Lepus marinus nostras, Orbis species.
Will. Ichth. 208. Lumpus anglorum.
Raj. Pisc. 77. Lumpus anglorum.
It. Öland. 110. Cyclopterus sive Lumpus.
In Sweden: Sjurygg-Fisk. In Skåne: Stenbit. In Bohuslän: Quabbsu.
Occurs in the Gulf of Bothnia; abundant in Malmö.
OBS. It is commonly used as a powder against the tertian fever.[325]

Cottus

321. COTTUS *quadricornis* [*Myoxocephalus quadricornis* (Linnaeus, 1758). Eng. Fourhorn sculpin, Sw. Hornsimpa], four osseous warts on head.
Syst. nat. 6. p. 43. t. 4. f. 3. *Mus. Ad. Fr.* 70. t. 32. f. 4. *Fn.* 278.
Cottus, scabrous; four horn-shaped tubes medially on head. *Art. Gen.* 48. *Spec.* 84.
In Sweden: Hornsimpa.
Occurs around Åland and elsewhere in the Baltic Sea and the Gulf of Bothnia.

322. COTTUS *gobio* [*Cottus gobio* Linnaeus, 1758. Eng. Bullhead, Freshwater sculpin or Miller's thumb, Sw. Stensimpa], smooth; head with two spines. *Art. Gen.* 48. *Syn.* 76. *Spec.* 82. *Fn.* 279.
Rondel. Pisc. 2. p. 202. Cottus.
Gesn. Pisc. 401. Cottus fluvialis sive capitatus.
Aldr. Ichth. 613. Cottus fluvialis sive capitatus.
Jonst. Pisc. t. 29. f. 11. Gobius capitatus.

[324] See no. 301.

[325] I.e. *Plasmodium vivax* malaria.

Charl. Onom. 157. Gobio capitatus.
Will. Ichth. 137. t. H. 3. f. 3. (*opt*). Gobio fluviatilis capitatus.
Raj. Pisc. 76. Gobius fluviatilis.
In Sweden: Sten-Simpa. In Falun: Slagg-Simpa.
Occurs in the Baltic Sea and in the small rivers of Falun, and in the Uppsala River.
DESCR. The fish "Slagg-Simpa", which is abundant in Falun, scarcely differs from this species; it is truly a small fish of Falun. Body two digits long, ash-grey, with various fuscous fasciae. Frontal dorsal fin with 7 rays; posterior 18; pectoral 14; ventral 4; anal 13; caudal 10.

323. COTTUS *scorpius* [*Myoxocephalus scorpius* (Linnaeus, 1758). Eng. Shorthorn sculpin, Sw. Rötsimpa], many spines on head; upper jaw somewhat longer. *Art. Gen.* 49. *Syn.* 77. *Spec.* 86. *Mus. Ad. Fr.* 70. *It. Scan.* 325. *Fn.* 280.
Aldr. Ichth. 201. Scorpaenae bellonii similis.
Jonst. Pisc. t. 18. f. 12. Scorpaenae bellonii similis.
t. 47. f. 4. 5. Scorpius marinus.
Schonef. Ichth. 67. Scorpio marinus 1. Scorpio nostras.
Will. Ichth. 138. Scorpaenae bellonii similis.
Raj. Pisc. 145. Scorpaenae bellonii similis.
In Sweden: Röt-Simpa, Skrabba, Skiälryta. In Skåne: Ulka. In Gothenburg: Pinulka.
Occurs in the West Sea; abundant.

324. COTTUS *cataphractus* [*Agonus cataphractus* (Linnaeus, 1758). Eng. Armed bullhead, Pogge or Hooknose, Sw. Skäggsimpa], loricate; snout with two warts, bifid; head cirrose beneath. *Mus. Ad. Fr.* 70.
Art. Gen. 49. *Syn.* 77. *Spec.* 87. Sculpin fish with many cirri; body octagonal.
In Bohuslän: Botn-mus.
Occurs in the ocean at Bohus.

Pleuronectes

325. PLEURONECTES *maximus* [*Scophthalmus maximus* (Linnaeus, 1758). Eng. Turbot, Sw. Piggvar], left-eyed; body asperous. *Art. Gen.* 18. *Syn.* 32. *Fn.* 298.[326]
Will. Ichth. 94. Rhombus maximus alter non squamosus.
Raj. Pisc. 31. Rhombus maximus asper non squamosus.
It. Gotl. 208. Butta.
In Sweden: Butta.
Occurs in the Baltic Sea.
DESCR. Eyes placed on the left side; skin asperous above, ash-grey, without maculae. Branchiostegal membrane with 7 rays (definitely not 6), dorsal fin 64, anal fin 48, ventral fins 6, and pectoral fins 11, but caudal fin 16. *It. Goth.* 186.

[326] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

326. PLEURONECTES *solea* [*Solea solea* (Linnaeus, 1758). Eng. Common sole, Sw. Sjötunga], right-eyed; body oblong, asperous; upper jaw longer.
Pleuronectes, oblong, upper jaw longer; scales asperous on each side. *Art. Gen.* 18. *Syn.* 32. *Fn.* 299. *It. W:goth.* 178.
Rond. Pisc. 320. Buglossus.
Gesn. Pisc. 666. 785. Buglossus vel Solea.
Aldr. Ichth. 235. Buglossa vel Solea.
Jonst. Pisc. 82. Solea.
Charl. Onom. 145. Solea.
Schonef. Ichth. 63. Solea vel Buglossus.
Will. Ichth. 100. Buglossus seu Solea.
Raj. Pisc. 31. Buglossus vel Solea.
In Sweden: Tunga, Sola.
Occurs in the West Sea.

327. PLEURONECTES *flesus* [*Platichthys flesus* (Linnaeus, 1758). Eng. European flounder, Sw. Skrubbskädda], right-eyed; lateral line asperous; spines on fins. *Art. Gen.* 17. *Syn.* 31. *Fn.* 300. *It. Scan.* 326.
Art. Spec. 39. Pleuronectes linea laterali aspera, spinulis ad radices pinnarum a latere oculato.
Rond. Pisc. 319. Passeris tertia species.
Gesn. Pisc. 666. 782. 788. Passeris tertia species.
Charl. Onom. 145. Passer niger.
Will. Ichth. 98. Passer fluviatilis vulgo Flesus.
Raj. Pisc. 31. Passer fluviatilis vulgo Flesus.
In Sweden: Flundra. In Bohuslän: Slättskädda.
Occurs in the West Sea.

328. PLEURONECTES *platessa* [*Pleuronectes platessa* Linnaeus, 1758. Eng. European plaice, Sw. Rödspätta], right-eyed; body glabrous; six tubercles on head.
Pleuronectes, glabrous on each side; six tubercles on right side of head. *Art. Spec.* 57. *Fn.* 301. *It. W:goth.* 179. *It. Scan.* 326.
Art. Gen. 17. *Syn.* 30. Pleuronectes oculis & tuberculis sex a dextra capitis, lateribus glabris, spina ad anum.
Rond. Pisc. 316. Platessa.
Gesn. Pisc. 664. 670. Platessa.
Aldr. Ichth. 243. Passer laevis.
Jonst. Pisc. t. 22. Passer laevis.
Schonef. Ichth. 61. Platessa.
Charl. Onom. 49. Platessa laevis.

Will. Ichth. 96. Platessa.
Raj. Pisc. 31. Platessa.
In Sweden: Skålla. In Bohuslän: Rödsputta.
Occurs in the West Sea.

329. PLEURONECTES *hippoglossus* [*Hippoglossus hippoglossus* (Linnaeus, 1758). Eng. Atlantic halibut, Sw. Hälleflundra], right-eyed; body entirely glabrous. *Art. Gen.* 17. *Syn.* 31. *Fn.* 302.
Rond. Pisc. 325. Hippoglossus.
Gesn. Pisc. 607. 787. Hippoglossus.
Aldr. Ichth. 238. Hippoglossus ab aldrovando observatus.
Charl. Onom. 146. Passer britannicus.
Schonef. Ichth. 62. Passerum genus majus.
Will. Ichth. 99. Hippoglossus.
Raj. Pisc. 33. Hippoglossus.
In Sweden: Hälg-flundra.
OBS. Except for these, we saw, if I am not mistaken, two other species (see *It. Gotland.* 186) in Gotland: Left-eyed, with 59 dorsal rays; 12 pectoral, 6 ventral, 38 anal, and 16 caudal. Right-eyed, with 57 dorsal rays, 9 pectoral, 6 ventral, 39 anal, and 16 caudal.
The first bigger one was without maculae, scabrous; the other had rusty brown maculae. Both species were very common there. They can scarcely be considered distinct species.

Labrus

330. LABRUS *suillus* [C*tenolabrus rupestris* (Linnaeus, 1758). Eng. Goldsinny wrasse, Sw. Stensnultra], dorsal fin ramentaceous; black macula above tail; nine dorsal spines. *It. Wgoth.* 179.
In Bohuslän: Bergsnyltra.
Occurs in the ocean near Bohus.
[DESCR.] Lateral line curved in front of tail.

331. LABRUS *exsoletus*[327] [C*entrolabrus exoletus* (Linnaeus, 1758). Eng. Rock cook or Small-mouthed wrasse, Sw. Grässnultra], dorsal fin ramentaceous; body with blue lines; anal fin with five spines.
In Bohuslän: Blåståhl.
Occurs in the ocean towards Gothenburg. *Joh. Cederfeldt.*

[327] I.e. orthographic inadvertence.

Perca

332. PERCA *fluviatilis* [*Perca fluviatilis* Linnaeus, 1758. Eng. River perch, European perch or Eurasian river perch, Sw. Abborre], dorsal fins distinct, second one with sixteen rays. *Fn.* 284.

Art. Gen. 39. *Syn.* 66. *Spec.* 74. Perca lineis utrinque sex nigris, pinnis ventralibus rubris.

Rond. Pisc. 2. p. 196. Perca fluviatilis.

Salv. Pisc. 226. f. 224. Perca fluviatilis.

Gesn. Pisc. 698. Perca fluviatilis.

Jonst. Pisc. 146. t. 28. L. 29. f. 8. Perca major.

Schonef. Ichth. 55. Perca major.

Charl. Onom. 161. Perca major.

Aldr. Ichth. 622. Perca fluviatilis major.

In Sweden: Abborre.

Occurs in the sea, lakes, and rivers; a very common fish. In the ponds of Falun, there is a singular variety of it, which is often found with a curved spine and an entirely gibbous dorsum.

333. PERCA *marina* [*Serranus scriba* (Linnaeus, 1758). Eng. Lettered perch or Painted comber, Sw. commonly called Skriftabborre], dorsal fins united; 15 rays, spinose, 14 ones without spines; body variegated with blotches.

Perca, with 7 transverse, black lines on each side; ductus of a red lead and blue colour on head and anterior part of venter. *Ars. Gen.* 40. *Syn.* 68.

In Norway: Uer or Roeder.

Occurs in the Norwegian Ocean; abundant.[328]

DESCR. Branchiostegal membrane with 7 rays.

334. PERCA *lucioperca* [*Sander lucioperca* (Linnaeus, 1758). Eng. Pikeperch or Zander, Sw. Gös], dorsal fins distinct, second one with twenty-three rays. *Fn.* 285.

Art. Gen. 39. *Syn.* 62. *Spec.* 76. Perca pallide maculosa, duobus dentibus maxillaribus utrinque majoribus.

Gesn. Paralip. 28. 1288. Lucio Perca.

Aldr. Ichth. 667. Schilus sive Nagemulus germanorum.

Jonst. Pisc. 174. t. 30. f. 15. Schilus.

Schonef. Ichth. 43. Lucioperca.

Charlet. Onom. 164. Schilus. Nagemulus.

Will. Ichth. 293. Lucioperca.

Raj. Pisc. 98. Lucio-Perca.

[328] It does not occur in Swedish waters, nor along Norway, but in the eastern Atlantic from Biscay to Mauritania as well as in the Mediterranean and Black Sea.

Mars. Danub. 4. p. 9. t. 22. f. 2. Lucioperca.
In Sweden: Giös.
Occurs in major lakes of Uppland, Västmanland, Södermanland, etc.

335. PERCA *cernua* [*Gymnocephalus cernuus* (Linnaeus, 1758). Eng. Blacktail or Ruffe, Sw. Gärs], dorsal fins coadunate, with twenty-seven rays, of which fifteen aculeate; tail bifid. *Fn.* 286.
Art. Gen. 40. *Syn.* 68. *Spec.* 77. Perca dorso monopterygio, capite cavernoso.
Gesn. Pisc. 191. 226. Cernua fluvialtilis.
Aldr. Ichth. 624. Perca fluviatilis minor.
Jonst. Pisc. t. 28. f. Perca fluviatilis minor.
Charl. Onom. 161. 158. Perca minor, quibus Cernua.
Scon. Ichth. 56. Perca minor, Porcus, Procellus, Cernua nonnullorum.
Will. Ichth. 334. Cernua fluviatilis.
Raj. Pisc. 144. Cernua fluviatilis.
In Sweden: Giers. In Falun: Snorgers.
Occurs ubiquitously in Swedish lakes.

Gasterosteus

336. GASTEROSTEUS *aculeatus* [*Gasterosteus aculeatus* Linnaeus, 1758. Eng. Three-spined stickleback, Sw. Storspigg], three dorsal fins. *Art. Gen.* 52. *Syn.* 80. *Spec.* 26 *It. W:goth.* 239. *Fn.* 276.
Rond. Pisc. 2. p. 206. Pisciculi aculeati prius genus.
Gesn. Pisc. 8. Pisciculus aculeatus: primum genus.
Aldr. Ichth. 628. Pungitius piscis.
Jonst. Pisc. 146. t. 28. *f. dexter.* Pungitius alberti.
Will. Ichth. 341. Pisciculus aculeatus.
Raj. Pisc. 145. Pisciculus aculeatus.
In Sweden: Spigg. In Värmland: Hornfisk.
Occurs in the lakes of Uppland.

337. GASTEROSTEUS *pungitius* [*Pungitius pungitius* (Linnaeus, 1758). Eng. Barnstickle or Nine-spined stickleback, Sw. Småspigg], ten dorsal spines. *Art. Gen.* 52. *Syn.* 80. *Spec.* 97. *Fn.* 277.
Rond. Pisc. 2. p. 206. Pisciculi aculeati alterum genus.
Gesn. Pisc. 8. Pisciculi aculeati alterum genus.
Aldr. Ichth. 628. Alterum genus Pungitii.
Jonst. Pisc. t. 22. *f. sinist.* alterum genus Pungitii.
Will. Ichth. 342. Piscis aculeatus minor.
Raj. Pisc. 145. Pisciculus aculeatus minor.

In Sweden: Benunge. In Dalsland: Gaddfur. In Dalarna: Gorquadd.
Occurs ubiquitously in small brooks of Uppland, Lapland, Dalarna, Öland, etc.

338. GASTEROSTEUS *spinachia* [*Spinachia spinachia* (Linnaeus, 1758). Eng. Fifteen-spined stickleback or Sea stickleback, Sw. Tångspigg], fifteen dorsal spines. *Art. Gen.* 52. *Syn.* 81.
Will. Ichth. 340. Aculeatus sive pungitius marinus longus.
Raj. Pisc. 145. Aculeatus idem.
Occurs in the ocean at the shores of Bohus. *Dr Haartman.*

Scomber

339. SCOMBER *scombrus* [*Scomber scombrus* Linnaeus, 1758. Eng. Atlantic mackerel, Sw. Makrill], five small fins each.
Scomber, with twenty pectoral rays, twelve dorsal ones. *Fn.* 287.
Art. Gen. 30. *Syn.* 48. *Spec.* 68. Scomber pinnulis quinque in extremo dorso, spina brevi ad anum.
Rond. Pisc. 234. Scomber.
Gesn. Pisc. 341. 1012. Scomber.
Aldr. Ichth. 270. Scomber.
Jonst. Pisc. 92. t. 21. f. 9. 11. Scomber.
Salv. Pisc. 241. c. 239. Scombrus.
Schonef. Pisc. 66. Scomber.
Charl. Onom. 147. Scomber, Scombrus.
Will. Ichth. 181. Scomber.
Raj. Pisc. 158. Scomber.
In Sweden: Makrill.
Occurs abundantly in the West Sea; feeds on jellyfish. *E. N.* C. 1742, p. 488.
OBS. The abdominal viscera of the fish enjoy many countless banded appendages just as in the cod.

Trigla

340. TRIGLA *hirundo*[329] [*Chelidonichthys lucerna* (Linnaeus, 1758). Eng. Tub gurnard, Sw. Fenknot], three digits on each side; lateral line aculeate.
Trigla, head aculeate; three appendages on each of the pectoral fins. *Art. Gen.* 24. *Syn.* 73. *It. W:goth.* 176.* *Fn.* 281.
Salv. Pisc. 194. Corvus.
Aldr. Ichth. 136. Hirundo aldrovandi prior.
Jonst. Pisc. t. 17. f. 8. Hirundo.
Will. Ichth. 280. Hirundo.

[329] Synonym of *Triglia lucerna*. See *Syst. nat.* (1758).

Raj. Pisc. 88. Hirundo.

In Sweden: Knorrhane. In Skåne: Knoding 326. In Marstrand: Knot. In Halland: Smed.

Occurs in the West Sea.

DESCR. Head quadrate, ash-grey, variously striated with scabrous points. Upper lip emarginate, glabrous above, on each side armed with three spines, of which the foremost is longer.

Ocular orbits fading away beneath. Iris of a bluish grey colour.

Three cirri inside ventral and pectoral fins, truncated, equal, distinctly articulate; lower ones shorter. When removed from body they are curved inwards.

Abdomen silvery.

Dorsum ash-grey. Sides beneath longitudinal line scattered with small maculae verging on white and indistinctly reddening, but above the line white and greenish spots or maculae. Lateral line rough, whitish, with prominent osseous points.

Branchiostegal membrane with 7 rays.

Swim bladder anteriorly bilobed.

When caught it groans from the abdomen; trembles when about to die.

IV. ABDOMINALES

Cobitis

341. COBITIS *barbatula* [*Barbatula barbatula* Linnaeus, 1758. Eng. Stone loach or Groundling, Sw. Grönling], 6 cirri; head flattened, toothless.

Cobitis, entirely glabrous, covered with maculae; body rather smoothly rounded. *Art. Gen.* 2. *Syn.* 2. *Fn.* 332.

Rond. Pisc. 2. p. 204. Cobitis barbatula.

Gesn. Pisc. 404. Cobitis fluviatilis barbatula.

Aldr. Ichth. 618. Cobitis barbatula.

Jonst. Pisc. t. 26. f. 22. Cobitis barbatula.

Charl. Onom. 157. Cobitis barbatula.

Schonef. Ichth. 31. Cobitis fluviatilis.

Will. Ichth. 265. Cobitis fluviatilis barbatula.

Raj. Pisc. 124. Cobitis fluviatilis barbatula.

In Sweden: Grönling. In Germany: Grundel.

Occurs in Lake Mälaren where, having been brought from Germany, it was introduced by King Adolf Fredrik.

342. COBITIS *taenia* [*Cobitis taenia* Linnaeus, 1758. Eng. Spined loach, Sw. Nissöga], 6 cirri; spine subocular.

Cobitis, with a bifurcate spine beneath both eyes. *Art. Gen.* 2. *Syn.* 5. *Spec.* 4. *Fn.* 333.

Rond. Pisc. 2. p. 204. Cobitis aculeata sive altera.

Gesn. Pisc. 404. 482. Cobitis aculeata.

Aldr. Ichth. 617. Cobitis aculeata rondeletii.

Jonst. Pisc. t. 26. f. 21. Cobitis aculeata.
t. 46. f. 1 Taenia cornuta.
Charl. Onom. 157. Cobitis aculeata.
Schonef. Ichth. 74. t. 4. f. 1. Taenia cornuta.
Will. Ichth. 205. Cobitis barbatula aculeata.
266. Taenia cornuta.
Raj. Pisc. 124. Cobitis barbatula aculeata.
Mars. Danub. 4. p. 3. t. 1. f. 2. Cobitis aculeata.
In Sweden: Tånglake.
Occurs in Lake Mälaren.

343. COBITIS *fossilis* [*Misgurnus fossilis* (Linnaeus, 1758). Eng. Weatherfish, Sw. Slampiskare], 8 cirri; ocular spine above.
Art. Gen. 2. *Syn.* 3. Cobitis caerulescens, lineis utrinque 5 longitudinalibus.
Mus. Ad. Fr. 76. idem.
Occurs at Ulriksdal, where it has been introduced in fishponds.[330]

Siluris

344. SILURUS *glanis* [*Silurus glanis* Linnaeus, 1758. Eng. Wels catfish or Sheatfish, Sw. Mal], a single dorsal fin; 6 cirri. *It. Scan.* 61.*
Gadus, dorsum monopterygian; upper jaw with two cirri, lower jaw with four. *Fn.* 291.
Art. Gen. 82. *Syn.* 110. *Spec.* 107. Silurus cirrhis quatuor in mento.
Rond. Pisc. 2. p. 180. Silurus.
Salv. Pisc. 210. Glanis sive piscis barbatus.
Gesn. Pisc. 867. 872. 1047. Silurus.
Aldr. Ichth. 569. Glanis.
Jonst. Pisc. t. 27. f. 8. Glanis.
Mars. Danub. 4. p. 7. t. 2. Silurus 1. Glanis.
Schonef. 69. Silurus.
Will. Ichth. 128. Silurus.
Raj. Pisc. 70. Silurus.
In Sweden: Mahl.
Occurs in lakes of Småland and Södermanland; a rare fish and very large.

[330] The fish, however, did not survive.

Salmo

345. SALMO *salar* [*Salmo salar* Linnaeus, 1758. Eng. Atlantic salmon, Sw. Lax], rostrum protruding beyond lower jaw. *Art. Gen.* 11. *Syn.* 22. *Spec.* 48. *Fn.* 306.

Rond. Pisc. 2. p. 167. Salmo.
Salv. Pisc. 200. Salmo.
Gesn. Pisc. 824. Salmo.
Aldr. Ichth. 483. Salmo vulgaris.
Jonst. Pisc. 106. t. 23. f. 1. Salmo.
Schonef. Ichth. 64. Salmo nobilis.
Charl. Onom. 150. Salmo.
Will. Ichth. 189. Salmo.
Raj. Pisc. 63. Salmo.
In Sweden: Lax.
Occurs in very large rivers throughout Sweden, which it ascends to lay eggs; this happens earlier in the southern than the northern provinces; in these parts, for example, in Torneå and Kemi or at the tip of the Gulf of Bothnia it is most abundant. It rather seldom spends the winters with us, as in Lake Siljan of Dalarna, and then its appearance is much changed.

OBS. The jaw varies; it is not distinctly curved, and the lower jaw is narrowed, similar to a digit, and it is curved into the sinus under the upper jaw. The Swedes have considered this feature to show that it is a distinct species; but the fish varies frequently. But I have found that all males have a hooked jaw; the others are females.

Art. Spec. 80. It is a salmon that is smaller and similar to the common species. In Sweden it is called "Laxunge". I am not inclined to believe that this one differs from that aforementioned species; it is just a matter of age.

346. SALMO *eriox* [*Salmo trutta* Linnaeus, 1758. Eng. Brown trout, Sw. Öring],[331] maculae ash-grey; extremity of tail equal. *Art. Gen.* 12. *Syn.* 23. *Fn.* 307.

Will. Ichth. 189. The grev i.e. cinereus aut griseus.
Raj. Pisc. 63. Salmo cinereus aut griseus.
In Sweden: Grålax.
Lives along with the previous species, from which I would scarcely think that it differs as to species.

347. SALMO *trutta* [*Salmo trutta* Linnaeus, 1758. Eng. Brown trout, Sw. Öring],[332] eyes small, black; irises dark brown; pectoral fin with six spots. *Fn.* 308.

Art. Gen. 12. *Syn.* 24. *Spec.* 51. Salmo latus, maculis rubris nigrisque, cauda aequali.
Charl. Onom. 155. Trutta taurina.
Will. Ichth. 193. Trutta salmonata.

[331] See nos. 347 and 348.
[332] See nos. 346 and 348.

Raj. Pisc. 63. Trutta salmonata.
In Sweden: Örlax, Börting.
Occurs more often in rivers of Dalarna and Norrland than in those of other provinces.
DESCR. Colour of dorsum ash-grey. 12 dorsal fin rays, scattered with black spots; 13 pectoral fin rays ash-grey, with 6 confluent spots longitudinally; 10 ventral fin rays ash-grey; 9 or 10 anal fin rays also ash-grey. The tail with 20 rays is entire, scarcely punctate, adipose, and fuscous. Venter is whitish. Sides of the whole fish, even the head, are scattered with angular, black maculae of a dark brown colour, each the size of a pea.
Teeth of jaws in a simple row; tongue divided; in each jaw 5 teeth; palates with three rows of teeth, of which lateral ones simple, but in the middle alternated with a double row.

348. SALMO *fario* [*Salmo trutta* Linnaeus, 1758. Eng. Brown trout, Sw. Öring],[333] red maculae; lower jaw somewhat longer. *Art. Gen.* 12. *Syn.* 23. *Spec.* 51. *Fn.* 309.
Rond. Pisc. 2. p. 169. Trutta fluviatilis.
Gesn. Pisc. 1002. Trutta fluviatilis rondeletii.
Aldr. Ichth. 589. Trutta fluviatilis rondeletii, gesneri.
Jonst. Pisc. t. 26. f. 1. Trutta fluviatilis.
Salv. Pisc. 96. Salar & varius.
Charl. Onom. 155. Trutta fluviatilis vulgaris.
Schonef. Ichth. 77. Truta vel Trutta vulgo, Forina & Forio.
Will. Ichth. 199. Trutta fluviatilis.
Raj. Pisc. 65. Trutta fluviatilis.
In Sweden: Laxöring, Forell, Stenbit.
Lives abundantly in rivers.
DESCR. The previous species commonly two feet long, but this species seldom one foot long. Tail blunt, slightly bifurcate. Anal fin snow-white at anterior margin. Pectoral fins not punctate. Adipose fin apically red-brownish. Even dorsum is maculate, although with a dark colour. Maculae above a longitudinal line arranged together, black, surrounded by a pale colour; there is a mixture of purple and black maculae beneath this line.

349. SALMO *alpinus* [*Salvelinus alpinus* (Linnaeus, 1758). Eng. Arctic char, Sw. Röding], dorsum black; sides blue; venter red-yellow. *Fn.* 310.
Art. Gen. 13. *Syn.* 25. *Spec.* 52. Salmo vix pedalis, pinnis ventris rubris, maxilla inferiore paullo longiore.
Gesn. Pisc. 1201. Umbla minor.
Aldr. Ichth. 650. Umbla minor alia.
Charl. Onom. 163. Umbla minor.
Will. Ichth. 196. Umbla minor.
Raj. Pisc. 65. Umbla minor.
In Sweden: Röding. In Lapland: Raud.

[333] See nos. 346 and 347.

Occurs in the deepest lakes of the mountains of Lapland; a very common and almost unique fish. With what food it keeps itself alive I do not know, since these waters are not full of worms, but always very cold, and there are no herbs.

DESCR. Length usually 13 inches. Scales are very small. Head glabrous, ovate, blunt. Jaws dentate. Tongue with two rows of teeth; each row consisting of 6 teeth. Palate dentate on the sides. Nostrils small, with a double opening on each side, the one above the other, of which the lower opening is larger and closed. Iris of eyes grey with a black pupil. Beneath eyes, in the cheek or bone that is covered with flesh, there are 7 punctations, longitudinally arranged; on this bone posteriorly 3 spots, arranged in a perpendicular row. Branchiostegal membrane with 10 ossicles.

12 dorsal fin rays, of which the first 2 become gradually longer; the 3rd and 4th very long and the following apportioned.

The colour of the whole fish above on dorsum is black; on the sides cyaneous or watery blue. But venter red-yellow or red tending to deep yellow; head and throat are white; ventral fins red, white at exterior margin; spots are inclining to deep yellow and scattered longitudinally on the sides along the lateral line. Tail bifurcate, of the same colour as the side.

Length from rostrum to base of head 1½ inches; from head to dorsal fin 3 ½ inches; base of dorsal fin is 1½ inches; the length of the same 2 inches; from dorsal fin to adipose fin 3 inches; from tail to adipose fin 2 ½ inches; from tail to anal fin 1½ inches. The most delicious meat of all; colour very red and beautiful.

OBS. I am in doubt regarding the synonyms of the authors, since the descriptions are insufficient. This fish is seldom found around us except in the lakes of alpine Lapland or sometimes sparsely in their descending rivers.

350. SALMO *eperlanus* [O*smerus eperlanus* (Linnaeus, 1758). Eng. European smelt or Smelt, Sw. Nors], head diaphanous, 17 anal fin rays.

O*smerus*, anal fins with seventeen rays. *Art. Gen.* 10. *Syn.* 21. *Fn.* 311.

Art. Spec. 45. Osmerus.

Rond. Pisc. 2. p. 196. Eperlanus.

Gesn. Pisc. 362, 430. Eperlanus.

Aldr. Ichth. 536. Eperlanus gesneri.

Jonst. Pisc. t. 24. f. 3. Eperlanus.
t. 47. f. 6. Spirinchus.

Schonef. Ichth. 70. Spirinchus.

Charl. Onom. 153. Eperlanus.

Will. Ichth. 202. Eperlanus.

Raj. Pisc. 66. Eperlanus.

In Sweden: Nors, Slom.

Occurs in lakes of Uppland and Dalarna as well as elsewhere; abundant.

OBS. There are two varieties. One is namely called "Slom" by the Swedes; it is larger and does not stink. The other is much smaller and called "Nors"; it is very foul-smelling like excrement. When the peasants come to Uppsala in early spring to sell this fish, the unpleasant smell fills the streets and at this time the ague also reigns.

351. SALMO *wimbra* [*Coregonus albula* (Linnaeus, 1758). Eng. Vendace or European cisco, Sw. Siklöja],[334] fin adipose, subserrate. *It. W:goth.* 231.
In Dalsland: Wimma.[335]
Occurs around Åmål in Dalsland.
[DESCR.] Tail forficate. Lateral line straight.

352. SALMO *lavaretus* [*Coregonus lavaretus* (Linnaeus, 1758).[336] Eng. Lavaret or Common whitefish, Sw. Lavaretsik], upper jaw longer; 14 dorsal fin rays.
Coregonus, upper jaw longer, flat; dorsal ray with fourteen ossicles. *Art. Gen.* 10. *Syn.* 19. *Spec.* 37. *Fn.* 312.
Gesn. Pisc. 33. Albula nobilis.
Schonef. Ichth. 12. Albula nobilis major sive lautus.
Jonst. Pisc. t. 46. f. 1. Albula nobilis.
Raj. Pisc. 60. Albula nobilis.
61. Lavaretus allobrogum.
Will. Ichth. 183. Lavaretus allobrogum.
In Sweden: Sijk, Stor-Sijk.[337]
Occurs in various lakes in Sweden.

353. SALMO *albula* [*Coregonus albula* (Linnaeus, 1758). Eng. Vendace or European cisco, Sw. Siklöja],[338] jaws edentulous, lower one longer.
Coregonus, lower jaw longer. *Art. Gen.* 9. *Syn.* 13. *Spec.* 40. *Fn.* 313.
Gesn. Pisc. 34. Albula minima.
Aldr. Ichth. 660. Albula minima.
Jonst. Pisc. 137. t. 30. f. 7. Albula minima.
Charl. Onom. 164. Albula minima.
Will. Ichth. 186. Albula minima.
Raj. Pisc. 61. Albula minima.
In Sweden: Sijklöja, Småsijk. In Dalsland: Blikta. In Norrland: Stint. In Finland: Moiku.
Occurs in most Swedish lakes. Spawns around early winter.

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[334] See no. 353.

[335] In 1746, Linnaeus makes a note in Dalsland about a fish called "ånims-wimma", which is much caught in a certain lake, but otherwise quite rare. No one should believe that it is the same kind of fish, which in other places is called "wimma", and thus a kind of *Cyprinus*, but it is a *Coregonus* or sik of a quarter's length (*Wästgöta-Resa*, for July 25); hence the wimma of Dalsland is a siklöja, i.e. *Coregonus albula*, according to Linnaeus.

[336] *Dyntaxa – Svensk taxonomisk databas*: "This species has never been recorded from Sweden. The name *Coregonus lavaretus* has occasionally been used for *C. maraena* in Sweden, depending on which species definition that has been used. It has been decided (with the current taxonomy) that the Linnaean name only applies to the populations that occur in Lakes Bourget and Geneva in France and Switzerland."

[337] The species in Sweden is *Coregonus maraena* (Bloch, 1779).

[338] See no. 351.

354. SALMO *thymallus* [*Thymallus thymallus* (Linnaeus, 1758). Eng. Grayling, Sw. Harr], upper jaw longer; dorsal fin with 23 rays.

Coregonus, upper jaw longer; dorsal fin with twenty-three ossicles. *Art. Gen.* 10. *Syn.* 20. *Spec.* 41. *Fn.* 314.

Rond. Pisc. 2. p. 187. Thymus.

Salv. Pisc. 81. t. 80. Thymus sive Thymallus.

Gesn. Pisc. 978. Thymallus sive Thymus.

Aldr. Ichth. 594. Thymallus.

Jonst. Pisc. t. 26. f. 3. 4. 5. & 31. f. 6. Thymallus.

Charl. Onom. 155. Thymallus.

Will. Ichth. 187. Thymallus.

Raj. Pisc. 62. Thymallus.

Mars. Danub. 4. p. 75. t. 25. f. 2. Thymallus.

In Sweden: Harr.

Occurs in Ångermanland and various parts of Norrland.

DESCR. Appearance as that of a vendace,[339] glabrous. Mouth with the minutest teeth on each side; rostrum blunt; jaws almost equal. Branchiostegal membrane with 9 rays. Dorsal fin in middle of dorsum, larger than the others, of the same length and width; 21 soft rays, of which the anterior five gradually become shorter, simpler, the others branched; the fin ends suddenly and is adipose as in the others, without rays. Tail medially bifurcate; many rays distinctly articulate, multifid. Anal fin abrupt, with 12 dichotomous rays. Pectoral fins with 11 dichotomous rays. Ventral fins with 15 multifid rays.

The intestines of this fish provide the Lapps with a means of coagulation when they make cheese from the milk of the reindeer, since no other kind of coagulation is available.

Esox

355. ESOX *lucius* [*Esox lucius* Linnaeus, 1758. Eng. Northern pike or Grand brochet, Sw. Gädda], rostrum flat, subequal.

Esox, rostrum with slanting plates. *Art. Gen.* 14. *Syn.* 26. *Spec.* 53. *Fn.* 304.

Rond. Pisc. 2. p. 188. Lucius.

Salv. Pisc. 94. Lucius.

Gesn. Pisc. 500. Lucius.

Aldr. Ichth. 630. Lucius.

Jonst. Pisc. t. 29. f. 1. Lucius.

Schonef. Ichth. 44. Lucius.

Charl. Onom. 162. Lucius.

Will. Ichth. 236. Lucius.

Raj. Pisc. 12. Lucius.

Mars. Danub. 4. p. 63. t. 22. f. 1. Lucius.

In Sweden: Gjädda.

Occurs ubiquitously in lakes and rivers, especially abundant in Lapland.

[339] See no. 353.

356. ESOX *belone* [*Belone belone* (Linnaeus, 1761). Eng. Garfish, Sw. Näbbgädda], rostrum with each jaw pointed.

Esox, rostrum cuspidate, thin, rather smoothly rounded, a span-long.[340] *Art. Gen.* 14. *Syn.* 27. *Fn.* 305.

Rond. Pisc. 227. Acus prima species.

Salv. Pisc. 68. Acus piscis.

Gesn. Pisc. 9. Acus prima species.

Aldr. Ichth. 106. Acus vulgaris sive oppiani.

Charl. Onom. 136. Acus.

Schonef. Ichth. 11. Acus prima species.

Will. Ichth. Acus vulgaris sive oppiani.

Raj. Pisc. 109. Acus vulgaris sive oppiani.

In Sweden: Näbbgjädda. In Bohuslän: Horngiäll.

Occurs in the West Sea; abundant.

DESCR. Head quadrate, green above; sides silvery, glabrous. Eyes white, with a black pupil. Nostrils large, filled up with a nipple. Mouth awl-shaped, longer than the actual head; lower jaw longer, but with a light red tip. Teeth at margins of both jaws; a few are found in the middle of the palate along the very small, longitudinal area. Branchiostegal membrane with 12 ossicles, definitely not 14.

Body rather smoothly rounded, slightly flattened, flexible, green above, silvery beneath lateral line.

Pectoral fins placed at the base of the head with 13 rays that are distinctly articulate and branched, except for the first one that is undivided.

Ventral fins very remote from the head, with 7 rays, of which the first one is longer and undivided.

Anal fin long, falcate, interrupted, with 20 rays, of which the first three are undivided; of these the first one is the smallest and the second one the largest.

Dorsal fin exactly opposite the anal fin, and of the same form and length, interrupted and falcate, with 16 rays; the first one is the smallest and undivided; the second and third ones the largest.

Lateral lines in the middle of the sides, scarcely visible. Three ventral lines, of which the two lateral ones are opposite and stretching out from throat to exterior margin of the ventral fins towards tail, but the middle one runs straight from throat to anus.

Both jaws are mobile, with the upper medial cartilage attached to the skull, and outside the oral cavity they extend on both sides as a bony prominence, which is received by the carved sinus of the head.

Teeth awl-shaped, with space in between, larger at interior edge of mouth, with acerose, tiny, barely visible nascent teeth scattered along the jaw line.

Tongue glabrous. Cranium pellucid. 79 vertebrae. Bones green.

[340] See the com. to no. 285.

Clupea

357. CLUPEA *harengus* [*Clupea harengus* Linnaeus, 1758. Eng. Atlantic herring or Baltic herring, Sw. Sill or, in the Baltic, Strömming], without maculae; lower jaw longer. *Art. Gen.* 7. *Syn.* 14. *Spec.* 37. *Fn.* 315. *It. Scan.* 221. 325.

α *Rond. Pisc.* 222. Harengus.
Gesn. Pisc. 408. 486. Harengus.
Aldr. Ichth. 294. Harengus flandricus.
Jonst. Pisc. t. 1. f. 6. Harengus.
Schonef. Ichth. 36. Harengus.
Will. Ichth. 219. Harengus.
Ray. Pisc. 103. Harengus.
In Sweden: Sill.

β *Rond. Pisc.* 220. Membras.
Gesn. Pisc. 74. 85. Membras.
Aldr. Ichth. 212. Membras rondeletii.
Jonst. Pisc. t. 19 f. 14. Membras.
Charl. Onom. 143. Membras.
In Sweden: Strömming.
Occurs in the sea. Of these α "Sill" is the larger one that mostly comes from the West Sea, but β "Strömming" is smaller and comes from the Gulf of Bothnia.

358. CLUPEA *sprattus* [*Sprattus sprattus* (Linnaeus, 1758). Eng. Sprat or European sprat, Sw. Skarpsill], 13 dorsal fin rays.
Clupea, four inches long, lower jaw longer; venter extremely sharp. *Art. Gen.* 7. *Syn.* 17. *Spec.* 33. *Fn.* 316.
Raj. Pisc. Spratti.
In Sweden: Hwassbuk.
Occurs in the sea.

Cyprinus

359. CYPRINUS *carpio* [*Cyprinus carpio* Linnaeus, 1758. Eng. Common carp or European carp, Sw. Karp], 9 anal fin rays; 4 cirri; second ray of dorsal fin posteriorly serrate.
Cyprinus, four cirri; third ossicle of dorsal and anal fins uncinate. *Art. Gen.* 4. *Syn.* 3. *Spec.* 25. *Fn.* 317.
Rond. Pisc. 2. p. 150. Cyprinus.
Salv. Pisc. 92. t. 91. Cyprinus rondeletii.
Gesn. Pisc. 309. 164. Cyprinus.
Aldr. Ichth. 637. Cyprinus.
Jonst. Pisc. t. 29. f. 3. 4. 6. Cyprinus.

Schonef. Ichth. 32. Cyprinus nobilis; Cyprianus; Carpa.
Petit. Act. Gall. 1733. p. 274. t. 15. Carpio.
Charl. Onom. 162. Cyprinus.
Will. Ichth. 545. Cyprinus.
Raj. Pisc. 115. Cyprinus.
In Sweden: Karp.
It is kept in the fishponds of the noblemen in Skåne and is cultivated. *It. Scan.* 378. Carp brought from Germany are sold alive in Stockholm; their descendants constitute a most tasty food.

360. CYPRINUS *brama* [*Abramis brama* (Linnaeus, 1758). Eng. Common bream or Carp bream, Sw. Braxen], 27 anal fin rays; fins fuscous. *Fn.* 318.
Art. Gen. 6. *Syn.* 4. *Spec.* 22. Cyprinus pinnis omnibus nigrescentibus; pinna ani ossiculorum viginti septem.
Rond. Pisc. 2. p. 154. Cyprinus latus sive Brama.
Gesn. Pisc. 316. 317. 165. Cyprinus latus sive Brama.
Aldr. Ichth. 641. Cyprinus latus.
Jonst. Pisc. 165. t. 29. f. 5. Cyprinus latus.
Schonef. Ichth. 33. Cyprinus latus vel Brama.
Charl. Onom. 162. Abramus, Cyprinus latus.
Will. Ichth. 248. t. 2. 10. Cyprinus latus sive Brama.
Ray. Pisc. 116. Cyprinus latus sive Brama.
In Sweden: Braxen.
Occurs in most lakes of Sweden. Spawns at the same time as the male juniper flowers and sheds its pollen.
There is a gibbous variety of this fish in Lake Vättern at Askersund.

361. CYPRINUS *aspius* [*Leuciscus aspius* (Linnaeus, 1758). Eng. Aral asp or Asp, Sw. Asp], anal fin with 16 ossicles; lower jaw longer, curved. *Fn.* 319.
Art. Gen. 6. *Syn.* 24. *Spec.* 14. Cyprinus maxilla inferiore longiore cum apice elevato; pinna ani ossiculorum quindecim.
In Sweden: Asp.
Occurs in Lake Mälaren in Uppland. In early spring it ascends the Sala River[341] all the way up to Uppsala.

[341] I.e. nowadays the Fyris River (Sw. Fyrisån).

362. CYPRINUS *idus* [*Leuciscus idus* (Linnaeus, 1758). Eng. Ide or Orfe, Sw. Id], red anal fin with 13 ossicles. *Fn.* 320.
Art. Gen. 5. *Syn.* 14. *Spec.* 6. Cyprinus iride sublutea, pinnis ventralibus anique rubris.
In Sweden: Id. In Eskilstuna: Tiockfjälling.
Occurs in lakes, rivers, and bays of the Baltic Sea, especially in Uppland and Södermanland.

363. CYPRINUS *tinca* [*Tinca tinca* (Linnaeus, 1758). Eng. Tench, Sw. Sutare], 25 anal fin rays; tail entire; body slimy.
Cyprinus, anal fin with eleven ossicles;[342] tail entire. *Fn.* 321.
Art. Gen. 4. *Syn.* 5. *Spec.* 27. Cyprinus mucosus totus nigrescens, extremitate caudae aequali.
Rond. Pisc. 2. 157. Tinca.
Salv. Pisc. 90. t. 89. Tinca.
Gesn. Pisc. 984. Tinca.
Aldr. Ichth. 646. Tinca.
Jonst. Pisc. 146. t. 29. f. 7. Tinca.
Charl. Onom. 162. Phycis vel Merula fluviatilis.
Schonef. Ichth. 76. Tinca.
Will. Ichth. 251. Tinca.
Ray. Pisc. 117. Tinca.
In Sweden: Sutare, Linnare, Skomakare.
Lives ubiquitously in muddy lakes.

364. CYPRINUS *carassius* [*Carassius carassius* (Linnaeus, 1758). Eng. Crucian carp, Sw. Ruda], 10 anal fin rays; tail entire; lateral line straight.
Cyprinus, anal fin with twenty ossicles; lateral line straight. *Art. Gen.* 4. *Syn.* 5. *Spec.* 29. *Fn.* 322.
Gesn. Pisc. 222. 166. Charax.
Aldr. Ichth. 644. Cyprinus latus alius.
Jonst. Pisc. 165. t. 27. f. 12. Cyprinus latus alius.
Will. Ichth. 249. Carassius simpliciter dictus.
Ray. Pisc. 116. Carassius simpliciter dictus.
In Sweden: Ruda. In Skåne: Carussa.
Occurs ubiquitously in muddy lakes in Sweden.

[342] Linnaeus obviously uses Lat. *radius* and *ossiculum* as synonyms for the fin rays.

365. CYPRINUS *ballerus* [*Ballerus ballerus* (Linnaeus, 1758). Eng. Zope or Blue bream, Sw. Faren],[343] anal fin with 40 ossicles. *Fn.* 323.
Art. Gen. 3. *Syn.* 12. *Spec.* 23. Cyprinus admodum latus & tenuis, pinna ani ossiculorum quadraginta.
Rond. Pis. 2. p. 154. Ballerus.
Gesn. Pisc. 24. Piscis Blicka germanorum, qui Alburnus lacustris dici potest.
Aldr. Ichth. 645. Ballerus rondeletii.
Jonst. Pisc. 165. t. 27. f. 7. Ballerus.
Charl. Onom. 162. Ballerus aristotelis.
Schonef. Ichth. 28. Ballerus.
Ray. Pisc. 117. Ballerus.
In Sweden: Blicka, Braxenpanka. In Småland: Braxenflicka.
Occurs widely and most abundantly in all Swedish lakes.

366. CYPRINUS *erythrophtalmus* [*Scardinius erythrophthalmus* (Linnaeus, 1758). Eng. Pearl roach or Rudd, Sw. Sarv], 14 anal fin rays; fins red. *Fn.* 324.
Art. Gen. 3. *Syn.* 4. *Spec.* 9. Cyprinus iride pinnis omnibus caudaque rubris.
Will. Ichth. 249. Rootaug i.e. Erythrophtalmos germanis dictus, Bramis adfinis.
Raj. Pisc. 116. Rotaug.
In Sweden: Sarf. In Västerbotten: Isarf.
Occurs in Uppsala and in Piteå in Västerbotten; common.
OBS. 60 elevated spots of the lateral line.

367. CYPRINUS *grislagine* [*Leuciscus leuciscus* (Linnaeus, 1758). Eng. Common dace, Sw. Stäm], 11 anal fin rays; fins whitening. *Fn.* 325.
Art. Gen. 5. Cyprinus oblongus, iride argentea, pinnis albentibus.
Art. Syn. 5. Spec. 12. Cyprinus oblongus, figura rutili, pinna ani ossiculorum decem.
Will. Ichth. 263. Grislagine augustae dictus Gobii fluviatilis species: germani enim Gobium Grefling vocant.
Raj. Pisc. 123. Grislagine augustae dictus Gobii fluviatilis species.
In Ångermanland: Stäm.
Occurs in Ångermanland and Västerbotten.

368. CYPRINUS *wimba* [*Vimba vimba* (Linnaeus, 1758). Eng. Vimba bream, Vimba, Zanthe or Zarte, Sw. Vimma], 24 anal fin rays; rostrum nose-formed. *Fn.* 326.
Art. Gen. 6. *Syn.* 14. *Spec.* 18. Cyprinus rostro nasiformi, dorso acuminato, pinna ani ossiculorum viginti quatuor.
In Sweden: Wimba.[344]
Occurs in Lake Mälaren and the River of Uppsala.

[343] See no. 369.
[344] See no. 351.

369. CYPRINUS *farenus* [*Ballerus ballerus* (Linnaeus, 1758).[345] Eng. Zope or Blue bream, Sw. Faren], 37 anal fin rays; irises light yellow. *Fn.* 327.
Art. Gen. 3. *Syn.* 13. *Spec.* 23. Cyprinus iride flava, pinna ani ossiculorum triginta septem.
In Sweden: Faren.
Occurs in Lake Mälaren, especially at the bridge Örsundsbro.

370. CYPRINUS *cultratus* [*Pelecus cultratus* (Linnaeus, 1758). Eng. Sichel, Ziege, Sabre carp or Sabrefish, Sw. Skärkniv], 30 anal fin rays; lateral line descending; venter strongly pointed. *It. Scan.* 82. t. 82.
In Sweden: Skierknif.
Occurs in the Baltic Sea at Kristianstad.

371. CYPRINUS *biorkna* [*Blicca bjoerkna* (Linnaeus, 1758). Eng. White bream or Silver bream, Sw. Björkna], 35 anal fin rays. *Fn.* 328.
Art. Gen. 3. *Syn.* 13. *Spec.* 20. Cyprinus quincuncialis pinna ani ossiculorum viginti quinque.
In Sweden: Björcka.
Occurs in Lake Mälaren in Uppland.
OBS. In a specimen of this fish, I have counted thirty-five rays in the anal fin.

372. CYPRINUS *rutilus* [*Rutilus rutilus* (Linnaeus, 1758). Eng. Roach or Common roach, Sw. Mört], anal fin reddish, with 12 rays. *Fn.* 329.
Art. Gen. 3. *Syn.* 10. *Spec.* 10. Cyprinus iride pinnisque ventris ac ani plerumque rubentibus.
Gesn. Pisc. 820. Rutilus sive Rubellus fluviatilis.
Aldr. Ichth. 621. Rutilus gesneri.
Jonst. Pisc. 130. t. 26. Rutilus fluviatilis gesneri.
Schonef. Ichth. 63. Rutilus, Rubellio & Rubiculus.
Charl. Onom. 158. Rutilus sive Rubellus fluviatilis.
Will. Ichth. 262. Rutilus sive Rubellus fluviatilis.
Raj. Pisc. 122. Rutilus sive Rubellus fluviatilis.
In Sweden: Mört.
Occurs in all the lakes of Sweden; most common of all fish; generally spawns when the buttercup flowers.

373. CYPRINUS *alburnus* [*Alburnus alburnus* (Linnaeus, 1758). Eng. Common bleak, Sw. Löja], 20 anal fin rays. *Fn.* 330.
Art. Gen. 6. *Syn.* 10. *Spec.* 17. Cyprinus quincuncialis, pinna ani ossiculorum viginti.

[345] See no. 365.

Rond. Pisc. 2. p. 208. Alburnus.
Gesn. Pisc. 23. Alburnus ausonii.
Aldr. Ichth. 68. Alburnus ausonii.
Jonst. Pisc. 146. t. 29. f. 13. Alburnus ausonii.
Schonef. Ichth. 11. Albula minor.
Charl. Onom. 161. Alburnus ausonii.
Will. Ichth. 263. Alburnus ausonii.
Ray. Pisc. 123. Alburnus ausonii.
In Sweden: Löja.
Occurs in Sweden. The most common fish in every lake.

374. CYPRINUS *aphya* [*Phoxinus phoxinus* (Linnaeus, 1758). Eng. Minnow or Common minnow, Sw. Elritsa], 9 anal fin rays; irises red; body pellucid. *Fn.* 331. *It. W:goth.* 132. 233.

Art. Gen. 4. *Syn.* 13. *Spec.* 30. Cyprinus biuncialis, iridibus rubris, & pinna ani ossiculorum novem.

Rond. Pisc. 208. Aphya vera.

Mars. Danub. 4. p. 24. t. 9. f. 1. Cobitis fluviatilis?

In Sweden: Mudd, Budd. In Dalarna: Quidd, Iggling. In Västerbotten: Glirr, Glirren. In Västergötland: Gli. In Dalsland: Alkufwa. In Östergötland: Alkutta. In Lapland: Golsensodg.[346]

Occurs in the rivers of Dalsland, Lapland, and Uppland; often in small rivers and lakes.

OBS. This fish may be the same as *Artedi's* tridactyl carp that is variously oblong, rather smoothly rounded, and the anal fin of which has 8 ossicles.

DESCR. Appearance as that of a trout[347] or salmon.[348] The length of a digit; dorsum smoothly rounded, very fat; hence concave along the spine. Dorsum of a bluish grey colour and with fuscous maculae, as in the perch. Iris of eyes white with a mix of redness. Dorsal fin positioned behind the centre of gravity; eight rays dichotomous, first one very simple. Tail bifurcate with 19 rays. Anal fin a little behind dorsal fin, with 9 rays. 7 ventral rays and 11 or 12 pectoral ones. Lower jaw a little shorter than upper one. Nasal mouth looks like a cow hoof, as is the case in the whole cyprianaceous genus. Scales are scarcely visible. While the fish are spawning and mating, the head is scattered with pustules as in the congeners. Dorsum fuscous, adorned laterally with the minutest, blackish spots, as in fasciae (just as those of the perch).

OBS. In Denmark a carp with a double anal fin and trifurcated tail was brought up by the noblemen. *Act. Stockh.* 1740. p. 403. *l.* 1. f. 3, 4, 5, 6, 7, 8. Thus I have possessed the same fish and described it in the source that has been cited. We have no hesitation in writing that this fish is the most beautiful of all, if you look at its colours. It was introduced to Sweden from China. In the whole of Europe, it will be as equally common as the peacock to delight noblemen.

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[346] *Solsensodg*, both in *Fn. Su.* (1746) and (1761), should be written as *Golsensodg*, which spelling is found in Linnaeus's *Iter Lapponicum*, *Ungdomsskrifter*, p. 41. He wrote down the fish designation *Golsensodg* (with a drawing of the fish) in Lycksele in Lapland in 1732.

[347] See no. 347.

[348] Linnaeus only writes *Salmo*, see nos. 345–354.

V. BRANCHIOSTEGI

Syngnathus

375. SYNGNATHUS *ophidion* [*Nerophis ophidion* (Linnaeus, 1758). Eng. Straight-nosed pipefish, Sw. Mindre havsnål], no pectoral, caudal or anal fins; body smoothly rounded.

Syngnathus, smoothly rounded; lacking pectoral and caudal fins. *Art. Gen.* 1. *Syn.* 2. *Spec.* 1. *Fn.* 334.

Will. Ichth. 160. Acus lumbriciformis aut septimus.

Raj. Pisc. 47. Acus lumbriciformis sive Ophidion lumbriciforme.

In Sweden: Hafsnåhl. In Halland: Tangsnipa.

Occurs in the Baltic and the Gulf of Bothnia.

376. SYNGNATHUS *acus* [*Syngnathus acus* Linnaeus, 1758. Eng. Great pipefish, Long-nosed pipefish or Narrowsnouted pipefish, Sw. Större kantnål], caudal, anal, and pectoral fins radiate; body heptangular.

Syngnathus, body medially heptangular; tail pinnate. *Art. Gen.* 1. *Syn.* 2. *Spec.* 2. *Fn.* 335.

Gesn. Pisc. 1025. Typhle.

Will. Ichth. 159. Acus aristotelis species altera major.

Raj. Pisc. 46. Acus aristotelis species altera major.

In Sweden: Kantnåhl.

Occurs in the Baltic Sea.

377. SYNGNATHUS *typhle* [*Syngnathus typhle* Linnaeus, 1758. Eng. Broad-nosed pipefish or Deep-snouted pipefish, Sw. Tångsnälla], caudal, anal, and pectoral fins radiate; body sexangular.

Syngnathus, body medially hexangular; tail pinnate. *Art. Gen.* 1. *Syn.* 1. *Spec.* 3. *Fn.* 336.

Rond. Pisc. 229. Acus secunda species sive Acus aristotelis.

Gesn. Pisc. 9. 11. Acus secunda species sive Acus aristotelis.

Aldr. Ichth. 105. Acus aristotelis.

Jonst. Pisc. 52. t. 15. f. 14. Acus aristotelis.

Salv. Pisc. 68. f. 2. Piscis septimus.

Will. Ichth. 158. Acus aristotelis sive Acus secunda species.

Raj. Pisc. 46. Acus aristotelis sive Acus secunda species.

Occurs in the Baltic Sea.

Class V[349]

INSECTA

I. COLEOPTERA

Scarabaeus

378. SCARABAEUS *nasicornis* [*Oryctes nasicornis* (Linnaeus, 1758). Eng. European rhinoceros beetle, Sw. Noshornsbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax with a triple projection; horn on head recurved.

Scarabaeus, head with a recurved horn; thorax gibbous; abdomen hirsute. *Fn.* 340.

Olear. Mus. 27. t. 16. f. 4. Scarabaeus nasicornis.

Jonst. Ins. t. 15. n. 2. Scarabaeus Buceros nasicornis.

Imper. Alt. p. 694. Scarabaeus Rhinoceros. f. 1. 2. 3.

Worm. Mus. p. 242. Monoceros.

Jacob. Mus. Dan. Part. 1. f. 5. n. 20. Scarabaeus nasicornis.

Barthol. Unic. p. 54. Scarabaeus monoceros.

Stalpart. Obs. p. 468. t. 9. f. 2. *mala.*

Hoffn. Inst. t. 13. f. *antepenult. edit. alt.* 2. t. 1.

Frisch. Germ. v. 3. p. 6. t. 3. f. 1. Scarabaeus nasicornis.

Swam. Bibl. t. 27. f. 1. 2.

Lives in rotten wood and in the gardeners' hotbeds.[350]

[DESCR.] Very similar to *Scar. monoceros*,[351] but without the longitudinal thoracic concavity; teeth of forefeet blunt, excepting the first one.

379. SCARABAEUS *lunaris* [*Copris lunaris* (Linnaeus, 1758). Eng. Horned dung beetle, Sw. Månhornsbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax bicornate, medially blunt, bifid; clypeus emarginate; horn erect.

Scarabaeus, clypeus of head crescent-shaped; margin elevated; cornicle emarginate. *Fn.* 341.

Occurs in Skåne. *Mr Leche.*

DESCR. Appearance as that of a dorbeetle.[352] Head covered with a crescent-shaped clypeus, large, elevated marginally and anteriorly emarginate, medially a short and emarginate cornicle. Thorax

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[349] IV in the Latin text owing to a misprint.

[350] Lat. *Vaporarium* (Sw. "Varmbänk") was an ingenious invention by Olof Rudbeck the Elder. See Linnaeus, *Hortus Upsaliensis*, p. 25 (with fig. 13).

[351] Unclear ref. by Linnaeus. Probably no. 379.

[352] See no. 388.

gibbous, smooth, medially with a pointed, rather prominent margin, exarate longitudinally with a line. Elytra smooth, each with 7 or 8 less deep furrows.

380. SCARABAEUS *cylindricus* [*Sinodendron cylindricum* (Linnaeus, 1758). Eng. Horned stag beetle or Rhinoceros stag beetle, Sw. Noshornsoxe; Family Lucanidae, Eng. Stag beetles, Sw. Ekoxbaggar], thorax anteriorly truncated with five teeth; head anteriorly with an erect horn; body cylindrical. *Fn.* 342.[353]

Occurs ubiquitously.

DESCR. Black, small, almost cylindrical. Horn erect from tip of rostrum, anteriorly glabrous, posteriorly hirsute with fine red-yellow hairs. Thorax cylindrical, stout, glabrous above, excavated and truncated anteriorly, with five teeth marginally, of which middle tooth distinct on each side in the cavity. Elytra furrowed with punctations, scabrous.

381. SCARABAEUS *nuchicornis* [*Onthophagus nuchicornis* (Linnaeus, 1758). Sw. Rakhorndyvel; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections; occiput armed with an erect spine; no scutellum.

Scarabaeus, head and thorax jet-black and opaque; elytra ash-grey and cloudy black. *It. Oel.* 41. *Fn.* 354.

Raj. Ins. p. 106. Scarabaeus pilularis 9. willugb.

Act. Ups. 136. p. 16. n. 2. Scarabaeus parvus, capite collarique nigro, elytris nebulosis.

List. Mut. t. 18. f. 18.

Lives under the dung of pigs; abundant in early spring.

[DESCR.] Very similar to *Scar. bovinus*,[354] but elytra weakly rusty brown, irrorated with black spots. No scutellum.

382. SCARABAEUS *subterraneus* [*Eupleurus subterraneus* (Linnaeus, 1758). Sw. Fårad dyngbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections, glabrous; head with a triple tubercle; elytra with crenate striae.

Lives in mounds.

DESCR. Small, black. Clypeus markedly blunt. Thorax with sparsely scattered punctations. Elytra striated, each striation with punctations.

383. SCARABAEUS *erraticus* [*Colobopterus erraticus* (Linnaeus, 1758). Sw. Slät dyngbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections, smooth; head with a single tubercle; elytra brick-red.

Lives everywhere on paths.

DESCR. Thorax convex, smooth, black, just as the whole body; elytra brick-red.

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[353] See Ch. *A small fauna of Sweden*. But wrongly "corrected" in *Fn. Su.* (1761), *Errata*, p. 560.

[354] Unclear ref. by Linnaeus.

384. SCARABAEUS *fossor* [*Teuchestes fossor* (Linnaeus, 1758). Sw. Stor dyngbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections, apically weakly notched; head with a triple tubercle, weakly cornute medially.

Scarabaeus, jet-black, glabrous. *Fn.* 352.

Act. Ups. 136. p. 16. r. 4. Scarabaeus parvus oblongus ater, elytris striatis.

Inhabits forests.

DESCR. Body the odour of musk, entirely jet-black, glabrous, smooth, shining. Elytra oblong, concolorous, striate, but barely visible. Antennae lamellate. Wings fuscous. Thorax strongly convex.

385. SCARABAEUS *fimetarius* [*Aphodius fimetarius* (Linnaeus, 1758).[355] Sw. Tegelvingad dyngbagge or Linnés dyngbagge; Family Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections; head tuberculate; elytra red; body black.

Scarabaeus, head and thorax black; antennae and elytra red. *Fn.* 355.

Frisch. Germ. 4. p. 35. t. 19. f. 3. Scarabaeus equinus medius, coleoptris rubris, collari nigro.

Act. Ups. 1736. p. 16. n. 6. Scarabaeus parvus niger, elytris antennisque rubris.

β Scarabaeus capite thoraceque nigro glabro; elytris griseis; pedibus pallidis. *It. Oel.* 41. *Fn.* 353.

Raj. Ins. p. 106. Scarabaeus pilularis 10.

Act. Ups. 1736. p. 16. n. 6. Scarabaeus parvus niger, elytris cinereis.

Lives in dung together with the previous beetles during spring; ubiquitous on public roads.

DESCR. Head black, shield-shaped, roundish. Thorax black, marginate, with pale sides. Elytra grey or red, each marked with nine striae. Legs palish grey.

386. SCARABAEUS *haemorrhoidalis* [*Otophorus haemorrhoidalis* (Linnaeus, 1758). Sw. Rödspetsad dyngbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections; head tuberculate; elytra apically red.

Scarabaeus, jet-black; elytra posteriorly rusty brown; legs red-brown. *Fn.* 358.

Lives on fungi and decaying plant material.

DESCR. Appears to me to be the size of a seed; entirely jet-black, smooth; elytra with excavated striae, posteriorly towards margin red-brownish. Legs and femora dark red-brown.

[355] This species has been split in two, the other one being *Aphodius pedellus* (De Geer, 1774), Sw. Rödvingad dyngbagge, which is the species commonly occurring in Sweden. *Aphodius fimetarius* (Linnaeus, 1758), Sw. Linnés dyngbagge, does probably not occur in Sweden.

387. SCARABAEUS *conspurcatus* [*Chilothorax conspurcatus* (Linnaeus, 1758). Sw. Skogsdyngbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], thorax without projections; lateral margins white; head tuberculate; elytra dark bluish grey, maculate with black spots.

Lives in equine dung.

DESCR. Small, black or fuscous. Elytra dark bluish grey or greyish blue, with 2, 5 or 7 roughly oblong, black spots. Thoracic sides pale.

388. SCARABAEUS *stercorarius* [*Geotrupes stercorarius* (Linnaeus, 1758). Eng. Dorbeetle, Sw. Fälttordyvel; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], elytra unspined, jet-black, glabrous; elytra furrowed; head rhomboid; vertex rather prominent. *Fn.* 349.

Mouff. Lat. p. 151. Pilularius.

Bauh. Ballon. p. 212. *f. ult.*

Wagn. Helv. p. 233. Scarabaeus pilularius.

List. Mut. t. 17. f. 4.

Loqu. p. 380. n. 4. Scarabaeus magnus ex purpura niger, tibiis omnium pedum serratis.

Raj. Ins. 90. n. 7. Scarabaeus major niger vulgatissimus, antennis globosis, elytris laevibus.

Raj. Ins. p. 74. n. 1. Scarabaeus magnus niger vulgatissimus; antennis articulatis.

Frisch. Germ. v. 4. p. 13. t. 6. Scarabaeus stercorarius niger major.

Merr. Pin. p. 201. Scarabaeus stercorarius vel fimarius.

In Sweden: Torndyfwel. In Småland: Torbagge.

Lives in dung and sewers; flies especially at night.

DESCR. It is black on the back and glabrous; underside of femur villous.

Clypeus armed with a blunt, medially elevated rhomboid, as if it were the squama of a tortoise. Antennae clavate; capitulum trifoliate; stalk reddish; bulb or the lowest joint pilose. Thorax smooth, not punctate; in the middle, towards posterior parts, punctate with fuscous. Elytra jet-black, with many striae. The whole little animal is bluish jet-black beneath. Femora of forelegs with a large, villous, rusty brown macula on anterior part. Mouth with two flattened jaws that are scattered with a rusty brown hirsuteness.

389. SCARABAEUS *vernalis* [*Trypocopris vernalis* (Linnaeus, 1758). Eng. Dorbeetle or Spring dorbeetle, Sw. Vårtordyvel; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines; elytra glabrous, very smooth; clypeus rhomboid; vertex rather prominent. *Fn.* 350.

It. Oel. 41. Scarabaeus magnus vulgatissimus, antennis articulatis.

Lives together with the preceding species in dung, of which it forms small balls; it draws these towards its holes just as the common tumble-bug.[356]

[356] *Scarabaeus pilularius*, i.e. *Canthon pilularius* (Linnaeus, 1758). Not occurring in Sweden.

DESCR. Regarding habitat and appearance similar to the preceding species so that it is believed to differ only by time of appearance. All the same it is different from the preceding species in the following respects:

1. In size smaller than the previous species.
2. Elytra not furrowed.
3. Of a shining cyaneous or blue colour.
4. Appears only during spring.
5. Antennae entirely black; no rusty brown macula on the femora.

390. SCARABAEUS *sabulosus* [*Trox sabulosus* (Linnaeus, 1758). Sw. Sandknotbagge; Fam. Trogidae, Eng. Hide beetles, Sw. Knotbaggar], without spines, black, opaque, wrinkled, with tubercles; antennae pilose at base.

Lives in sand and dry ground.

DESCR. Very similar to the beet carrion beetle,[357] black and wrinkled, so that at first sight one might believe it to be a silphid, but the mouth, antennae, and legs are those of a scarab beetle.

391. SCARABAEUS *horticola* [*Phyllopertha horticola* (Linnaeus, 1758). Eng. Garden chafer or Garden foliage beetle, Sw. Trädgårdsborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines; head and thorax blue, subpilose; elytra grey; legs black. *Fn.* 351.

It. Scanic. 116. 321. Scarabaeus frisicus.

Act. Ups. 1736. p. 16. n. 3. Scarabaeus, medius, capite collarique caeruleo, pedibus nigris, elytris pallidis striatis.

Inhabits gardens, where it devastates fruit trees, except for the common pear. Very numerous in Skåne, around us rather rare.

[DESCR.] Antennal stalk is rusty brown.

392. SCARABAEUS *melolontha* [*Melolontha melolontha* (Linnaeus, 1758). Eng. Cockchafer, commonly called May bug or Doodlebug, Sw. Ollonborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, brick-red; thorax villous; abdominal segments white; cauda curved. *Fn.* 345.

Aldr. Ins. p. 454. t. superior. f. 2.

Mouff. Lat. p. 160. f. 2. Scarabaeus arboreus vulgaris.

Hoffn. Ins. t. 1. f. 11.

Merian. Lat. v. 1. p. 2. f. 4.

Goed. Belg. v. 1. p. 178. f. 78.

List. Goed. p. 265. f. 111.

Loqu. p. 379. n. 1. Scarabaeus maximus rufus, uropygio deorsum inflexo.

Mut. t. 18. f. 16.

Alb. Ins. t. 60.

Leuwenh. Arc. 1695. v. 1. p. 14. Molitor.

[357] See no. 454.

Pet. Gaz. p. 29. t. 19. f. 2. Scarabaeus arboreus major castaneus.
Raj. Ins. p. 104. n. 1. Scarabaeus arboreus vulgaris major.
Frisch. Germ. 4. p. 20. t. 14. Scarabaeus julii sive vitis.
Occurs in Skåne, where the larva consumes the roots of corn, and the winged creature the leaves of hedges and trees, especially those of beech, oak, and apple.
DESCR. This beetle belongs to the larger species. Head, thorax, and elytra are of a brick-red colour. Thorax villous. Each elytron with 4 elevated, slightly glabrous striae. Anus acuminate, curved down. Venter fuscous, with a pointed white macula laterally and beneath on each segment. Upper oral lip blunt.

393. SCARABAEUS *solstitialis* [*Amphimallon solstitiale* (Linnaeus, 1758). Eng. Summer chafer or European June beetle, Sw. Pingborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, brick-red; thorax villous; elytra pale deep yellow, with three parallel white lines. *Fn.* 346.
Mouff. Lat. p. 160. f. Scarabaeus lanuginosus arboreus alteri adfinis.
List. Mut. t. 18. f. 17.
Loqu. p. 380. n. 2. Scarabaeus alter ex flavo cinereus.
It. Gotl. 245. Ållenborre.
Pet. Gaz. p. 36. t. 22. f. 9. Scarabaeus pectinatus minor villosus.
Frisch. Germ. 9. p. 30. t. 15. f. 3. Scarabaeus junii sive solstitialis.
In Sweden: Ållenborre. In Skåne: Pingborre.
Appears towards evening in Roslagen, Öland, Gotland 245, and Skåne 238;[358] abundant.
DESCR. Entirely brick-red. Eyes black. Antennae lamellate. Pectus and abdomen hirsute. Elytra glabrous, rather pale, with three longitudinal, white lines, which often disappear in the dead beetle.

394. SCARABAEUS *fullo* [*Polyphylla fullo* (Linnaeus, 1758). Eng. Pine chafer, Sw. Valkare or Fläckig ollonborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines; each with seven equal antennal lamellae; body black, irrorated with white. *Fn.* 343.
Charl. Onom 46. Fullo.
Mouff. Lat. p. 160. f. 4. Fullo.
Act. N. Cur. dec. 2. *anm.* 6. *obs.* 239. Scarabaeus pictus.
Hoffn. Inst. 2. t. 7.
Frisch. Germ. 11. p. 22. t. 1 f. 1. Scarabaeus julii albo maculatus.
Raj. Ins. p. 93. n. 9. Scarabaeus Fullo plinii.
Occurs in the fields of Skåne, where it consumes the roots of plants.[359] In Holland this species was the most numerous insect of all that I collected in the dunes.

[358] References to Linnaeus's journeys to Öland and Gotland, and Skåne, resp.
[359] Occurs only occasionally in Sweden.

[DESCR.] Male with oblong, foliaceous antennae, but female with roundish ones. Clypeus truncated transversely in the anterior part.

395. SCARABAEUS *fasciatus* [*Trichius fasciatus* (Linnaeus, 1758). Eng. Eurasian bee beetle, Sw. Humlebagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, black, tomentose, light yellow; elytra with two connected deep yellow fasciae. [*Fn*. 348.]

Mouff. Lat. p. 161. f. 6.

Lives on flowers of lilac and dropwort; abundant.

DESCR. Head and thorax blackish, with dense, erect, grey hairs, just as also abdomen and legs. Elytra pale grey with three black fasciae, of which the middle one is narrower and medially interrupted; the other fasciae are broader, united, and extending through the elytral sutures. OBS. Sometimes the glabrous elytra are without this small, interrupted medial fascia.

396. SCARABAEUS *brunneus* [*Serica brunnea* (Linnaeus, 1758). Eng. Brown chafer, Sw. Brunborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, red-brown tending to brick-red; elytra striate; thorax with a scarcely visible spot on each side.

Occurs in Uppsala; less abundant.

DESCR. Stature as that of the orb-weaver, of a dark brown colour. Lip or clypeus flattened. Antennae longitudinally fissile, as in the pine chafer.[360] Thorax marked on each side with a fuscous, scarcely visible spot. Tibiae dentate. The head is posteriorly blackish.

397. SCARABAEUS *quisquilius* [*Cercyon quisquilius* (Linnaeus, 1761). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], without spines, jet-black, glabrous; elytra dark bluish grey tending to brick-red.

Lives in litter.

DESCR. The size of a milletgrass seed, ovate, glabrous, with the appearance of a scarab beetle. Legs pitch-black. Elytra whitish yellow tending to dark bluish grey.

398. SCARABAEUS *quadrimaculatus* [*Phalacronothus quadrimaculatus* (Linnaeus, 1761). Sw. Fyrprickig dyngbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, black, oblong; elytra with two red maculae.

Lives around houses; rather rare.[361]

DESCR. Body oblong, black. Clypeus of head projecting inwards. Elytra striate. Small macula in elytral corner near base and a larger macula towards elytral tip.

399. SCARABAEUS *farinosus* [*Hoplia philanthus* (Fuesslin, 1775). Eng. Welsh chafer, Sw. Fjällig ängsborre; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, black; pollen greenish; elytra relatively short.

Inhabits gardens; rather rare.

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[360] See no. 394.

[361] Not found in Sweden.

DESCR. Almost the size of a garden chafer,[362] entirely black, blunt, splashed over and almost covered with green speckles. Elytra shorter than abdomen.

400. SCARABAEUS *auratus* [*Cetonia aurata* (Linnaeus, 1758). Eng. European rose chafer or Green rose chafer, Sw. Gräsgrön guldbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, gold-coloured; second abdominal segment laterally unidentate.

Scarabaeus, body bronze green. *Fn.* 344.

Hoffn. Ins. 3. t. 6. *f. prior.*

Bauh. Ballon. 211. f. 3. Buprestis.

Worm. Mus. p. 342. Scarabaeus chlorochrysos.

Merret. Pin. p. 201. Smaragdulus vel Vindulus.

Frisch. Germ. v. 12. p. 25. t. 3. f. 1. Scarabaeus arboreus viridis sive Scarabaeus auratus dictus.

Raj. Ins. p. 76. n. 7. Scarabaeus major, corpore breviore, alarum elytris & thoracis tegmine crustaceo, colore viridi serici instar splendentibus.

In Småland: Guldsmed.

Lives as a larva underground, together with roots of plants and ant hills, and where plants are brought together in gardens. Having wings it delights in the flowers of peony.

401. SCARABAEUS *nobilis* [*Gnorimus nobilis* (Linnaeus, 1758). Eng. Noble chafer, Sw. Ädelguldbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, gold-coloured, smooth; abdomen punctate posteriorly with white.

Roesl. Ins. 2. *Scar.* 1. t. 3. f. 3. 4. 5.

Occurs in Sweden; rather rare.

DESCR. Half the size of the preceding species; entirely gold-coloured, silky and not glabrous. Thorax obovate. Abdomen punctate with white on the sides and posteriorly. Elytra are scattered with white speckles.

402. SCARABAEUS *variabilis* [*Osmoderma eremita* (Scopoli, 1763). Eng. Hermit beetle or Russian leather beetle, Sw. Läderbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, jet-black, opaque; elytra punctate with white.

Occurs in Sweden; rather rare.

DESCR. Very similar to the preceding species, but entirely black, except that there are some rather rare individuals with white elytral spots, which appear here and there.

[362] See no. 391.

403. SCARABAEUS *rufipes* [*Acrossus rufipes* (Linnaeus, 1758). Sw. Aftondyngbagge; Fam. Scarabaeidae, Eng. Scarab beetles, Sw. Bladhorningar], without spines, jet-black; antennae pale; elytra smooth. *Fn.* 356.

Lives in dung.

DESCR. It is small, although not the smallest. Entirely jet-black, glabrous; clypeus of head blunt. Antennae red-brown, especially outermost part of tip, otherwise pale red-brown. Legs with outermost segments pale red-brown. Elytra striate, black, posteriorly blunt or curved. Wings long.

404. SCARABAEUS *aquaticus* [*Hydrobius fuscipes* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar],[363] without spines, pitch-black; elytra striate; antennae whitish yellow, filiform. *Fn.* 357.[364]

Lives in water bodies and under water along with the predaceous diving beetle;[365] abundant.

DESCR. The size of a rather large rice seed. Colour entirely black, but less saturated, yet entirely fuscous below; on each elytron 10 very small striae.

405. SCARABAEUS *cervus* [*Lucanus cervus* (Linnaeus, 1758). Eng. European stag beetle, Sw. Ekoxe; Fam. Lucanidae, Eng. Stag beetles, Sw. Ekoxbaggar], jaws prominent, stretched out, apically bifurcate and laterally unifurcate.

Scarabaeus, two horns, mobile, equal, apically bifurcate, equipped with a ramus and denticles facing inwards. *Fn.* 337.

Mouff. Lat. p. 148. Cervus volans.

Aldr. Ins. p. 151. f. 1.

Jonst. Ins. t. 14. Scarabaeus 2. f. 1. 2.

Imper. Alt. p. 694. Cervus volans.

Charl. Onom. 46. Cervus volans platyceros.

Hoffn. Ins. 1. t. 6. & 2. t. 1.

Merrian. Europ. Gall. t. 168.

Merret. Pin. p. 201. Scarabaeus Cervus volans dictus.

Wagn. Helv. p. 236. Scarabaelaphus.

Olear. Mus. p. 27. t. 16. f. 5. Taurus volans.

Worm. Mus. p. 242. Scarabaeus cornutus.

Dal. Pharm. p. 398. Scarabaeus cornutus.

Raj. Ins. p. 74. n. 2. Scarabaeus maximus platyceros. Taurus nonnullis, aliis Cervus volans.

It. Oel. 69. Scarabaeus Cervus volans dictus.

In Sweden: Ekoxe, Hornoxe. In Blekinge: Horntroll.

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[363] See no. 766.

[364] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[365] Linnaeus only refers to *Dytiscus*, see nos. 764–779.

β *Scarabaeus*, jaws crescent-shaped with prominent teeth; thorax without projections. *Fn.* 338. Female.

Raj. Ins. p. 75. n. 3. Scarabaeus platyceros totus niger, cornibus brevibus unicum tantum ramum emittentibus, corpore oblongo & velut parallelogrammo.

Lives as a larva in rotten oak wood.

DESCR. Female of the same size as male. Mouth prominent with two jaws that are crescent-shaped, angular, prominent, black; on inner side they are armed with a double denticle; these denticles or their equivalents are double in each jaw, of which one is lower, the upper higher. Thorax smooth, convex, marginate, black, without any elevated margins. Elytra smooth, blackish, slightly purple tinted, marginate. Legs serrate. Thoracic margins anteriorly and posteriorly equipped with bluish grey, fine hairs.

406. SCARABAEUS *tridentatus* [*Prionus coriarius* (Linnaeus, 1758). Eng. Tanner beetle; Sw. Taggbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar],[366] jaws prominent, flat, black, with a lateral tooth raised in the jaws.

Scarabaeus, jaws resembling a small crescent, with prominent teeth; thorax tridentate on each side. *It. Oel.* 152. *Fn.* 339.

Occurs in Öland.

DESCR. This beetle has much, but not all, in common with the preceding species. Mouth with crescent-shaped, pointed jaws, as in the preceding species. Eyes reniform. Head, thorax, elytra, and abdomen blackish brick-red, with very small punctations, otherwise as in the preceding species, but pectus more hirsute. Thorax armed with three prominent denticles on each side. Antennae lamellate laterally, as in the preceding beetles. It is a quarter of the size of the previous beetle.

407. SCARABAEUS *caraboides* [*Platycerus caraboides* (Linnaeus, 1758). Eng. Blue stag beetle, Sw. Lundblåoxe; Fam. Lucanidae, Eng. Stag beetles, Sw. Ekoxbaggar], jaws prominent, crescent-shaped; thorax marginate.

Occurs in Uppsala. *Löfling.*

DESCR. Stature of a rather small ground beetle, bluish black. Thorax marginate. Jaws prominent, crescent-shaped. Antennal capitulum with a 4-laminated side. Legs black. Anterior femora truncated, with a white macula at base.

Dermestes

408. DERMESTES *lardarius* [*Dermestes lardarius* Linnaeus, 1758. Eng. Larder beetle, Sw. Fläskänger; Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], black; elytra anteriorly ash-grey. *Fn.* 360.

Goed. Belg. 2. p. 145. f. 4. Dermestes.

List. Goed. p. 276. f. 114.

Blank. Belg. p. 95. t. 11. f. K. L. M.

Raj. Ins. p. 107. n. 4. Scarabaeus antennis clavatis, clavis in angulos divisis, quartus.

366 See no. 647.

Frisc. Germ. 5. p. 25. t. 9. Scarabaeus lardi parvus, fascia transversali elytrorum nigro-fuscorum albida.

In Sweden: Änger.

Lives in carcasses, meat, and fat; dilacerates the skins of birds; an animal that is hated by ornithologists. The farmers wrap various things in a linen cloth which has been soaked in bleach and dried, so that the skin beetles[367] and *Teniae*,[368] etc., cannot touch them.

409. DERMESTES *elongatus* [*Nemozoma elongatum* (Linnaeus, 1761). Fam. Trogossitidae, Eng. Bark-gnawing beetles, Sw. Flatbaggar], black; elytra at base and posterior fascia dark bluish grey; antennae and legs rusty brown.

Occurs in Uppsala. *Is. Uddman*.

DESCR. Body longer than that of the other congeners, cylindrical. Thorax with head the length of the posterior part of body. Head anteriorly above the furrow exarated and almost cloven. Thorax cylindrical, broad. Basal third of elytra dark bluish grey and fasciae indistinctly dark bluish grey towards tip. Antennae clavate; club with three joints. Legs also rusty brown, shortish.

410. DERMESTES *undulatus* [*Megatoma undata* (Linnaeus, 1758). Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], black; elytra with double linear white undulating fasciae. *Fn.* 361.

Occurs in Uppsala; rather rare.

DESCR. The size, shape, and appearance of the first beetle, but elytra marked with double transverse, undulate white lines, of which the one is very remote from the other.

411. DERMESTES *pellio* [*Attagenus pellio* (Linnaeus, 1758). Eng. Fur beetle or Carpet beetle, Sw. Pälsänger; Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], black; sheath wings with two white spots. *Fn.* 362.

Frisch. Germ. v. 5. p. 22. t. 8.

Act. Ups. 1736. p. 117. n. 11. Dermestes niger, elytris puncto albo.

In Sweden: Mahl.

Lives in meat, clothes, food, and the walls of houses; larva with a pilose cauda.

DESCR. Body ovate, jet-black, with a white spot on each elytron, appearing as two white spots on the closed elytra on dorsum. Furthermore, if one looks closely, there are another 5 white spots, i.e. one at dorsal scutum, another on each side where the pectus is connected to the elytra, and a third linear spot on each elytron towards its base, which makes five minute spots, and in some beetles these spots are entirely absent, excepting the spot of the scutum. Venter, legs, and antennae clavate, all jet-black. When this animal is touched, frightened or feeling danger, it contracts its legs and head.

[367] Linnaeus only refers to *Dermestes*, see nos. 408–439.

[368] Linnaeus must mean *Tineae*, i.e. moths, since *Teniae*, tapeworms, cannot be found in fabric.

412. DERMESTES *pectinicornis* [*Ptilinus pectinicornis* (Linnaeus, 1758). Eng. Fan-bearing wood-borer, Sw. Kamhornad trägnagare; Fam. Ptinidae, Eng. Wood-borer beetles, Sw. Trägnagare], fuscous; antennae pinnate, deep yellow.

Lives ubiquitously in forests.

DESCR. Size barely twice that of a louse. Body cylindrical, fuscous or blackish, but not shining. Antennae light yellow, pinnate on each side. Thorax gibbous. Tibiae pale.

413. DERMESTES *clavicornis* [*Orthocerus clavicornis* (Linnaeus, 1758). Fam. Zopheridae, Eng. Ironclad beetles, Sw. Barkbaggar], black; antennae clavate, pilose.

Inhabits forests and meadows; rather rare.

DESCR. The size of a flea; colour black. Elytra furrowed with punctations. Antennae clavate, rather thick, perfoliate, pilose, the length of the thorax and head; hence very spectacular.

414. DERMESTES *pertinax* [*Hadrobregmus pertinax* (Linnaeus, 1758). Sw. Envis trägnagare; Fam. Ptinidae, Eng. Wood-borer beetles, Sw. Trägnagare], fuscous; antennae filiform.

Cassida, black; antennae setaceous; body rather smoothly rounded. *Fn.* 384.

Act. Ups. 1736. p. 17. n. 5. Dermestes corpore oblongo, elytris striatis, capite clypeato.

Lives in houses where it consumes clothes. Strange animal. When somebody touches it, it contracts its head and legs so that the head is protected by the pronotum[369] and does not appear. Bends the legs well so that the femora seem to be truncated. It remains for rather long in this trance, and no force or disturbance can impell it to flee or to move the smallest fiber; no water, no fire, no corrosive spirits, and nor anything else could stimulate the nerves so that this animal would not prefer this state, even if it might die. It does, however, not like the rays of the sun very much.

DESCR. Insect smoothly rounded, oblong, jet-black, opaque. Antennae entirely setaceous (not clavate as in the others). Elytra oblong, bent, with the minutest punctations; eight striae. Pronotum roundish, wider than long, uneven above, with a cruciform and rather prominent margin. At the posterior or lateral thoracic angles, there is often a light yellow spot covered with fine hairs. The abdomen is black, although it certainly appears entirely white in daylight.

415. DERMESTES *mollis* [*Ernobius mollis* (Linnaeus, 1758). Eng. Pine bark anobiid or Pine knot borer, Sw. Mjuk trägnagare; Fam. Ptinidae, Eng. Wood-borer beetles, Sw. Trägnagare], brick-red; eyes fuscous; antennae filiform.

Lives around villages; rather rare.

OBS. Intermediate between the leaf beetles[370] and *Dermestes pertinax*.[371]

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[369] See the com. to no. 452.

[370] Linnaeus only refers to *Chrysomela*, see nos. 506–578.

[371] See no. 414.

416. DERMESTES *capucinus* [*Bostrichus capucinus* (Linnaeus, 1758). Eng. Capuchin beetle, Sw. Rödvingad kapuschongbagge; Fam. Bostrichidae, Eng. Auger beetles, false powder-post beetles or horned powder-post beetles, Sw. Kapuschongbaggar], black; elytra and abdomen red; thorax apically notched, emarginate.

Lives in old wood, on which it gnaws and destroys.

DESCR. Larger than our other beetles. Head small, narrow and jet-black, basally retracted under and into the thorax. Antennae black with six segments and a club with three segments, truncated, turbinate at tip. Thorax black, convex, gibbous, scabrous, almost muricate, and apically notched on dorsum and anteriorly emarginate with a ciliate margin. Scutellum very small, black. Elytra red with punctations, and almost wrinkled. 4 posterior abdominal segments red. Legs black.

417. DERMESTES *calcographus* [*Pityogenes chalcographus* (Linnaeus, 1761). Eng. Six-toothed spruce bark beetle, Sw. Sextandad barkborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], jet-black; elytra truncated and denticulate, red-brown; sides and base blackish.

Lives in tree trunks.

DESCR. Very similar to the common spruce bark beetle.[372] Antennae brick-red. Body glabrous. Elytra truncated and denticulate, red-brown, but black at base and sides.

418. DERMESTES *typographus* [*Ips typographus* (Linnaeus, 1758). Eng. Eight-toothed spruce bark beetle or Eurasian spruce bark beetle, Sw. Åttatandad barkborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], brick-red, pilose; elytra striate, apically notched, truncated and denticulate. *It. Oel.* 26. 195. *Fn.* 366.

Raj. Ins. p. 100. n. 10. Scarabaeus antennis clavatis x.

Act. Ups. 1736. p. 17. n. 6. Dermestes pubescens, elytris apice erosis.

Lives in trunks of pine between bark and wood, where it forms winding labyrinths and impressed marks, and produces powder or farina.

OBS. Antennae clavate, neither perfoliate nor fissile, but tip ovate, solid, flattened. Elytra striate, posteriorly apically notched, marginate, tridentate.

419. DERMESTES *micrographus*[373] [*Pityophthorus micrographus* (Linnaeus, 1758). Eng. Common spruce bark beetle, Sw. Vanlig grangrenborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], brick-red, glabrous; elytra villous, apically blunt. *Fn.* 367.[374]

Lives in carcasses; also eats insects.

DESCR. Body smoothly rounded. The size of a rather large louse, entirely brick-red, glabrous. Elytra covered with long hairs at tip.

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[372] See no. 419.

[373] See Ch. *A small fauna of Sweden.*

[374] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

420. DERMESTES *poligraphus* [*Polygraphus poligraphus* (Linnaeus, 1758). Eng. Small spruce bark beetle, Sw. Större dubbelögad bastborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], brick-red, pilose; elytra greyish blue, somewhat blunt.

Lives under the cortex of dead trees and forms pinnate channels.

DESCR. Smaller than the common spruce bark beetle,[375] cylindrical. Elytra unstriated, more greyish blue, posteriorly blunt, barely red-brown.

421. DERMESTES *piniperda* [*Tomicus piniperda* (Linnaeus, 1758). Eng. Common pine shoot beetle, Sw. Större märgborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], black, weakly villous; elytra pitch black, entire; feet red-brown.

Lives inside the lower twigs of Scots pine, which it dries and causes them to fall. It is an assistant of Nature's gardener. Invades the twigs of the previous year, where it hides beneath the dry part.

DESCR. The size of the eight-toothed spruce bark beetle,[376] entirely black. Elytra striate, weakly villous, tips not apically notched. Only the feet rusty brown.

422. DERMESTES *violaceus* [*Necrobia violacea* (Linnaeus, 1758). Fam. Cleridae, Eng. Chequered beetles, Sw. Brokbaggar], bluish black; thorax villous. *Fn.* 373.

Occurs ubiquitously in Sweden.

DESCR. The size of a rice seed; entirely blue above, blackish beneath. Thorax villous.

423. DERMESTES *fenestralis* [*Rhizophagus fenestralis* (Linnaeus, 1758). Fam. Monotomidae, Eng. Root-eating beetles, Sw. Gråbaggar], chestnut-coloured; head blackish; thorax fuscous.

Chrysomela, fuscous; head blackish. *Fn.* 443.

Found on windows in springtime.

DESCR. The whole body is smaller than a flea, oblong; elytra not blunt. Legs paler than the body itself. Whole body blackish chestnut-coloured except for the blackish head.

424. DERMESTES *domesticus* [*Trypodendron domesticum* (Linnaeus, 1758). Sw. Husborre; Fam./subfam. Curculionidae/Scolytinae, Eng. Weevils/Bark beetles, Sw. Vivlar/Barkborrar], black; elytra grey and black marginally; thorax villous. *Fn.* 368.

Act. Ups. 1736. p. 17. n. 7. Dermestes cylindraceus; collari crasso subhirsuto; elytris testaceis.

Lives in various household furnishings and in houses.

DESCR. Body, small, cylindrical. Pectus thick, roundish, black, weakly hirsute. Elytra oblong, with blunt tip, brick-red; margin black all around. Wings dusky white. Abdomen and legs black. Antennae red-brownish. Elytra appear closed. Sheath wings grey, with a black suture. Lateral margins black

[375] See no. 419.

[376] See no. 418.

towards venter; anal area black above elytra. The size of a rather large louse. When touched it contracts and does not move.

425. DERMESTES *melanocephalus* [*Cercyon melanocephalus* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], black, ovate, glabrous; elytra grey. *Fn.* 369.

Lives ubiquitously among litter.

DESCR. Whole body is no larger than a flea. Appearance entirely as that of a scarab beetle,[377] but antennae horizontally perfoliate. Whole body including wings, thorax, head, and antennae jet-black, glabrous; only the elytra are chestnut-coloured. Related to the carrion beetles.[378]

426. DERMESTES *murinus* [*Dermestes murinus* Linnaeus, 1758. Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], tomentose, oblong, cloudy fuscous and ash-grey; scutellum deep yellow. *Fn.* 365.

Act. Ups. 1736. p. 17. n. 9. Dermestes oblongus elytris murinis vix striatis.

Frisch. Germ. 4. p. 34. t. 18. Scarabaeus erucae pinguis nigrae glabrae.

Lives in carcasses, meat, and rotten wood.

DESCR. Body oblong, convex, mouse-grey, ash-grey or rather black or maculate with an almost grey-white colour, smooth, not striated. Surface (seen through a magnifying glass) hirsute. Scutellar dorsum whitish yellow. Pectus and abdomen white beneath. Antennae flattened, perfoliate. Head not retractable but protruding beyond pectus when the head is bent. There is another beetle that is twice as large and more blackish. Could it be a female? It folds up its legs skillfully in a strange way. When hunched up it is ovate.

427. DERMESTES *pilula* [*Byrrhus pilula* (Linnaeus, 1758). Eng. Pill beetle, Sw. Vanlig kulbagge; Fam. Byrrhidae, Eng. Pill beetles, Sw. Kulbaggar], tomentose, ovate, cloudy fuscous.

Mordella, roundish, of a mouse-grey colour. *Fn.* 536.

Act. Ups. 1736. p. 18. n. 2. Mordella colore murino.

Lives in garden plantations and under stones.

DESCR. Half the size of a pea or ladybird;[379] of the same form as the latter, but colour entirely mouse-grey or dusky black. Thorax glabrous, more shining. Elytra barely manifestly striate; it jumps with its legs.

428. DERMESTES *scarabaeoides* [*Sphaeridium scarabaeoides* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], ovate, jet-black, glabrous; elytra with two indistinctly rusty brown maculae.

Lives on flowers.

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[377] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

[378] Linnaeus only refers to *Silpha*, see nos. 444–466.

[379] Linnaeus only refers to *Coccionella*, see nos. 470–505.

DESCR. The size of a rice seed. The appearance of a scarab beetle,[380] black, glabrous, agile. Rusty brown macula at elytral tip and base.

429. DERMESTES *scrophulariae* [*Anthrenus scrophulariae* (Linnaeus, 1758). Eng. Common carpet beetle or Buffalo carpet beetle; Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], tomentose, maculate; elytral suture red.

Coccinella, villous; margin of sheath wings curved; sutures red. *Fn.* 412.

Raj. Ins. p. 85. n. 37. Scarabaeus parvus, corpore subrotundo, collo oblongo, alarum elytris nigris binis punctis albicantibus notatis.

Act. Ups. 1736. p. 18. n. 3. Gyrinus nigricans major.

Lives on figwort 520;[381] abundant.

DESCR. *Ray's* description is the best. Abdomen white. Body ovate. Thorax broad, convex. Elytra blackish, irrorated with white. Sutures of elytra red, both between themselves and towards the thorax. Antennae clavate, entire, not split. This beetle and the following one are different from the others in terms of their whole appearance, since they are almost hirsute and not characterized by the conspicous or reflexed eytral margin.

430. DERMESTES *museorum* [*Anthrenus museorum* (Linnaeus, 1761). Eng. Museum beetle, Sw. Museiänger; Fam. Dermestidae, Eng. Larder beetles, Skin beetles or Carpet beetles, Sw. Ängrar], tomentose, maculate; elytra marked with a white spot.

Coccinella, villous; margin of sheath wings curved; thoracic macula white at the base on each side. *Fn.* 411.

Lives in museums, where it is destructive according to *Mr De Geer.*

DESCR. It is so similar to the preceding species that it can easily be mistaken for it, although it is three times as small. It is entirely black, and made cloudy by scarcely visible fuscous and white spots. Thorax with a white macula on each side towards base, and two larger white spots in the middle of each elytra; entirely whitish beneath. Thorax, head, and antennae black.

431. DERMESTES *paniceus* [*Stegobium paniceum* (Linnaeus, 1758). Eng. Bread beetle, Biscuit beetle or Drugstore beetle, Sw. Brödbagge; Fam. Ptinidae, Eng. Woodborer beetles, Sw. Trägnagare], rusty brown; eyes red-brown.

Lives in bread.

DESCR. Similar to the following species, but eyes red-brown and thorax broader.

432. DERMESTES *stercoreus* [*Typhaea stercorea* (Linnaeus, 1758). Fam. Mycetophagidae, Eng. Hairy fungus beetles, Sw. Vedsvampbaggar], oblong, glabrous, brick-red; eyes black. *Fn.* 375.

Lives in horse dung and on flowers of common rowan; abundant in early spring.

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[380] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

[381] *Scrophularia* 520 can be found in several works, and refers, for example, to the number in Linnaeus's journey to Öland and Gotland, which he undertook in 1741.

DESCR. Body the size of a louse, glabrous, brick-red, covered by wood-coloured hairs that are barely visible except through a magnifying glass.

433. DERMESTES *ferrugineus* [*Pityophagus ferrugineus* (Linnaeus, 1761). Fam. Nitidulidae, Eng. Sap beetles or Pollen beetles, Sw. Glansbaggar], oblong, semi-cylindrical; elytra relatively short.

Occurs in Uppsala. *Prof. Forsskål.*

DESCR. The size of a rice seed; entirely smooth. Elytra relatively short. Thorax quadrate; head darker.

434. DERMESTES *pedicularius* [*Kateretes pedicularius* (Linnaeus, 1758). Fam. Kateretidae, Eng. Short-winged flower beetles, Sw. Kullerglansbaggar], oblong, brick-red; elytra relatively short.

Chrysomela, watery brick-red, hemipterous. *Fn.* 441.[382]

Often lives in great numbers on flowers.

DESCR. The size of a louse. Body oblong, smooth. Antennae somewhat clavate. Elytra unstriated but truncated, and two abdominal segments uncovered.

435. DERMESTES *pulicarius* [*Brachypterolus pulicarius* (Linnaeus, 1758). Eng. Toadflax flower-eating beetle or Antirrhinum beetle; Fam. Kateretidae, Eng. Short-winged flower beetles, Sw. Kullerglansbaggar], oblong, black; elytra relatively short; abdomen pointed. *Fn.* 370.

Act. Ups. 1636. p. 16. n. 7. Scarabaeus minimus ater florilegus.

Raj. Ins. p. 108. Scarabaeus antennis clavatis, clavis in annulos divisis.

Lives abundantly on flowers; flies readily, runs with agility.

DESCR. Body oblong-ovate, jet-black; the size of a rather large louse. Abdomen flat, apically acuminate, longer than elytra. Antennae clavate, perfoliate. Wings white.

436. DERMESTES *psyllius* [*Nomen dubium*], ovate, black; abdomen blunt; thorax and elytra marginate.

Lives on flowers.

DESCR. The size of the toadflax flower-eating beetle,[383] but ovate, blunt, jet-black, smooth. Thorax and elytra strongly marginate; antennae clavate, although horizontally fissile, almost like those of scarab beetles.[384]

437. DERMESTES *scanicus* [*Cryptophagus scanicus* (Linnaeus, 1758). Fam. Cryptophagidae, Eng. Silken fungus beetles, Sw. Fuktbaggar], fuscous; thorax weakly brick-red. [*Fn.* 376.]

Occurs in Skåne. *Mr Leche.*

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[382] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[383] See no. 435.

[384] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

DESCR. Almost the size of a louse. Body entirely fuscous. Antennae clavate, perfoliate. Thorax and elytral base dark brick-red.

438. DERMESTES *colon* [*Nomen dubium*], thoracic sides light yellow; elytra grey with a black spot.

Lives in litter.

DESCR. Body ovate. Head black. Thorax fuscous, laterally light yellow. Elytra dark brick-red or grey with a medial, black spot at lower margin.

439. DERMESTES *niger* [*Dasytes niger* (Linnaeus, 1761). Fam. Dasytidae, Eng. Soft-winged flower beetles, Sw. Borstbaggar], oblong, pilose, black; elytra rather soft.

Inhabits forests.

DESCR. Almost the size of the common pine shoot beetle,[385] but entirely jet-black, elongate, glabrous, although thorax and elytral tips are scattered with erect hairs.

Hister

440. HISTER *unicolor* [*Hister unicolor* Linnaeus, 1758. Fam. Histeridae, Eng. Clown beetles, Sw. Stumpbaggar], entirely jet-black; elytra weakly striated.

Coccinella, jet-black, glabrous; elytra shorter than abdomen, curved at margin. *Fn.* 410.

Act. Ups. 1736. n. 10. Dermestes subrotundus ater nitidus; elytris brevibus.

Lives ubiquitously in soil, sand, and horse dung.

DESCR. Body quadrate, jet-black, shining, conspicuously glabrous. Elytra shorter than abdomen, somewhat truncated, conspicuously glabrous, absolutely entire, with some vaguely manifest striae. Thorax smooth, unstriated, but marked with an excavated line surrounding it. Head smallest of all parts, which it retracts entirely inside thorax when alarmed, as if it were beheaded, and it could not be forced by any kind of torment to extend the head again. Mouth forcipate with two pointed teeth. Antennae clavate, entire. Posterior of abdomen truncated, glabrous, slightly longer than elytra, markedly blunt. This animal varies in size.

441. HISTER *pygmaeus* [*Dendrophilus pygmaeus* (Linnaeus, 1758). Fam. Histeridae, Eng. Clown beetles, Sw. Stumpbaggar], entirely jet-black; elytra very smooth.

Lives in sandy places.

DESCR. It is smaller than a rice seed and the elytra are minimally striate, by which feature this animal differs from the previous one that is ten times as large.

442. HISTER *bimaculatus* [*Atholus bimaculatus* (Linnaeus, 1758). Fam. Histeridae, Eng. Clown beetles, Sw. Stumpbaggar], jet-black; elytra posteriorly red.

Lives on paths.

DESCR. Dusky rusty brown and subovate macula on posterior elytral sides. The size of a rice seed.

[385] See no. 421.

443. HISTER *4-maculatus* [*Hister quadrimaculatus* (Linnaeus, 1758). Fam. Histeridae, Eng. Clown beetles, Sw. Stumpbaggar], jet-black; elytra bimaculate.
Lives in manured areas.[386]
DESCR. It is larger than the first species. Large rusty brown, with an almost crescent-shaped macula on each elytron, but in some the macula is red and unequal towards elytral base, and in others bimaculate, red, crescent-shaped towards elytral tip.

Silpha

444. SILPHA *vespillo* [*Nicrophorus vespillo* (Linnaeus, 1758). Eng. Common burying beetle or Common sexton beetle, Sw. Rödbandad dödgrävare; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], oblong, jet-black; pronotum[387] orbicular, uneven; elytra with a double rusty brown fascia.
Scarabaeus, pronotum marginate; elytra black, with two transverse, red fasciae. *Fn.* 347.[388]
Mouff. Lat. p. 149. lin. 7. f. 3. *ordine perpendic. & app. tab. ult.* Cantharus tertius.
Imper. Alt. 692. t. 2. f. 2. Cantharis fasciata.
List. Mut. 117. f. 5.
Loqu. p. 381. n. 2. Scarabaeus majusculus niger, duabus luteis fasciis undulatis transversim ductis supra alarum thecas.
Blank. Belg. p. 168. t. 14. f. 1.
Frisch. Germ. 12. p. 28. t. 2. f. 2. Scarabaeus moschii odore.
Raj. Ins. p. 106. Scarabaeus foetidus 1. aldrovandi.
Lives around carcasses which it buries.

445. SILPHA *bipustulata* [*Nitidula bipunctata* (Linnaeus, 1758). Eng. Two-spotted sap beetle; Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], oblong, black; each elytron with a single red spot.
Dermestes, black; sheath wings with two red spots. *Fn.* 363.
Act. Ups. 1736. p. 17. n. 12. Dermestes niger, elytris puncto rubro.
Lives in fat and the like.

446. SILPHA *quadripustulata* [*Glischrochilus quadripunctatus* (Linnaeus, 1758). Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], oblong, black; elytra with two rusty brown spots each.
Dermestes, black; sheath wings with four red spots. *Fn.* 364.
Frisch. Germ. 9. p. 36. t. 19. Scarabaeus parvus luteo maculatus erucae lanigerae.
Lives in trees, also found on windows.

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386 Not occurring in Sweden.

387 See the com. to. no. 452.

388 See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

DESCR. Body oblong, entirely black; on each elytron two cubical or quadrate red longitudinal spots, so that these four spots are arranged as a quadrate on the convergent elytra.

447. SILPHA *seminulum* [*Agathidium seminulum* (Linnaeus, 1758). Fam. Leiodidae, Eng. Round fungus beetles, Sw. Mycelbaggar], ovate, jet-black, shining, without maculae; abdomen red.

Lives in rotten wood, especially that of spruce.

[DESCR.] When touched it adopts a globose shape. It is very small and most glabrous.

448. SILPHA *agaricina* [*Scaphisoma agaricinum* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], ovate, jet-black, markedly glabrous, hemipterous.

Lives in mushrooms; a fast runner.

DESCR. Body densely jet-black; appearance as that of the predaceous diving beetle;[389] the size of a columbine seed. Abdomen pointed. Elytra shorter than body. Antennae very slender. Legs pale.

449. SILPHA *russica* [*Triplax russica* (Linnaeus, 1758). Fam. Erotylidae, Eng. Pleasing fungus beetles, Sw. Trädsvampbaggar], oblong, red-brown; antennae, elytra, and pectus black.

Occurs in Finland.

DESCR. It is red, but the elytra are striate, glabrous like the eyes; antennae and pectus blue-black beneath.

450. SILPHA *littoralis* [*Necrodes littoralis* (Linnaeus, 1758). Eng. Shore sexton beetle, Sw. Stor asbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], jet-black; elytra smooth, with three elevated lines; pronotum[390] orbicular, shining.

Cassida, jet-black; elytra with three elevated lines; antennae anteriorly brick-red. *Fn.* 380.

Frisch. Germ. 6. p. 12. t. 5. Scarabaeus campestris.

Occurs in Turku[391] according to *Mr Starck*, and in Lund according to *Dr Leche*.

DESCR. Entirely black; on each elytron three longitudinal, elevated striae, of which the outermost is largest. Three outermost antennal segments rusty brown.

[389] Linnaeus only refers to *Dytiscus*, see nos. 764–779.

[390] See the com. to no. 452.

[391] I.e. Åbo.

451. SILPHA *atrata* [*Phosphuga atrata* (Linnaeus, 1758). Sw. Snäckätande asbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], elytra somewhat punctate, with three elevated, smooth lines; pronotum[392] entire anteriorly.

Cassida, black; elytra with three elevated, smooth lines, area between punctate; pronotum entire anteriorly. *Fn.* 385.

Inhabits forests.

DESCR. Pronotum somewhat convex, anteriorly hardly truncated, but rounded; on each elytron three equal, elevated striae, hardly dentate except for the marginal stria, which is larger and prominent. Whole animal jet-black, flattened and covered with the minutest punctations.

452. SILPHA *thoracica* [*Oiceoptoma thoracicum* (Linnaeus, 1758). Eng. Red-breasted carrion beetle, Sw. Rödsköldad asbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], black; elytra dark with a single elevated line;[393] pronotum[394] apically notched, brick-red.

Cassida, pronotum rusty brown; elytra with an elevated line.[395] *Fn.* 386.

Raj. Ins. 90. Scarabaeus priori similis parum canaliculatus, scapulis croceis.

Occurs in Uppsala.

DESCR. Very similar to the other beetles. Entirely jet-black, but pronotum anteriorly truncated, rusty brown, with deep yellow hairs. Elytra jet-black; a single stria on each elytron, elevated, pointed, once interrupted.

453. SILPHA *quadripunctata* [*Dendroxena quadrimaculata* (Scopoli, 1771). Sw. Fyrprickig asbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], black; elytra pale, with a black spot at base and middle; thorax emarginate.

Pet. Gaz. t. 12. f. 2.

Schreber. Ins. 2. f. 5. Silpha quadripunctata nigra, elytris exalbidis: maculis quatuor nigris.

Occurs in the German speaking countries[396] according to *Mr Schreber*, in Sweden according to *Mr*[397] *Åman*.

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[392] See the com. to no. 452.

[393] In reality there are three longitudinal ridges.

[394] Linnaeus here writes *clypeus*. He normally and appropriately uses the word *clypeus* for the head sclerite above the mouth, but in this case for the *pronotum* of the thorax. *Clypeus* in Latin means "round shield". Linnaeus also uses the term *scutum*, which in Latin means "oblong shield". In modern insect morphology *scutum* is reserved for the mesothorax (mesonotum) and metathorax, but Linnaeus uses the term more descriptively.

[395] See the com. above to no. 452.

[396] Lat. *Germania*.

[397] Lat. "J." is most likely a misprint for Lat. *D[ominus]*. Linnaeus mentions his student Nils Åman in *The Linnaean Correspondence*. See for example: Linnaeus to Abraham Bäck, 10 February 1758.

DESCR. The size of the red-breasted carrion beetle.[398] Body black. Thoracic sides brick-red. I have learnt that each elytron has a somewhat larger black spot at base and another in the middle.

454. SILPHA *opaca* [*Aclypea opaca* (Linnaeus, 1758). Eng. Beet carrion beetle, Sw. Gulhårig skinnarbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], fuscous; elytra concolorous, with elevated lines underneath; thorax anteriorly truncated.

Cassida, black; elytra with five smooth striae each on both sides; pronotum[399] emarginate. *Fn.* 383.

Occurs at Drottningholm. *B. Kallenberg.*

DESCR. Resembles entirely the red-breasted carrion beetle[400] in all respects; differs only regarding the smooth, elevated, pointed, and not in the least dentate elytral striae. The rest as in the preceding beetle.

455. SILPHA *rugosa* [*Thanatophilus rugosus* (Linnaeus, 1758). Sw. Skrovlig skinnarbagge; Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], blackish; elytra wrinkled, with three elevated lines; thorax emarginate.

Cassida, black; elytra with five striae and elevated spots. *Fn.* 379.

Act. Ups. 1736. p. 17. n. 3. Dermestes niger, punctis elevatis; collari caesio.

Raj. Ins. p. 90. n. 9. Scarabaeus inter cadavera frequens depressus parum canaliculatus undique niger.

Lives in the huts of Lapps and ubiquitously in carcasses. Destroys furs and meat of the Lapps, because it lives commonly in mantles. Along with the Lappish cockroaches,[401] consumes fish, when these are being dried; in a short time it often destroys all of them. Around us abundant at carcasses.

DESCR. Body oval, somewhat oblong. Head extended in front of the pronotum.[402] Pronotum convex, broad, anteriorly truncated; margin rather prominent, in some the surface is glabrous, jet-black, in others there is a pubescent, bluish grey fluff, and the surface is tuberculate with rather prominent, rough spots. Elytra with five elevated, longitudinal striae (numbered with the lateral striae included, without which there are only three striae); between each a longitudinal row of elevated punctations. Wings blackish, just as also the whole body is jet-black (except for some that have a bluish grey pronotum or head), opaque and slightly shining. Antennae clavate; last segment roundish; last but one lenticular; last but two conical and vertical. Larva glabrous, ovate-oblong, consisting of twelve segments; except for the head and cauda it is entirely jet-black; head small.

[398] See no. 452.

[399] See the com. to no. 452.

[400] See no. 452.

[401] See no. 863.

[402] See the com. to no. 452.

456. SILPHA *sabulosa* [*Opatrum sabulosum* (Linnaeus, 1761). Sw. Kornig sandsvartbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], fuscous; elytra with three elevated lines, dentate on each side; thorax weakly emarginated.

Cassida, black; elytra with five striae, dentate on each side; pronotum[403] emarginate. *Fn.* 382.

Act. Ups. 1736. p. 17. Cassida nigra, clypeo emarginato, elytris punctatis.

Lives commonly in sandy and dry lands; eats carcasses.

DESCR. Body black, weakly shining, but almost sordid ash-grey. Most of the head lies hidden under the pronotum. Antennae clavate; pronotum anteriorly emarginate. Elytra display five striae (marginals included) that are elevated and indistinctly denticulate towards the sides; they are, however, not punctate but as if tubercles or elevated punctations were attached to the striae.

457. SILPHA *obscura* [*Silpha obscura* Linnaeus, 1758. Fam. Silphidae, Eng. Carrion beetles or Burying beetles, Sw. Asbaggar], elytra punctate, with three elevated lines; pronotum[404] truncated.

Lives in litter.

DESCR. Body middle-sized, jet-black. Elytra covered with punctations and three elevated, scarcely visible lines. Thorax anteriorly truncated and not emarginate, posteriorly somewhat rounded.

458. SILPHA *ferruginea* [*Peltis ferruginea* (Linnaeus, 1758). Sw. Vanlig flatbagge; Fam. Trogossitidae, Eng. Bark-gnawing beetles, Sw. Flatbaggar], each elytron with six elevated lines; thorax emarginate.

Cassida, rusty brown; elytra with punctations and reciprocal, elevated striae. *Fn.* 387.

Occurs in Roslagen.

DESCR. Middle-sized; thoracic margin of sheath wings rather pale. Elytra striate and punctate between the striae.

459. SILPHA *grossa* [*Peltis grossa* (Linnaeus, 1758). Sw. Större flatbagge; Fam. Trogossitidae, Eng. Bark-gnawing beetles, Sw. Flatbaggar], black; elytra densely punctate, with three elevated lines; thorax emarginate.

Lives in litter.

DESCR. Body similar to that of *S. obscura*[405] but twice as large. Thorax posteriorly almost truncated, anteriorly strongly emarginate. Elytra with three elevated striae and between these striae dense punctations.

[403] See the com. to no. 452.

[404] See the com. to no. 452.

[405] See no. 457.

460. SILPHA *oblonga* [*Grynocharis oblonga* (Linnaeus, 1758). Sw. Avlång flatbagge; Fam. Trogossitidae, Eng. Bark-gnawing beetles, Sw. Flatbaggar], black; elytra with punctate striae, each with six elevated lines; thorax emarginate.

Cassida, jet-black; elytra with ten elevated striae having striate punctations. *Fn.* 381.

Lives sometimes in heaps of plants.

DESCR. Smaller than the previous species, narrower, entirely jet-black, glabrous. Structure of antennae and pronotum[406] as that of the previous beetle. Each elytron has ten elevated striae, each demarcated by a row of punctations.

461. SILPHA *aquatica* [*Helophorus aquaticus* (Linnaeus, 1758). Fam. Helophoridae, Eng. Water scavenger beetles, Sw. Halsrandbaggar], ash-grey; elytra weakly striated; thorax emarginate, longitudinally wrinkled, greenish.

Lives at water bodies.[407]

DESCR. Body roughly oblong, dusky ash-grey; the size of a bed bug.[408] Thorax anteriorly truncated, wrinkled. Elytra striate.

462. SILPHA *colon* [*Omosita colon* (Linnaeus, 1758). Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], black; elytra variously rusty brown; thorax emarginate and dorsally with two impressions.

Occurs ubiquitously.

DESCR. Body smaller than a bed bug.[409] Thorax barely emarginate. Elytra weakly brick-red and apically paler.

463. SILPHA *depressa* [*Omosita depressa* (Linnaeus, 1758). Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], rusty brown; elytra smooth; thorax emarginate.

Occurs in Uppsala.

DESCR. Body rusty brown; the size of a bed bug.[410] Elytra not striated.

464. SILPHA *grisea* [*Soronia grisea* (Linnaeus, 1758). Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], grey; elytra smooth; body emarginate.

Occurs ubiquitously.

DESCR. Body almost the size of a bed bug,[411] grey, and as if reticulate with a pale and brick-red colour.

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406 See the com. to no. 452.

407 Not occurring in Sweden.

408 See no. 909.

409 See no. 909.

410 See no. 909.

411 See no. 909.

465. SILPHA *aestiva* [*Epuraea aestiva* (Linnaeus, 1758). Fam. Nitidulidae, Eng. Sap beetles, Sw. Glansbaggar], brick-red, tomentose; thorax emarginate; eyes black.
Lives in litter.
DESCR. Body the size of a louse, smooth, glabrous, light yellow.

466. SILPHA *pedicularia* [*Nomen dubium*], black; elytra smooth; thorax marginate.
Lives in litter.
DESCR. Body the size of a flea, jet-black, glabrous. Thorax barely emarginate.

Cassida

467. CASSIDA *viridis* [*Cassida viridis* Linnaeus, 1758. Eng. Green tortoise beetle, Sw. Grön sköldbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], green. *It. Oel.* 153. *Fn.* 377.
Act. Ups. 1736. p. 17. n. 1. Cassida viridis, corpore nigro.
Volkam. Hesperid. v. 1. p. 166. f. 4. *bona*.
Raj. Ins. p. 107. n. 5. Scarabaeus antennis clavatis, clavis in annulos divisis.
Reaum. Gall. v. 3. t. 18. f. 15–19.
Blank. Belg. 89. t. 11. f. E. Testudo viridis.
Goed. Belg. 1. p. 94. t. 43. Testudo viridis.
List. Goed. 286. t. 116.
Merian. Eur. t. 115.
Frisch. Germ. 13. p. 35. t. 29. Coccionella clypeata viridis.
Inhabits gardens of gypsywort, mint, and other flowers, where the larva covered with its own excrement moves around.
DESCR. Body oval, convex above, flat beneath; the convex surface consists of elytra and pronotum,[412] which are green, smooth, and equal, just as if they consisted of a single shell divided by a lambdoid suture. Abdomen entirely black and head entirely concealed beneath pronotum. Antennae filiform and clavate, pale, and fuscous above. Legs pale. Elytra extending laterally to rather prominent margins so that together with the pronotum they show no vestige of the body.

468. CASSIDA *nebulosa* [*Cassida nebulosa* Linnaeus, 1758. Sw. Mållesköldbagge; Fam. Chrysomelidae, Eng. Tortoise beetles, Sw. Bladbaggar], cloudy pale.
Cassida, cloudy, pale, oval; pronotum[413] entire, covering head. *Fn.* 378.[414]
Goed. Belg. 1. p. 96. t. 44.
List. Goed. 287. t. 117.
Mut. t. 17. f. 10.
Raj. Ins. p. 88. n. 13. Scarabaeus minor, sordide fulvus, punctis & maculis aliquot nigris temere sparsis notatus.

[412] See the com. to no. 452.
[413] See the com. to no. 452.
[414] See Ch. *A small fauna of Sweden.* Wrongly "corrected" in *Fn. Su.* (1761), *Errata*, p. 560.

Inhabits gardens among oleraceous plants, e.g., balm.

DESCR. Entirely similar to the first species, but it is only half as large; colour grey, scattered with unequal, black spots and hence cloudy. Pronotum resembles a moon; anteriorly minimally emarginated, entirely smooth, not maculate, but pale. Elytra wrinkled, striate with punctations; striae curved and winding. Body black, entirely concealed by pronotum and elytra. Antennae black, filiform, and clavate; margin of the sheath wings prominent in this beetle, as also in the previous species.

469. CASSIDA *nobilis* [*Cassida nobilis* Linnaeus, 1758. Sw. Ädelsköldbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], grey; elytra with a blue, strongly shining line.

Inhabits gardens.

DESCR. Clypeus of head entire. Antennae subclavate, black, at base pale. Body pale grey above, black beneath. Blue, strongly shining line on each elytron along the longitudinal suture, which fades away together with life itself.

Coccinella

470. COCCINELLA *unipunctata* [*Cercyon unipunctatus* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], sheath wings whitish yellow and with a common black spot.

Lives on plants.

DESCR. Body black just as head and thorax. Elytra pale; one common spot medially on suture. Antennae black. Lateral margins of thorax lie hidden. Twice the size of a louse. Legs rusty brown.

471. COCCINELLA *bipunctata* [*Adalia bipunctata* (Linnaeus, 1758). Eng. Two-spot ladybird, Sw. Tvåprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[415] sheath wings red, with two black spots. *Fn.* 388.

Merian. Europ. 3. p. 58. t. 35. *f. infima. f.* p. 69. t. 136.

List. Loqu. p. 383. n. 8. Scarabaeus alter niger exiguus, pennarum crustis miniatulis, in quibus mediis duae tantum maculae nigrae.

Raj. Ins. p. 86. n. 2. Scarabaeus haemisphaericus minor; elytris e flavo rubentibus, singulis maculis sive punctis nigris media parte notatis.

Petiv. Gaz. p. 34. t. 21. f. 4. Coccinella anglica bimaculata sive minor rubra.

Bradl. Natur. t. 27. f. 4.

Frisch. Germ. 9. p. 33. t. 16. f. 4. Coccinella secundae magnitudinis, punctis coleoptrorum duobus.

Lives on alder, where the larva devours aphids.

DESCR. Abdomen, antennae, legs and everything facing the ground are black. Thorax black, with a lateral white macula. Two very small, white spots at base of thorax and likewise at insertion of antennae. Elytra red, each with a black spot medially.

[415] See nos. 500 and 504.

472. COCCINELLA *tripunctata* [*Coccinella undecimpunctata* (Linnaeus, 1758). Eng. Eleven-spot ladybird, Sw. Elvaprickig kustpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[416] sheath wings red, with three black spots.[417]

Lives on plants.

DESCR. Body a little smaller than that of the previous species. Thorax jet-black with a white macula on each side. Elytra red with a common spot at base and solitary spots at tip. Two very small white spots on top of head.

473. COCCINELLA *hebraea* [*Anatis ocellata* (Linnaeus, 1758). Eng. Eyed ladybird, Sw. Ögonfläckig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[418] sheath wings deep yellow, with six longitudinal, black maculae.

Occurs around us; rather rare.

DESCR. Body mostly larger than those of our ladybirds. Head black with two white spots. Thorax black, variegated with whitish. Elytra deep yellow; margin black, decorated with three black, rather broad, longitudinal lines, of which the outermost part is longer and curved at base and ends in a somewhat larger spot.[419]

474. COCCINELLA *quinquepunctata* [*Coccinella quinquepunctata* Linnaeus, 1758. Eng. Five-spot ladybird, Sw. Femprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings blood-coloured, with five black spots. *Fn.* 392.

Lives in cornfields and on blackthorn.

DESCR. Rather small. Two spots on each elytron (except for the macula at base which is black and white), of which the one in the middle is larger and the one at the tip smaller. Thorax black, white on each side. Forehead with two white spots.

475. COCCINELLA *trifasciata* [*Coccinella trifasciata* Linnaeus, 1758. Eng. Three-banded ladybird, Sw. Trebandad nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings red, with three black fasciae. *Fn.* 390.

Raj. Ins. 87. n. 9. Scarabaeus haemisphaericus minor, elytris ex albo liventibus: lineolis nigris in medio dorso pictis.

Inhabits the wasteland of Lapland.

DESCR. Thorax black, with white sides; two white spots at base of antennae. Elytra red with three transverse, rather broad, blunt, black lines, of which those nearest to thorax unite both elytra.

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[416] See nos. 478 and 480.

[417] *Coccinella undecimpunctata* may lack some or all of the black spots.

[418] See no. 484.

[419] Linnaeus here describes the very rare variety with longitudinal lines instead of ocellate spots. The main morph was described in *Syst. nat.* (1758) under the name *Coccinella ocellata*. See no. 480.

The other posterior two are not stretched out towards the inner elytral margin; hence they are interrupted in the middle of dorsum.

476. COCCINELLA *hieroglyphica* [*Coccinella hieroglyphica* Linnaeus, 1758. Eng. Hieroglyphic ladybird, Sw. Hieroglyfnyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings deep yellow, with two longitudinal, sinuate, black maculae.

Occurs around us; rather rare.

DESCR. It is very closely related to C. *decempustulata*.[420]

477. COCCINELLA *septempunctata* [*Coccinella septempunctata* Linnaeus, 1758. Eng. Seven-spot ladybird, Sw. Sjuprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings red, with seven black spots. *Fn.* 391.[421]

Hollar. Ins. t. 7. f. 8.

Alb. Ins. t. 61. f. C.

Goed. Belg. 2. p. 58. t. 18.

List. Goed. p. 268. f. 112.

Mut. t. 17. f. 2.

Mer. Europ. 2. p. 24. t. 11. f. p. 76. t. 149.

Petiv. Gaz. p. 33. t. 21. f. 3. Cochinella anglica vulgatissima sive rubra, septem nigris maculis punctata.

Raj. Ins. 86. n. 1. Scarabaeus subrotundus sive haemisphaericus rubens major vulgatissimus.

Frisch. Germ. 4. p. 1. t. 1. f. 4. Coccionella major.

In Sweden: Åkerhöns, Nyckelpiga, Jungfru Mariae Höna.

Lives in hedges and fields, most common; devours aphids.

DESCR. Head black; frons with two white spots. Thorax black, with white laterally on both sides. Elytra red; on each elytron three black spots equally well spaced, but at elytral base a black spot anteriorly white that unites both elytra. Antennae very small, clavate. Animal jet-black beneath. Larva ash-grey, scattered with black and white maculae. Pupa attached anally, deep yellow, covered with black maculae and as if burnt.

[420] See no. 501.

[421] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

478. COCCINELLA *novempunctata*[422] [*Coccinella undecimpunctata* Linnaeus, 1758. Eng. Eleven-spot ladybird, Sw. Elvaprickig kustpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[423] sheath wings red, with nine black spots.

Lives on plants.

DESCR. Head with two white spots on frons. Thorax black, with solitary, lateral, white maculae. Each elytron with two pairs of black spots and a common black one at the base, anteriorly white.

479. COCCINELLA *decempunctata* [*Adalia decempunctata* (Linnaeus, 1758). Eng. Ten-spot ladybird, Sw. Tioprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[424] sheath wings red-yellow, with ten black spots.

Lives on plants.

DESCR. Head black with a tridentate, white macula on frons. Thorax with four whitish maculae. Elytra red-yellow, with an exterior light yellow margin, marked by a black spot at base, and three other ones arranged transversely in the middle, and the smallest one at elytral tip. Legs pale.

480. COCCINELLA *undecimpunctata* [*Coccinella undecimpunctata* Linnaeus, 1758. Eng. Eleven-spot ladybird, Sw. Elvaprickig kustpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[425] sheath wings red, with eleven black spots. *Fn.* 394.

Act. Ups. 1736. p. 18. n. 2. Coccinella punctis undecim.

Lives in hedges.

DESCR. This species is among the smallest of its genus. Five small spots on each elytron; the sixth is larger stretching out towards both elytra. Thorax black with two white spots.

481. COCCINELLA *tredecimpunctata* [*Hippodamia tredecimpunctata* (Linnaeus, 1758). Eng. Thirteen-spot ladybird, Sw. Trettonprickig plattpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings deep yellow, with thirteen black spots. *Fn.* 395.

Act. Ups. 1736. p. 18. n. 3. Coccinella punctis duodecim.

Lives on horseradish.

DESCR. Body middle-sized, if the largest and smallest ladybirds are considered. Thorax black, on each side whitish, with a black spot. Elytra deep yellow. Six black spots on each elytron, of which two are almost contiguous in the middle of elytra. The single black spot at elytral base connects both shells; hence it is different. Abdomen deep yellow on the sides. Antennae, mouth, and tibiae deep yellow. Femora black.

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[422] Linnaeus here describes a variety of *Coccinella undecimpuntata* with only nine spots. See also nos. 472 and 480.

[423] See the com. to no. 472.

[424] See nos. 491 and 501.

[425] See nos. 472 and 473, the com. to. DESCR.

482. COCCINELLA *quatuordecimpunctata* [*Propylaea quatuordecimpunctata* (Linnaeus, 1758). Eng. Fourteen-spot ladybird, Sw. Schackbrädspiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[426] sheath wings light yellow, with fourteen black spots, some contiguous. *Fn.* 396.

Occurs in Skåne. *Mr Leche.*

DESCR. This one is among the small species of its genus. Elytra light yellow; on each elytron two equal, oblong spots, provided with a longitudinal, black suture, to which a quadrangular spot is connected in the middle of each elytron; then another spot is connected to the opposite one in a triangular form; there is a terminal, elytral spot also added to the longitudinal suture. Thorax on the back posteriorly covered with a large, black macula, anteriorly tetra-lobed.

483. COCCINELLA *sedecimpunctata* [*Tytthaspis sedecimpunctata* (Linnaeus, 1758). Eng. Sixteen-spot ladybird, Sw. Sextonprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings light yellow, with sixteen black spots; the three lowest ones connected.

Occurs in Kalmar. *Ad. Modéer.*

DESCR. It is smaller than our other ladybirds. Thorax light yellow, with 3 spots connected on each side. Elytra light yellow, round, arranged longitudinally with 5 spots close to dorsal suture, and another 5 spots inside lower margin, of which all, except for the first one, are connected. But there is doubt whether these connected spots should be counted as three or four. Femora black. Tibiae light yellow.

484. COCCINELLA *ocellata* [*Anatis ocellata* (Linnaeus, 1758). Eng. Eyed ladybird, Sw. Ögonfläckig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[427] sheath wings deep yellow, with fifteen ocellate, black spots. *Fn.* 398.

Occurs in the Academical Garden;[428] rather rare.

DESCR. It belongs to the somewhat larger species of its genus. Head black with two spots on frons. Thorax black, white on each side, with a black spot as in most of the others. On each elytron anteriorly 1 spot, then 3 and then another three; posteriorly none. When doubled (sc. on the two elytra), they amount to 14. Then add another black one which touches both elytra at elytral base! All spots black with a white ring. Abdomen and legs black. In others, a thin, longitudinal, black line on each elytron at tip.

485. COCCINELLA *novemdecimpunctata* [*Anisosticta novemdecimpunctata* (Linnaeus, 1758). Eng. Water ladybird or Nineteen-spot ladybird, Sw. Nittonprickig kärrpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings light yellow, with nineteen black spots.

Lives on plants.

DESCR. Body small. Thorax light yellow with 6 black spots, of which two are placed posteriorly. Elytra light yellow, each with 9 black spots and a single common spot at base. Legs light yellow.

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[426] See no. 492.

[427] See no. 473.

[428] I.e. the Linnaean Garden or Linnaeus's Garden in Uppsala.

486. COCCINELLA *22-punctata* [*Psyllobora vigintiduopunctata* (Linnaeus, 1758). Eng. Twenty-two-spot ladybird, Sw. Tjugotvåprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings light yellow, with twenty-two black spots. *Fn.* 401.

Lives in hedges.

DESCR. It can be numbered among the smaller species. Each elytron is light yellow with nine black, separated maculae, excepting two barely visible, indistinct. Thorax marked with seven maculae, of which the lowest one is larger than the others. But the first two at antennae are the smallest. Beneath, the margin of the sheath wings can be seen; it is prominent with a black spot medially on each side. Abdomen is black, as in the others.

487. COCCINELLA *24-punctata* [*Subcoccinella vigintiquatuorpunctata* (Linnaeus, 1758). Eng. Twenty-four-spot ladybird, Sw. Tjugofyraprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[429] sheath wings red, with twenty-four black spots. *Fn.* 402.

Occurs in Skåne. *Mr Leche.*

DESCR. It should be considered as being among the smallest of our ladybirds. On each elytron two distinct spots, and then 4, the middle parts of which are coalesced, moreover 3 that are entirely coalesced, hence almost a fascia; finally, 2 smaller, distinct spots.

488. COCCINELLA *25-punctata* [*Subcoccinella vigintiquatuorpunctata* (Linnaeus, 1758). Eng. Twentyfour-spot ladybird, Sw. Tjugofyraprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[430] sheath wings red, with twenty-five black spots.

Lives on plants.

DESCR. Thorax red with a single, black spot. Elytra with 12 black spots each, in addition to the first one. Antennae and legs red.

489. COCCINELLA *conglobata* [*Oenopia conglobata* (Linnaeus, 1758). Eng. Poplar ladybird, Sw. Plommonpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings red, with many black, almost contiguous spots.

Coccinella, sheath wings red, with many black spots, of which some are connected to the longitudinal, black suture. *Fn.* 403.

Frisch. Germ. 9. p. 34. t. 17. f. 6.

Lives in trees.

DESCR. Thorax anteriorly red, posteriorly black. Elytra red, with many quadrate, jet-black maculae or spots that are connected with each other and with the black inner margins of the sheath wing. Therefore, this ladybird differs only with respect to a few characters from the following species. Its larva is hispid.

[429] See no. 488.

[430] See no. 487.

490. COCCINELLA *conglomerata* [*Adalia conglomerata* (Linnaeus, 1758). Sw. Granskogspiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings whitish yellow, with many contiguous, black spots.

C*occinella*, sheath wings whitish yellow, with many black spots, all connected to the longitudinal, black suture. *Fn.* 404.[431]

Raj. Ins. 87. n. 5. Scarabaeus hemisphaericus flavus, maculis nigris variae figurae.

List. Loqu. 383. n. 9. Scarabaeus luteus, nigris maculis distinctus.

Frisch. Germ. 9. t. 17. f. 4. 5.

Lives in hedges.

DESCR. Very similar to the preceding species in size and appearance. But the thorax, which is black, has rather large white maculae laterally, and anteriorly a rather large white macula, and in the middle towards elytron it is white including a macula that is marked with two or three black spots. Each elytron is red and marked with a red cross, the base (at cauda) of which is emarginate and bifid; here almost no maculae are distinct, but all are merged to form this cross.

491. COCCINELLA *guttato-punctata* [*Adalia decempunctata* (Linnaeus, 1758). Eng. Ten-spot ladybird, Sw. Tioprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[432] sheath wings red, with fourteen white spots, three black ones.

Occurs ubiquitously, but nevertheless rather rare.

[DESCR.] Very similar to the ten-spot ladybird[433] so that I do not know whether the sex is the only difference.

492. COCCINELLA *quatuordecimpunctata*[434] [*Propylaea quatuordecimpunctata* (Linnaeus, 1758). Eng. Fourteen-spot ladybird, Sw. Schackbrädspiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[435] sheath wings red, with fourteen white spots. *Fn.* 397.

List. Loqu. 383. n. 10. Scarabaeus subrufus, cui in humeris pinnae maculatae, inque singulis alarum thecis septem maculae albae sunt.

Act. Ups. 1736. p. 18. n. 5. Coccionella punctis quatuordecim.

Inhabits small woods and gardens.

DESCR. Middle-sized. Thorax red with a thin, longitudinal, white line in the middle and a macula that is white on each side. Each elytron is marked with 7 spots; from thorax towards cauda the spots can be numbered in this order: 1, 3, 2, 1.

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[431] See Ch. *A small fauna of Sweden*.

[432] See no. 479.

[433] See no. 479. Linnaeus, however, writes C*occion. decempustulata*.

[434] The "correction" *14 guttata* in *Fn. Su.* (1761), *Errata*, p. 560, is in fact incorrect. It is *14-punctata* that is valid, which Linnaeus also wrote in *Syst. nat.* (1758). In the correction, he has confused *14-punctata* with his species C*occinella 14-guttata* that is found in *Syst. nat.* but not in *Fn. Su.*; today the latter is called C*alvia quatuordecimguttata* (Eng. Cream-spot ladybird, Sw. Fjortonfläckig lövpiga). In addition, in *Fn. Su.*, no. 502, there is also the C*occinella quatuordecimpustulata*.

[435] See no. 482.

493. COCCINELLA *sedecimguttata* [*Halyzia sedecimguttata* (Linnaeus, 1758). Eng. Orange ladybird, Sw. Sextonfläckig sköldpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings deep yellow, with sixteen white spots. *Fn.* 399.

Inhabits the forests of Luleå in Lapland.

DESCR. Thorax deep yellow, with 5 light yellow maculae without any middle line. Each elytron deep yellow, marked with eight spots; from thorax the spots can be numbered in this order: 2, 3, 2, 1. Head light yellow.

494. COCCINELLA *octodecimguttata* [*Myrrha octodecimguttata* (Linnaeus, 1758). Eng. Eighteen-spot ladybird, Sw. Artonfläckig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings red, with sixteen white spots, the first two crescent-shaped.

Occurs around us; rather rare.

495. COCCINELLA *vigintiguttata* [*Sospita vigintiguttata* (Linnaeus, 1758). Sw. Alnyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[436] sheath wings red, with twenty white spots. *Fn.* 400.

Lives on cultivated land.

DESCR. In size and appearance it agrees with the preceding two species. Thorax red; at lateral margin marked on each side with a thin, arcuate, white line; between these thin lines two upper, rather small, white spots on the back, and two other lower, white ones or closer to elytra and a little larger; on each elytron, which is red, there are ten white spots, of which two in the middle are almost contiguous.

496. COCCINELLA *oblongo-guttata* [*Myzia oblongoguttata* (Linnaeus, 1758). Eng. Striped ladybird, Sw. Ljusstreckad nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings red, with white lines and spots. *Fn.* 389.

It. Oeland. 148. Coccionella coleoptris rubris: lineis quatuor albis longitudinalibus.

Lives in hedges.

DESCR. Somewhat larger than all our others in this genus. Elytra and thorax red. On each side of thorax white; each elytron marked with two thin, longitudinal, white lines, of which the inner one is augmented by a whitish spot or interrupted in the middle, and consisting of two oblong spots.

497. COCCINELLA *obliterata* [*Aphidecta obliterata* (Linnaeus, 1758). Eng. Larch ladybird, Sw. Smutsfläckad nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], wings light yellow, with four red-brown spots, of which the anterior ones are indistinct.

Occurs ubiquitously; less abundant.

[436] See no. 505.

498. COCCINELLA *bipustulata* [*Chilocorus bipustulatus* (Linnaeus, 1758). Eng. Heather ladybird, Sw. Hednyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings black, with two red spots; abdomen blood-coloured. *Fn.* 409.

Frisch. Germ. 9. p. 34. t. 16. f. 6. Coccinella media nigra, punctis duobus rubris dorsalibus.

Lives on common rowan, in September, in Falun and elsewhere.

DESCR. Of average size; very similar to the previous species, almost circular in shape, entirely black, shining, somewhat prominent at margin. Thorax without maculae. Each elytron has a macula or broad, blood-coloured spot in the middle, often a merging of three spots. Abdomen inferiorly red-brownish, otherwise entirely black beneath. Back beneath elytra also blood-coloured. Pupa is covered with stiff hairs.

499. COCCINELLA *quadripustulata* [*Exochomus qudripustulatus* (Linnaeus, 1758). Eng. Pine ladybird, Sw. Fyrfläckig tallpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor], sheath wings black, with four red spots, inner ones longer. *Fn.* 408.

Lives on common nettle, raspberry, and other plants.

DESCR. It belongs to the rather small species and is ovate, shining, and jet-black. Head jet-black. Thorax jet-black with a pair of punctations on the back. Elytra black, each of which has a rather small red macula with a rusty brown spot near base of outer margin, and another rather small macula in the middle of elytron, towards inner margin, also red. The anus is red.

500. COCCINELLA *sexpustulata* [*Adalia bipunctata* (Linnaeus, 1758). Eng. Two-spot ladybird, Sw. Tvåprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[437] sheath wings black, with six red spots. *Fn.* 407.

Raj. Ins. p. 87. n. 4. Scarabaeus hemisphaericus minor, elytris nigris rubris maculis pictis.

Lives in trees; fairly rare.

DESCR. Thorax entirely black. Elytra jet-black, shining, each with three blood-coloured spots, of which the one nearest to the thorax is the largest; the outermost is situated at the very elytral tip, but the intermediate is situated closer to the inner margin than the outer margin. I have seen a variety without the third macula at *Mr de Geer's*.

501. COCCINELLA *decempustulata* [*Adalia decempunctata* (Linnaeus, 1758). Eng. Ten-spot ladybird, Sw. Tioprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[438] sheath wings black, with ten red-yellow spots.

Inhabits pastures.

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[437] Linnaeus here describes a variety of *Adalia bipunctata*, see the com. to no. 471.

[438] See no. 479.

502. COCCINELLA *quatuordecim pustulata* [*Coccinula quatuordecimpustulata* (Linnaeus, 1758). Sw. Fjortonprickig torrbackspiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor]; sheath wings black, with fourteen light yellow spots. [*Fn.* 406.]

Lives on flowers of greater knapweed; numerous.

DESCR. It should be numbered among the minor species. Elytra black with three pairs of red spots and an outermost odd one. Thorax blackish with a red spot on each side.

503. COCCINELLA *sedecimpustulata* [*Nomen dubium*], sheath wings black, with sixteen red-yellow spots.

Occurs around us; rather rare.

504. COCCINELLA *pantherina* [*Adalia bipunctata* (Linnaeus, 1758). Eng. Two-spot ladybird, Sw. Tvåprickig nyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[439] sheath wings black, with eight light yellow spots.

Occurs ubiquitously.

505. COCCINELLA *tigrina* [*Sospita vigintiguttata* (Linnaeus, 1758). Sw. Alnyckelpiga; Fam. Coccinellidae, Eng. Ladybirds or Lady beetles, Sw. Nyckelpigor],[440] sheath wings black, with twenty whitish spots. *Fn.* 405. *Uddm. Diss.* 11.

Occurs in Skåne and Småland.

DESCR. Frons of head white. Thorax black, white on each side with a black spot. Elytra black with black spots:[441] at base 1, after that 3, then 3, then 2, and finally 1.

Chrysomela

506. CHRYSOMELA *goettingensis* [*Timarcha goettingensis* (Linnaeus, 1758). Eng. Small bloody-nosed beetle or Lesser bloody-nosed beetle; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, black; legs violet.

Occurs in Skåne.[442]

DESCR. Body middle-sized, black or jet-black tending to violet, without visible spots. Feet and lowest antennal segment rusty brown.

507. CHRYSOMELA *tanaceti* [*Galeruca tanaceti* (Linnaeus, 1758). Sw. Renfanebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, jet-black, punctate; antennae and legs black.

Chrysomela, jet-black; contiguous punctations. *Fn.* 413. *It. Goth.* 270.

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[439] See the com. to no. 471.

[440] See no. 495. Linnaeus here describes the melanistic form *tigrina*.

[441] *Sic!* But cf. the description above: "sheath wings black, with twenty whitish spots".

[442] Not occurring in Sweden.

Lives abundantly on tansy on the Island of Gotland towards the south, called "Heligholmen" so that it is also spreading very slowly towards the stone-quarries of Burgsvik.

DESCR. It is among the larger members of this genus. Entirely jet-black and hardly shining. Thorax and elytra with the minutest, closely arranged punctations. The elytra are fairly flexuous, soft, and blunt. Antennae with eleven segments. Elytral margin prominent.

508. CHRYSOMELA *haemorrhoidalis* [*Nomen dubium*], ovate, black, shining; antennae whitish yellow at base; anus red.

Chrysomela, black, glabrous; antennae weakly light yellow at base. *Fn.* 414.

Occurs in Roslagen according to *De Geer* and in Skåne according to *Mr Leche*.

DESCR. Body middle-sized, with spots neither contiguous nor striated; on elytra the colour inclines somewhat towards blue.

509. CHRYSOMELA *graminis* [*Chrysolina graminis* (Linnaeus, 1758). Eng. Tansy beetle, Sw. Praktbladbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, green, shining; antennae and legs concolorous.

Chrysomela, green-blue. *Fn.* 419.

Act. Ups. 1736. p. 17. n. 1. Chrysomela viridi-caerulea nitida.

Occurs abundantly at the beginning of spring in grass meadows; found at the city of Härnösand in Ångermanland in 1732 and at Drottningholm in 1753.

DESCR. This animal is among the largest of its genus; strongly convex. Entirely of a green and blue colour, silky or gold-coloured. Elytra rather prominent at margin and distinguished by the minutest punctations, which are not widely spread (as they are in the previous species). These elytra are strongly convex and then become more concave beneath. Antennae and legs green. Abdomen green.

510. CHRYSOMELA *aenea* [*Plagiosterna aenea* (Linnaeus, 1758). Sw. Alglansbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, green, shining; abdomen posteriorly rusty brown.

Chrysomela, green, shining; thorax anteriorly excavated. *Fn.* 420.

Lives on alder.

DESCR. Shining all over. Thorax anteriorly not evenly truncated, but sinuously excavated. Punctation medially on sternum. Legs and antennae black; these are pale at base.

511. CHRYSOMELA *alni* [*Agelastica alni* (Linnaeus, 1758). Eng. Alder leaf beetle, Sw. Allövbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, violet; elytra with scattered punctations.

Chrysomela, black-purple, scattered with punctations. *Fn.* 416.

Frisch. Germ. v. 7. p. 13. t. 8. Scarabaeus alni caeruleus.

Occurs in spring and lives on alder, the leaves of which it consumes; numerous.

DESCR. It resembles C*hrysomela betulae*[443] like an egg an egg,[444] only larger, and the elytra are in fact covered with punctations, but these are scattered and not as on C*hrysomela betulae* arranged longitudinally into striae. Head and thorax black beneath, as also legs and antennae. Colour as that of the sweet violet.

512. CHRYSOMELA *haemaptera* [C*hrysolina haemoptera* (Linnaeus, 1758). Eng. Plaintain leaf beetle, Sw. Svartkämpsbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, violet; wings red.

Inhabits groves.

DESCR. Body somewhat larger, blackish, and weakly bluish above, blue beneath including legs. Antennae black. Wings red.

513. CHRYSOMELA *padi* [C*yphon padi* (Linnaeus, 1758). Fam. Scirtidae, Eng. Marsh beetles, Sw. Mjukbaggar], ovate, black; elytra apically dark bluish grey.

C*hrysomela*, elytra fuscous, posteriorly dark bluish grey. *Fn.* 434.

Lives on the European bird cherry.

DESCR. It scarcely exceeds the size of a flea. Body black. Thorax and elytra fuscous, but elytra paler and darker bluish grey posteriorly.

514. CHRYSOMELA *betulae* [*Nomen dubium*], ovate, violet; elytra striated with punctations.

C*hrysomela*, black-purple; striated with punctations. *Fn.* 415.

Act. Ups. 1736. p. 19. n. 3. Attelabus caeruleus nitidus oblongiusculus, subtus niger.

Lives on birch, on the leaves on which it feeds. The larva lives beneath the leaves of birch, the lower surface of which it consumes. It does not mind eating the rather dense and hard fibres or petioles of the leaves nor the epidermis or the upper surface of the leaf facing the sky. When nourished with food it raises or lifts the abdomen or cauda many times. When the tissue of the leaves has been thus consumed, the leaf appears as a pale, sapless patch; hence in autumn or August, the leaves of the birch are often maculate. The eggs are blunt, globose, numerous, arranged close together, shining, and often found on the lower surface of the leaves.

DESCR. The insect is bluish jet-black verging on purple, or specifically violet, entirely with the colour of the double-flowered sweet violet. Only venter, legs, and antennae black. Head and thorax are scattered with disordered, almost contiguous minutest punctations. But the elytral striae, which can hardly be perceived with the eyes, are marked by a row of remarkably minute punctations, the smallness alone of which distinguishes it from the next species.

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[443] See no. 514.

[444] Lat. *ovum ovo*. An expression often used by Linnaeus, i.e. the two beetles could not be more similar. See no. 1979. See also *The Linnaean Correspondence*.

The larva is sufficiently similar in appearance to those of the ladybirds found on rocket salad. Singular segments medially, equipped with a transverse row of warts, which are pilose at tip and secrete liquid. Abdomen is pale and also verrucose.

515. CHRYSOMELA *armoraciae* [*Phaedon armoraciae* (Linnaeus, 1758). Sw. Bäck-veronikebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, black, strongly shining, weakly bluish, jet-black beneath.

Lives on leaves of horseradish.

DESCR. Body the size of a hemp seed; shining with blue or green above; black beneath including feet, shining, ovate. At base, the middle of elytra appears like a pit.

516. CHRYSOMELA *hypochaeridis* [*Cryptocephalus hypochoeridis* (Linnaeus, 1758). Sw. Smaragdfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, gold-coloured; antennae black; elytra relatively short. *It. Scan.* 210.*

Lives on flowers of spotted cat's-ear; numerous in the fields of Skåne.

517. CHRYSOMELA *vulgatissima* [*Phratora vulgatissima* (Linnaeus, 1758). Eng. Blue willow beetle, Sw. Blå videbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong-ovate, blue; antennae rusty brown at base.

Inhabits small woods.

DESCR. Body the colour of *Ch. armoraciae*[445] or dark blue or shining blue, but more oblong than ovate.

518. CHRYSOMELA *staphylea* [*Chrysolina staphylaea* (Linnaeus, 1758). Sw. Rostbladbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, entirely dark brick-red. *Act. Ups.* 1736. p. 17. n. 3. *Fn.* 422.

Lives in rotten wood at the beginning of spring.

DESCR. It should be numbered among the larger species of this genus. Colour of the whole body, elytra, thorax, antennae, abdomen, and legs is one and the same, i.e. dark brick-red or chestnut-coloured. But most of all it resembles the seed of the bladdernut or pistachio tree. Owing to its singular colour, I do not know of anything else to which I would liken it. Outermost segment of antenna is ovate, the others shorter. Elytra are scattered with dispersed, minutest punctations. Thorax marked with a rather thick margin on each side and an impressed macula also on each side. Body ovate. Only eyes black. Antennae and legs redder. Tarsi of legs white beneath.

519. CHRYSOMELA *vitellinae* [*Phratora vitellinae* (Linnaeus, 1758). Eng. Brassy willow beetle, Sw. Bronsvidebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, bronze coloured.

Chrysomela, of a bronze colour. *Fn.* 426.

Lives on willow and aspen.

DESCR. Of average size; entirely bronze red or of a polished bronze colour or even of a blackish bronze colour.

[445] See no. 515.

520. CHRYSOMELA *polygoni* [*Gastrophysa polygoni* (Linnaeus, 1758). Eng. Knotweed leaf beetle, Sw. Trampörtsbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, blue; thorax, femora, and anus red-brown. *Fn.* 440.

Act. Ups. 1736. p. 19. Attelabus subrotundus caeruleo-nigricans; collari testaceo.

β *Chrysomela*, green, shining; thorax anteriorly even; elytra posteriorly contiguous. *Fn.* 421.

Occurs often in the countryside on prostrate knotweed. The egg-pregnant female swells so that abdomen becomes twice as large as the capacity of the elytra.

DESCR. This leaf beetle should be numbered among the smaller species. Head and elytra shining, green-red or brick-red tending to red, thick, convex. Antennae black, subclavate. Femora red-brown; tarsi black.

521. CHRYSOMELA *pallida* [*Gonioctena pallida* (Linnaeus, 1758). Sw. Blek videbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, entirely light yellow; eyes black.

Chrysomela, pale grey. *Fn.* 423.

Lives on willow.

DESCR. Colour of the whole body grey or brick-red. Very similar to *Ch. staphylea*[446] but a little smaller. Hind tarsi whitening beneath. Eyes black. A special mark by which it differs from *Ch. staphylea*[447] (except for the colour that is much paler) are the punctations longitudinally arranged in 9 rows on each elytron, while the elytra of the latter are scattered with punctations not distributed along the striae.

522. CHRYSOMELA *polita* [*Chrysolina polita* (Linnaeus, 1758). Sw. Vattenmyntebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate; thorax gold coloured; elytra red-brown.

Chrysomela, bronze green; elytra reddish. *Fn.* 427.

Lives on willow and aspen.

DESCR. Middle-sized. Head and thorax shine beautifully. Elytra red tending to brick-red with tips lacking maculae.

523. CHRYSOMELA *populi* [*Chrysomela populi* Linnaeus, 1758. Sw. Aspglansbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate; thorax bluish; elytra red, apically black.

Chrysomela, blue-black; elytra red, apically black. *Fn.* 428.

It. Oel. 38. Chrysomela thorace viridi caeruleo, elytris rubris apice nigris.

Lives on aspen, the leaves of which it consumes; numerous in early spring; hence there are leaf skeletons that look something like nets, and only consist of vessels. It often strips the trees of all their leaves.

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[446] See no. 518.

[447] See no. 518.

DESCR. It is among the largest members of its genus. Elytra red, scattered with the minutest punctations. The elytral tip has a very small, black macula. Thorax glabrous, blackish blue tending to green, as is also the case both with scutellum, abdomen, head, and legs. Antennae more blackish; thoracic margin distinct, with an impressed line. The curved, elytral margin surrounds the body closely. Wings and dorsum blackish. Elytra vary from red to light yellow, perhaps also because of sex. The antennae of this leaf beetle are not lamellate, as they are described by *Lister*, but, as the other authors tell us, filiform, with 11 segments and the most basal being the largest.

When the larva is touched, it secretes a kind of oily, whitish yellow fluid through the lateral tubercules; it is very fetid so it cannot be endured at all.

524. CHRYSOMELA *viminalis* [*Gonioctena viminalis* (Linnaeus, 1758). Sw. Svartbent videbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, black; thorax bimaculate; elytra brick-red.

C*hrysomela*, thorax and elytra red. *Fn.* 429.

Lives on goat willow.

DESCR. Body entirely black, just as head, antennae, abdomen, pectus beneath, and legs. But the thorax is red with two fuscous spots close to elytra, and elytra themselves red; on each elytron 9 rows of the minutest and scarcely visible punctations. The larva is black and very wrinkled, but the pupa is light yellow.

525. CHRYSOMELA *decempunctata* [*Nomen dubium*], ovate; thorax red, posteriorly black; elytra red-brown, each with approximately five black spots.

C*hrysomela*, red-brown above; two thoracic spots, black; many elytral spots. *Fn.* 436.

C*hrysomela*, red; each elytron with five black maculae each. *Fn.* 1354.

Lives on aspen.

DESCR. Body blackish. On each elytron 3 black spots or more. Thorax red; in the middle black posteriorly. Antennae serrate.

526. CHRYSOMELA *lapponica* [C*hrysomela lapponica* Linnaeus, 1757. Sw. Brokglansbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate; thorax green; elytra red, with a blue fascia placed between the spot and crescent-shaped macula.

C*hrysomela*, thorax green; sheath wings red with a blue cross. *Fn.* 431.

Act. Ups. 1736. p. 17. n. 4. Chrysomela, viridi-aurea, rubro variegata.

Occurs in Umeå in Lapland.

DESCR. As to form and appearance in some ways it resembles C*h. populi*.[448] Head and thorax of a bronze green colour. Antennae black, very similar to its congeners. Legs mostly black. Elytra, however, especially distinctive, very beautiful, and of a watery red colour, embellished with bronze blue fasciae so that the macula at elytral base is somewhat rounded, and not connected with the other maculae, only with the thorax. Inner elytral margin, longitudinally bronze blue, with a linear and transverse fascia in the middle of elytra, and a repand margin on each side constitutes a cross together with the longitudinal macula, which runs along the inner margin. Between the branches of

[448] See no. 523.

this cross and the elytral tip or behind the middle fascia there is an almost circular arch of the same colour as the other maculae, the one stem of which arises from the longitudinal macula at the inner elytral margin, and the other free stem is directed towards the anus. Head, thorax, and elytra are scattered with disordered, minutest punctations.

527. CHRYSOMELA *boleti* [*Diaperis boleti* (Linnaeus, 1758). Sw. Brokig svampsvartbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], ovate, black; elytra with three repand, light yellow fasciae.

Lives in tree fungi.

DESCR. Body somewhat larger, almost hemispherical, jet-black, glabrous. Elytra with three light yellow, repand, broad fasciae, of which the first one is at the base, and the last one at the tip is very small.

528. CHRYSOMELA *collaris* [*Chrysomela collaris* Linnaeus, 1758. Sw. Krypvideglansbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, violet; thorax with deep yellow margins and black spot.

Chrysomela, black-purple; thorax deep yellow on each side with a black spot. *Fn.* 417.

Act. Ups. 1736. p. 17. n. 5. Chrysomela violaceo-nigra, collari margine rubro.

Lives on willow.

DESCR. In size and appearance very similar to the alder leaf beetle.[449] Same colour all over. Elytra are scattered with the minutest punctations, which are winding and not arranged into striae. Thorax is smooth and glabrous, laterally red, longitudinally violet in the middle, as with elytra, or a little more blackish in the middle. Head, legs, and abdomen black. Black spot with a deep yellow colour in the middle of thoracic sides.

529. CHRYSOMELA *sanguinolenta* [*Chrysolina sanguinolenta* (Linnaeus, 1758). Eng. Toadflax leaf beetle, Sw. Gulsporrebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], ovate, black; elytra blood-coloured at margin.

Inhabits willow thickets.

DESCR. Body somewhat larger, black, shining. Thorax marginate. Elytra blood-coloured at outer margin. Legs black.

530. CHRYSOMELA *marginata* [*Chrysolina marginata* (Linnaeus, 1758). Sw. Större röllikebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], of a blackish filthy colour; elytra with a deep yellow margin.

Lives in stalks.

DESCR. The colour resembles that of the preceding species, but a quarter of its size, and thorax is not marginate.

[449] See no. 511.

531.[450] CHRYSOMELA *marginella* [*Prasocuris marginella* (Linnaeus, 1758). Sw. Smörblommebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, ovate, blue-black; thorax and elytra deep yellow at margin.

Chrysomela, bronze black above; sheath wings with a deep yellow margin. *Fn.* 437.

Raj. Ins. 99. Scarabaeus antennis clavatis tertius.

Occurs in Östergötland. *De Geer.* In Skåne. *J. Leche.* In Uppsala on the buttercup. *We.*[451]

DESCR. Middle-sized; outer margins of elytra and thorax whitish yellow. Thorax and head bronze black; jet-black beneath. Body is oval. Legs black.

532. CHRYSOMELA *coccinea* [*Endomychus coccineus* (Linnaeus, 1758). Eng. Scarlet endomychus or False ladybird; Fam. Endomychidae, Eng. Handsome fungus beetles, Sw. Svampbaggar], ovate; thorax emarginate, blood-coloured with a black macula; elytra blood-coloured with two black maculae.

Occurs around us; rather rare.

DESCR. Middle-sized. Head small, black. Thorax quadrangular, scarlet, medially black. Elytra scarlet; on each elytron two round maculae. Abdomen blood-coloured. Legs and antennae black.

533. CHRYSOMELA *minuta* [*Laccobius minutus* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], ovate, black; elytra, legs, and thoracic sides grey.

Lives in rather humid areas.

DESCR. The size of a louse, form of the ladybird,[452] and the appearance of the predaceous diving beetle.[453] Elytra pale whitish yellow with fuscous striae out of blackish spots, visible through a magnifying glass.

534. CHRYSOMELA *oleracea* [*Altica oleracea* (Linnaeus, 1758). Sw. Grön dunörtsjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping; body greenish blue.

Lives on vegetables; numerous.

DESCR. Larger than most of our jumping leaf beetles. Colour slightly shining greenish blue. Antennae black.

[450] Incorrectly no. 331 in the Latin.

[451] I.e. Linnaeus himself is the source.

[452] Linnaeus only refers to *Coccionella*, see nos. 470–505.

[453] Linnaeus only refers to *Dytiscus*, see nos. 764–779.

535. CHRYSOMELA *chrysocephala* [*Psylliodes chrysocephalus* (Linnaeus, 1758). Eng. Cabbage-stem flea beetle, Sw. Rapsjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping; body bluish jet-black; frons and the four anterior legs deep yellow.

Inhabits groves.

DESCR. Body a little larger than a louse, black. Frons, antennal base, and 4 anterior legs weakly rusty brown. Thorax jet-black, shining. Elytra striate, weakly bluish black.

536. CHRYSOMELA *hyoscyami* [*Psylliodes hyoscyami* (Linnaeus, 1758). Eng. Henbane flea beetle, Sw. Bolmörtsjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping; body greenish blue; legs brick-red; hind femora violet.

Mordella, ovate, blue, shining; tibiae rusty brown. *Fn.* 540.

Raj. Ins. 98. n. 9. Scarabaeus antennis articulatis longis sive Capricornus exiguus saltatrix.

Act. Ups. 1736. p. 18. n. 5. Gyrinus caeruleus nitidus.

Lives on recently planted cabbage, which it devastates; also eats henbane.

DESCR. The size of a rather large louse. Entirely blue, shining, convex, ovate. Femora thick, black, jumping, raised. Tibiae rusty brown.

537. CHRYSOMELA *atricilla* [*Longitarsus atricillus* (Linnaeus, 1761). Sw. Fältjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, black; thorax, elytra, and tibiae brick-red.

Lives on plants.

DESCR. The size of a flea. Head, pectus, abdomen, and hind femora jet-black. Antennae, thorax, elytra, and legs brick-red.

538. CHRYSOMELA *erythrocephala* [*Nomen dubium*], jumping; body bluish jet-black; head and knees of legs red-brown.

Inhabits groves.

DESCR. Body a little larger than a louse, jet-black. Frons rusty brown. Knees of the four anterior legs red-brown. Elytra bluish jet-black.

539. CHRYSOMELA *modeeri* [*Hippuriphila modeeri* (Linnaeus, 1761). Eng. Horsetail flea beetle, Sw. Fräkenjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, bronze coloured, shining; elytra apically light yellow; forelegs and posterior tibiae light yellow.

Occurs in Kalmar. *A. Modéer.*

DESCR. Body smaller than a flea, bronze coloured, shining. Elytra striate, tip broad light yellow. Antennae deep yellow at base.

540. CHRYSOMELA *helxines* [*Nomen dubium*], jumping; body bronze green; antennae and all legs brick-red.

Mordella, roundish, bronze jet-black. *Fn.* 539.

Occurs in the countryside at the beginning of spring, especially on the seed leaves of buckwheat.

DESCR. Much smaller than a flea. Whole beetle black above shining with blackish bronze. Elytra striate with punctations; entirely black beneath including legs.

541. CHRYSOMELA *exoleta* [*Longitarsus exsoletus* (Linnaeus, 1758). Sw. Vallörtsjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, whitish yellow; legs brick-red; abdomen and head fuscous.

Mordella, light yellow. *Fn.* 535.

Occurs in Skåne. *Mr Leche.*

DESCR. The size of a louse; appearance as that of a leaf beetle. Everything of the same red-yellow colour tending to light yellow including antennae, elytra, legs, trunk, and abdomen.

542. CHRYSOMELA *nitidula* [*Crepidodera nitidula* (Linnaeus, 1758). Sw. Aspjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping; elytra blue; head and thorax golden.

Lives on plants.

DESCR. Body including hind femora jet-black beneath. Head and thorax gold-coloured. Elytra blue, shining, striate. Legs and antennal bases rusty brown.

543. CHRYSOMELA *nemorum* [*Phyllotreta nemorum* (Linnaeus, 1758). Eng. Turnip flea beetle or Yellow-striped flea beetle, Sw. Gulrandig jordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, jet-black; elytra with a light yellow line; legs pale.

Mordella, oblong, jet-black; elytra longitudinally whitish yellow in the middle. *Fn.* 542.

List. Mut. t. 31. f. 29.

Act. Ups. 1736. p. 18. n. 6. Gyrinus niger, utrinque albus.

Lives on lungwort, toothwort, and on other plants in spring, especially on those belonging to class Tetradynamia.

DESCR. The size of a very large flea. Body oblong, black, minimally shining. Antennae setaceous, truncated, with eleven black segments except in some, i.e. the second and third segments, where they are white. Elytra black; each elytron longitudinally whitish yellow medially, but on all sides surrounded by a black margin on all sides, even at the longitudinal suture. Jumping legs pale. One can find individuals double the size as normal.

544. CHRYSOMELA *holsatica* [*Longitarsus holsaticus* (Linnaeus, 1758). Sw. Kärrspirejordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, black, shining; elytra with a red apical spot.

Mordella, black; elytra apically red. *Fn.* 544.

Act. Ups. 1736. n. 8. Gyrinus nitidus; elytrorum apice rubro.

Lives on vegetables; rare around us. In 1735, we observed that it was very abundant in Holstein.

DESCR. The size of a rather large louse; entirely jet-black, shining. Red spot at each elytral tip.

545. CHRYSOMELA *rufipes* [*Derocrepis rufipes* (Linnaeus, 1758). Sw. Vickerjordloppa; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], jumping, blue, obovate; head, thorax, legs, and antennae red-brown.

Lives on plants.

DESCR. Body twice as large as a louse. Elytra bluish jet-black, shining.

546. CHRYSOMELA *tridentata* [*Labidostomis tridentata* (Linnaeus, 1758). Sw. Tandsäckbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax blue; elytra brick-red.

Lives on aspen and willow.

DESCR. Body middle-sized. Head, thorax, and abdomen shining with a green or blue colour. Elytra pale brick-red. Antennae black, weakly pectinate. Legs blackish. There is a peculiar mark: the thorax is posteriorly tricuspid with a tooth in the middle at the position of the scutellum.

547. CHRYSOMELA *quadripunctata* [*Clytra quadripunctata* (Linnaeus, 1758). Eng. Four-spotted leaf beetle, Sw. Myrsäckbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax black; elytra red with two black spots; antennae short.

Mordella, oblong, black; sheath wings red; four black spots. *Fn.* 432.

Lives in the forests of Leufsta. *De Geer.* In the forests of Uppsala. *E. Ekelund.*

DESCR. Larger than all the others, more smoothly rounded, more oblong. On each elytron two rather large spots, of which the first one is more ovate, posterior one more transverse. Antennae almost pectinate. Thorax short.

548. CHRYSOMELA *bipunctata* [*Cryptocephalus bipunctatus* (Linnaeus, 1758). Sw. Tvåfläckig fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax black, shining; elytra red with two black spots; antennae long.

Lives in shrubs.

DESCR. Body black. Thorax jet-black, strongly shining. Elytra deep yellow tending to rusty brown with a small elevated black spot at base, and an orbicular, black macula almost in the middle of elytron. Antennae black, the length of the body.

β There is a variety with a single, oblong, black macula on elytra, somewhat shorter than elytra.

549. CHRYSOMELA *quadripustulata* [*Mycetophagus quadripustulatus* (Linnaeus, 1761). Sw. Stor vedsvampbagge; Fam. Mycetophagidae, Eng. Hairy fungus beetles, Sw. Vedsvampbaggar],[454] black above; elytra red-brown, bimaculate.

Occurs in Sweden. *Mr* C. *Solander.*

DESCR. Middle-sized or small. Whole beetle blackish above, rusty brown beneath. Head rusty brown. Thorax black with two impressed spots. Elytra black, with a rather large red-brown macula at base; another smaller red-brown macula in front of tip. Legs and abdomen rusty brown.

550. CHRYSOMELA *moraei* [C*ryptocephalus moraei* (Linnaeus, 1758). Sw. Johannesörtsfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax black; elytra black with two marginal, red maculae.

Occurs in Uppsala; rather rare. *Joh. Moraeus.*

DESCR. Head black. Frons with two brick-red spots. Thorax jet-black, smooth; anterior margin and posterior angles white. Elytra white, smooth. On each elytron, two light yellow maculae, i.e. one at the tip, the other at the outermost middle part of margin. Anterior femora weakly rusty brown on anterior side.

551. CHRYSOMELA *nitens* [C*ryptocephalus nitidus* (Linnaeus, 1758). Sw. Svart fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax shining blue; elytra blue; legs brick-red.

Lives on plants.

DESCR. Varies with green, blue, and blackish colours. The size of a rather large or small rice seed. Mouth light yellow. Legs brick-red, sometimes all, sometimes only anterior ones. Antennae light yellow at base.

552. CHRYSOMELA *barbareae* [C*ryptocephalus decemmaculatus* (Linnaeus, 1758). Eng. Ten-spotted pot beetle, Sw. Tiofläckig fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar],[455] cylindrical, ovate; antennae rusty brown at base and mouth.

Lives on foreign flowers. C. *Blom.*

DESCR. The size of a louse. Antennae barely shorter than body, rusty brown at base. Mouth whitish yellow. Thorax jetblack, smooth. Elytra black, not shining, weakly striated with spots, but apically glabrous. Legs black. Femora rather thick.

553. CHRYSOMELA *labiata* [C*ryptocephalus labiatus* (Linnaeus, 1761). Sw. Björkfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], subcylindrical, jet-black; thorax shining; mouth, forelegs, and antennal base inclining to deep yellow.

Lives on plants.

[DESCR.] The size of a louse.

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[454] See no. 811.

[455] See nos. 557 and 560.

554. CHRYSOMELA *sericea* [C*ryptocephalus sericeus* (Linnaeus, 1758). Sw. Sidenfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax, elytra, and legs blue.

C*hrysomela*, green, shining; thorax even; elytra with contiguous punctations, posteriorly dehiscent.[456] *Fn.* 418.

Act. Ups. 1736. p. 17. n. 2. Chrysomela viridis nitida.

Lives on willow.

DESCR. Insect silky, green, punctate. If observed through a magnifying glass, it has neighbouring punctations touching each other; at anus this animal is blunt. Elytra posteriorly dehiscent, even, less punctate. Antennae and legs blackish.

555. CHRYSOMELA *coryli* [C*ryptocephalus coryli* (Linnaeus, 1758). Eng. Hazel pot beetle, Sw. Röd fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax and elytra brick-red; legs black.

Lives on hazel.

DESCR. Body middle-sized. Head black, curved, with a small, arcuate, light yellow line in front of each eye. Antennae shorter than body. Thorax red-brown, glabrous. Elytra red-brown, blunt, striate, curved at tip.

556. CHRYSOMELA *pini* [C*ryptocephalus pini* (Linnaeus, 1758). Sw. Tallfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical, brick-red; elytra palish; legs concolorous; antennae fuscous.

Lives on pine.

DESCR. Body scarcely twice the size of a louse. Thorax notably glabrous. Elytra weakly striate.

557. CHRYSOMELA *bothnica* [C*ryptocephalus decemmaculatus* (Linnaeus, 1758). Eng. Ten-spotted pot beetle, Sw. Tiofläckig fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar],[457] cylindrical, jet-black; thorax with a longitudinal, red line.

Occurs in Västerbotten. *Mr* C. *Solander.*

DESCR. Body jet-black, notably glabrous. Frons rusty brown. Anterior thoracic margin and broadish dorsal line are rusty brown. Furthermore, legs mostly deep yellow.

558. CHRYSOMELA *cordigera* [C*ryptocephalus cordiger* (Linnaeus, 1758). Sw. Hjärtfallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax variegated; elytra red with two black spots.

Lives in shrubs.

DESCR. Body black, white in front. Antennae black, at base red-brownish. Thorax black, with a cordate, white macula next to scutellum; in front of this macula a white line. Thoracic sides white with a black spot. Scutellum black. Elytra red; two spots on each elytron, of which the anterior one is rather remote from the opposite. Femora black, white at tip on the outside. Tibiae rusty brown.

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[456] Botanical term meaning "divided" or "split".

[457] See the com. to no. 552.

559. CHRYSOMELA *sexpunctata* [*Cryptocephalus sexpunctatus* (Linnaeus, 1758). Eng. Six-spotted pot beetle, Sw. Sexfläckig fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], cylindrical; thorax variegated; elytra red with three black maculae.

Occurs around us; rather rare.

DESCR. Body middle-sized. Head, antennae, legs, abdomen, and everything beneath black. Thorax red above with two black maculae marginally and posteriorly. Elytra red; on each elytron 3 black spots, of which the anterior ones are equal, small; the single posterior one twice as large.

560. CHRYSOMELA *decem-punctata* [*Cryptocephalus decemmaculatus* (Linnaeus, 1758). Eng. Ten-spotted pot beetle, Sw. Tiofläckig fallbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar],[458] cylindrical; thorax variegated; elytra light yellow, each with five black spots.

Inhabits forests.

DESCR. Body light yellow above, black beneath. Frons medially light yellow. Antennae black-tipped. Thorax black laterally. Each elytron with five somewhat larger, black spots, of which the first is notably glabrous inferiorly, the last is uneven. Legs weakly rusty brown and black.

561. CHRYSOMELA *obscura* [*Bromius obscurus* (Linnaeus, 1758). Eng. Western grape rootworm, Sw. Mjölkebagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], subcylindrical; thorax black; elytra and legs black.

Inhabits forests.

DESCR. The same stature as that of a weevil.[459] Body jet-black and weakly shining. Thorax rounded.

562. CHRYSOMELA *longimana* [*Labidostomis longimana* (Linnaeus, 1761). Sw. Långarmssäckbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], subcylindrical, of a dark bronze colour; elytra light yellow tending to bluish; forelegs very long.

Lives on mountain clover; abundant. *Adolph Modéer, Master of Philosophy.*

DESCR. Body middle-sized; entirely bronze black including scutellum. Antennae black, weakly pectinate. Thorax posteriorly on each side quasi-mucronate. Elytra entirely dull light yellow with a mucronate spot at base. Forelegs longer.

563. CHRYSOMELA *merdigera* [*Lilioceris merdigera* (Linnaeus, 1758). Eng. Onion beetle, Sw. Lökbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, red; thorax cylindrical, impressed on each side. *Fn.* 425.

Blank. Belg. p. 91. t. 11. f. J.

Mer. Eur. 71.

Reaum. Gall. 3. t. 17. f. 1. 2.

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[458] See the com. to no. 552.

[459] Linnaeus only refers to *Curculio*, see nos. 579–637.

Lives on lily and lily of the valley; its larva when collected is covered with its own excrement.

DESCR. Regarding size it should be placed among the average species. Thorax, elytra, head above, and legs are red. But antennae, eyes, knees of legs, abdomen, scutellum, and head beneath, as also thorax beneath, are black. Thorax much narrower than elytra, smoothly rounded, but on each side it is marked with an impressed cavity. Elytra are striated with the minutest punctations. Varies as to the black head and legs.

564. CHRYSOMELA *tenella* [*Galerucella tenella* (Linnaeus, 1761). Eng. Strawberry leaf beetle, Sw. Älggräsbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], somewhat oblong, rusty brown; elytra light yellow at margin and thorax.

Inhabits forests.

DESCR. Resembles the willow leaf beetle,[460] but one third of its size. Thorax light yellow without maculae. Elytra rusty brown, marginate with light yellow. Antennae whitish yellow and not black. Legs light yellow. Abdomen fuscous.

565. CHRYSOMELA *nymphaeae* [*Galerucella nymphaeae* (Linnaeus, 1758). Eng. Waterlily beetle or Waterlily leaf beetle, Sw. Näckrosbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, fuscous; elytra whitish yellow at the rather prominent margin.

Chrysomela, sheath wings fuscous; margin pale light yellow. *Fn.* 444.

Lives on leaves of waterlily. Around June 24 it can generally be seen in the act of mating, especially in the Uppsala River. A most lazy and sluggish little animal.

DESCR. It is middle-sized. Head fuscous; thorax weakly light yellow, unequal. Elytra fairly flat, black, opaque, with punctations; at lateral and posterior margins (but definitely not towards suture) light yellow. Legs light yellow. Antennae alternatingly black and light yellow, half the length of the body. Wings fuscous with black veins. Abdomen whitish yellow at the rear with a wide black band on each segment, but appearing black on the side facing the ground.

Larva is black, glabrous, and light yellow beneath.

566. CHRYSOMELA *caprea* [*Lochmaea caprea* (Linnaeus, 1758). Eng. Willow leaf beetle, Sw. Sälglövbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong; thorax punctate with black; elytra grey; antennae long, black.

Chrysomela, black; elytra and thorax grey. *Fn.* 424.

Act. Ups. 1736. p. 19. n. 6. Attelabus subrotundus griseus.

Lives on willow; most numerous.

DESCR. Elytra grey, soft, curved, pellucid, scattered with the minutest, most crowded punctations. Head, as also antennae, legs, and the body itself black. Regarding size it is smaller than most of the others. Thorax with black maculae on the back.

[460] See no. 566.

567. CHRYSOMELA *asparagi* [*Crioceris asparagi* (Linnaeus, 1758). Eng. Common asparagus beetle, Sw. Gulfläckig sparrisbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong; thorax red with two black spots; elytra light yellow with cross and four black spots.

Chrysomela, thorax red, cylindrical with two black spots; sheath wings light yellow with a black cross. *Fn.* 430.

Frisch. Germ. 1. p. 27. t. 6. Scarabaeus cruciatus, erucae Asparagi.

Lives on branches of asparagus, which the larva consumes. It is still very rare around us, but most common in Hamburg. Gardeners believe it to have been introduced from Russia on specimens of asparagus, which it now devastates.

DESCR. It is smaller and much narrower than the preceding species. Head black-blue. Antennae black. Thorax narrow, cylindrical, with two black spots on the back. Elytra oblong, light yellow; red-yellow towards outer margin along its whole length. A cross-shaped, blue macula covers the sheath wings; the trunk covers the inner margin of both elytra along their whole length, but the branches are short and do not touch the outer elytral margin; at elytral base, an oblong, blue macula that is not united with the cross; towards elytral tip a rounded, blue spot that is often merged with the base of the cross.

Larva dusky black, glabrous.

568. CHRYSOMELA *duodecim-punctata* [*Crioceris duodecimpunctata* (Linnaeus, 1758). Eng. Spotted asparagus beetle, Sw. Svartprickig sparrisbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, red-brown; elytra with six spots; pectus and knees of legs black.

Frisch. Ins. 13. t. 28.

Lives on asparagus.

[DESCR.] Antennae black. Thorax without maculae.

569. CHRYSOMELA *phellandrii* [*Prasocuris phellandrii* (Linnaeus, 1758). Sw. Strimbladbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, black; thorax and elytra with two deep yellow lines.

Chrysomela, bronze black; elytra with two deep yellow lines. *Fn.* 438.[461]

Lives on stem and root of water dropwort. Pupa white, cylindrical, angular, blunt.

DESCR. It is entirely oblong, completely bronze black above. Thoracic lateral margin light yellow; in the middle and at outer margin of each elytron, a longitudinal, light yellow line. Tibiae and inner parts of femora light yellow. Antennae clavate, black. Differs from the other beetles by its oblong body shape.

[461] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

570. CHRYSOMELA *cerasi* [*Orsodacne cerasi* (Linnaeus, 1758). Sw. Körsbärsbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], somewhat oblong, grey; eyes black.

Chrysomela, dark bluish grey; eyes black. *De Geer. Fn.* 435.

Lives on leaves of European bird cherry.

DESCR. Small; entirely pale or dark bluish grey.

571. CHRYSOMELA *quadrimaculata* [*Phyllobrotica quadrimaculata* (Linnaeus, 1758). Eng. Skullcap leaf beetle, Sw. Frossörtsbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong; thorax and legs light yellow; elytra light yellow with two widely spaced, black maculae.

Inhabits small woods.

DESCR. Body oblong, entirely pale light yellow. Head except for the frons black. Elytra with a round, black macula at base and a larger one towards tip.

572. CHRYSOMELA *cyanella* [*Lema cyanella* (Linnaeus, 1758). Sw. Tistelbladbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, blue; thorax, cylindrical, laterally gibbous.

Inhabits forests.

DESCR. Body entirely dark blue, shining. Only antennae black.

573. CHRYSOMELA *melanopa* [*Oulema melanopus* (Linnaeus, 1758). Eng. Cereal leaf beetle, Sw. Rödhalsad sädesbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], oblong, blue; thorax and legs red-brown.

Inhabits small woods and meadows.

DESCR. Body oblong, blue. Thorax subglobose, rusty brown. Femora rusty brown. Tarsi black.

574. CHRYSOMELA *caraboides* [*Melandrya caraboides* (Linnaeus, 1761). Sw. Blåsvart brunbagge; Fam. Melandryidae, Eng. False darkling beetles, Sw. Brunbaggar], black; elytra weakly blue; tarsi rusty brown.

Occurs in Kalmar. *A. Modéer.*

DESCR. Same stature as that of a ground beetle,[462] but thorax anteriorly rounded and posteriorly almost trilobed with pointed angles. Elytra striate, blue-black.

575. CHRYSOMELA *corvina* [*Nomen dubium*], long, dark bluish grey; thorax posteriorly transverse.

Lives in trees.

DESCR. Body oblong, fuscous above, black beneath. Thorax subovate, posteriorly transverse, convex. Elytra somewhat emarginate.

[462] Linnaeus only refers to *Carabus*, see nos. 780–814.

576. CHRYSOMELA *ceramboides* [*Pseudocistela ceramboides* (Linnaeus, 1758). Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], long, black; elytra brick-red; antennae serrate.
Occurs in the countryside.
DESCR. Body black. Thorax ovate, anteriorly narrower, posteriorly somewhat transverse. Elytra elongate, brick-red, weakly striated.

577. CHRYSOMELA *murina* [*Isomira murina* (Linnaeus, 1758). Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], long, black; elytra and legs brick-red.
Occurs in Sweden; rather rare.
DESCR. Body half as large as the preceding species, ovate-oblong, black. Thorax looks like half an egg, convex, posteriorly transverse. Legs rusty brown. Elytra brick-red, with very small striations.

578. CHRYSOMELA *hirta* [*Lagria hirta* (Linnaeus, 1758). Sw. Ullbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], long, villous, black; thorax rather smoothly rounded; elytra brick-red.
Occurs in Sweden; abundant.
DESCR. Body elongate, woolly, black. Antennae half the length of the body. Thorax subcylindrical. Elytra brick-red, subdiaphanous, entirely woolly.

Curculio

579. CURCULIO *violaceus* [*Magdalis violacea* (Linnaeus, 1758). Sw. Violett tallsplintvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], violet; rostrum long; proboscis the length of the thorax. *Fn.* 451.
Occurs in Roslagen. *De Geer.*
DESCR. Middle-sized; striate with punctations.

580. CURCULIO *alliariae* [*Nomen dubium*], entirely violet; rostrum long. *Fn.* 468.
Lives on the stems of garlic mustard, which it perforates.
DESCR. The size of a flea. Head, thorax, and femora bluish black, but elytra more saturated, furrowed with striae of punctations. Does not jump; very similar to the preceding species but somewhat larger. Body (excepting elytra), not jet-black, as with the preceding species. Is this a difference owing to sex or age?

581. CURCULIO *cyaneus* [*Orobitis cyaneus* (Linnaeus, 1758). Sw. Violvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], jet-black; rostrum long; elytra violet; scutellum white.
Curculio, jet-black; elytra bluish black. *Fn.* 467.
Lives on willow.
DESCR. The size of a flea. Head, thorax, and legs jet-black, scattered with the minutest punctations. Elytra violet or bluish black; furrowed with striae of punctations. Legs rusty brown, but with which it does not jump. The scutellum is a white spot.

582. CURCULIO *aterrimus* [*Nomen dubium*], jet-black; rostrum long; elytra shining.
Curculio, jet-black; sheath wings weakly shining. *Fn.* 466.
Occurs in Skåne. *Mr Leche.*
DESCR. Half the size of a flea. Entirely jet-black, slightly shining, but elytra striate with spots. It is a quarter the size of the preceding species. Abdomen including elytra, ovate.

583. CURCULIO *cerasi* [*Magdalis cerasi* (Linnaeus, 1758). Sw. Körsbärssplintvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], jet-black; rostrum long; elytra opaque, oblong.
Curculio, jet-black; sheath wings rather long, opaque. *Fn.* 465. *It. Scan.* 355.
Lives on leaves of sour-cherry, the epidermis of which the larva eats; it devoured the leaves remarkably in 1750.
DESCR. Twice the size of a flea, entirely jet-black. Elytra with opaque, striate punctations, and not shining at all.

584. CURCULIO *acridulus* [*Notaris acridula* (Linnaeus, 1758). Sw. Jättegröevivel; Fam. Erirhinidae, Eng. Wetland weevils, Sw. Kärrvivlar], pitch-black; rostrum long; abdomen ovate. *Fn.* 463.
Lives on tetradynamous plants; abundant.

585. CURCULIO *purpureus* [*Nomen dubium*], purple, shining; rostrum long. *Fn.* 457.
Pet. Gaz. 35. t. 22. f. 55. Curculio miniatus minimus.
List. Loqu. 394. Scarabaeus ex toto coccineus.
Inhabits small woods. *De Geer.*
DESCR. Smaller than the preceding species; rostrum very long.

586. CURCULIO *frumentarius* [*Apion frumentarium* (Linnaeus, 1758). Sw. Rödspetsvivel; Fam. Apionidae, Eng. Seed weevils, Sw. Spetsvivlar], blood-coloured; rostrum long. *Fn.* 474.
Leuv. arc. 1697. Aug. 6. p. 83. f. 1.
Lives on grains of corn, very noxious.
DESCR. A little larger than a louse.

587. CURCULIO *granarius* [*Sitophilus granarius* (Linnaeus, 1758). Eng. Grain weevil or Granary weevil, Sw. Kornvivel; Fam. Dryophthoridae, Eng. Weevils, Sw. Borrvivlar], pitch-black, oblong; rostrum long; thorax punctate, the length of the elytra.
Curculio, red-brown tending to brick-red, oblong; thorax almost the length of the elytra. *Fn.* 462.
Raj. Ins. 88. Scarabaeus parvus sordide sive obscure fulvus, proboscide longa deorsum arcuata.

Lives in seeds of corn, on which it feeds, especially on the granular seeds of oat.[463]
DESCR. All parts entirely of the same colour, red-brown tending to brick-red. The body is entirely oblong and what is peculiar in this species is that the thorax is very long and large so that it is almost just as long as the elytra (but not entirely). Thorax scattered with punctations and elytra grooved by striae. The size of a louse.

588. CURCULIO *dorsalis* [*Dorytomus dorsalis* (Linnaeus, 1758). Sw. Krypvidehängevivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; elytra red with a black suture.
Curculio, black; elytra medially red-brownish. *Fn.* 475.[464]
Act. Ups. 1736. p. 16. n. 6. Curculio minimus fuscus, lateribus rufescentibus.
Lives on pilewort.
DESCR. The size of a louse. Entirely black or blackish ash-grey, especially at thorax, which is conspicuously covered with ash-greyish fine hairs. Elytra striate, mostly red-brown except for those parts of thorax and suture that are longitudinally adjacent and black; hence, when elytra are closed, the red-brown sides of the insect are visible. Femora black, but tibiae light yellow. Antennae dusky black; lowest segment not larger.

589. CURCULIO *pini* [*Pissodes pini* (Linnaeus, 1758). Eng. Pine weevil, Sw. Större tallvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; elytra brick-red; fasciae cloudy.
Curculio, rostrum long; elytra with rusty brown macula. *Fn.* 447.
List. Loqu. p. 393. n. 29. Scarabaeus majusculus scaber e leucophaeo nigroque varius.
Lives on Scots pine; yields resin. Very abundant around us. Walks slowly, grasps tightly, and adheres tenaciously. When taken captive it tries in vain to bite your skin with the mouth.
DESCR. Abdomen has a strong dorsal hump anally. The whole little animal is grey to black; whole body, rostrum, thorax, elytra, and legs with the minutest, contiguous punctations. Some brick-red markings on thorax consisting of very thin and fine hairs, also similar in shape to the fasciae made of two transverse lines, of which the one closer to thorax is interrupted at elytral suture. Antennal tips whitish yellow. Very similar to the large pine weevil,[465] but larger, and the elytral fasciae are less regular, but rather indistinct. The larva is covered by a subglobose net on the needles; inside this net it transforms.

[463] Lat. *Avenae*, see *Fn. Su.* (1761), *Errata*, p. 560.
[464] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.
[465] See no. 615.

590. CURCULIO *rumicis* [*Hypera rumicis* (Linnaeus, 1758). Sw. Skräppekokongvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], grey, cloudy black, oblong; rostrum long; legs and antennae weakly fuscous. [*Fn.* 454.]

Lives on acute dock and curly dock, and consumes the underside of the leaf; hence blotches and defects of the leaves. Hides under the leaves, where it fastens a netlike, light yellow nest, inside which it transforms.

DESCR. Middle-sized. Rostrum almost the length of the thorax. Sheath wings somewhat acuminate; no denticle on anterior femur, although it is thicker.

Larva fuscous above, light yellow beneath, except for the first three segments of body.

591. CURCULIO *lapathi* [*Cryptorhynchus lapathi* (Linnaeus, 1758). Eng. Poplar and willow borer, Sw. Alvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], variously white and black, muricate; rostrum long.

Lives especially on red dock.

DESCR. Body middle-sized. Sides of head, thorax, and elytra white, muricate. Elytra posteriorly contracted and whitish, but dorsally blackish, muricate. Abdomen blackish. Tibiae red-brownish.

592. CURCULIO *scaber* [*Romualdius scaber* (Linnaeus, 1758). Eng. Crusted root weevil, Sw. Marmorskorpvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], ash-grey; rostrum long; legs red-brown; elytra scabrous. *Fn.* 471.

Lives on plants and in soil.

DESCR. Twice the size of a louse. It is distinguished from the others because the fuscous elytra are stained with scarcely visible white; they are irrorated with very short setae that are rather erect, white, stiff.

593. CURCULIO *cupreus* [*Involvulus cupreus* (Linnaeus, 1758). Sw. Oxelkäkvivel; Fam. Rhynchitidae, Eng. Tooth-nosed snout weevils, Sw. Käkvivlar], dark bronze coloured and darker beneath; rostrum long.

Lives on plants.

DESCR. It is not much larger than a louse. The colour is that of dull copper, which is derived from the scattered copper-coloured hairs. Elytra striate with extensive punctations.

594. CURCULIO *t-album* [*Limnobaris t-album* (Linnaeus, 1758). Sw. Kärrsvartvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], jet-black; rostrum long; abdominal sides and hind sides deep yellow.

Occurs in Västerbotten. *Mr* C. *Solander.*

DESCR. Larger than a louse. White line forming the letter T on abdominal sides near pectus.

595. CURCULIO *ruficollis* [*Salpingus ruficollis* (Linnaeus, 1761). Fam. Salpingidae, Eng. Narrow-waisted bark beetles, Sw. Trädbasbaggar], rusty brown; rostrum long; elytra and base of head bluish jet-black.

Occurs in Kalmar. *Modéer.*

DESCR. Body larger than a louse. Head black with a light yellow rostrum. Thorax rusty brown. Elytra black, almost bluish, very strongly shining. Abdomen and legs rusty brown. Antennae slightly fuscous.

596. CURCULIO *quercus* [*Orchestes quercus* (Linnaeus, 1758). Eng. Oak flea weevil, Sw. Röd ekhoppvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], pale light yellow; rostrum long; eyes black.

Uddm. Diss. 25.

Lives on leaves of common oak; subcutaneous.

DESCR. It is larger than a flea. Elytra often with two fasciae that verge on white at base and suture and form an erect triangle.

597. CURCULIO *polygoni* [*Hypera arator* (Linnaeus, 1758). Sw. Nejlikekokongvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], brick-red; rostrum long; suture of sheath wings repand.

Syst. nat. 10. p. 375. n. 22.

Lives on prostrate knotweed. *T. Bergman.*

DESCR. Thorax rather dark brick-red with 3 light yellow lines. Elytra markedly striate, light yellow, with 3 black lines, frequently interrupted.

598. CURCULIO *viscariae* [*Sibinia viscariae* (Linnaeus, 1761). Sw. Tjärblomstervivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], roundish, ash-grey; rostrum long; thorax and elytra ash-grey with a green hue.

Lives on flowers of clammy campion; dries them by perforating the calyx. *Modéer.*

DESCR. Body as large as a louse, obovate, villous, ash-grey with a green hue. Head and legs black.

599. CURCULIO *bipunctatus* [*Ellescus bipunctatus* (Linnaeus, 1758). Sw. Videfrövivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], ash-grey; rostrum long; elytra with a black macula; tibiae whitish yellow. *Fn.* 470.

Lives on willow.

DESCR. This species is scarcely larger than a louse. Head and rostrum jet-black, glabrous. Thorax black clothed with ash-grey fine hairs. Each elytron black, striate, clothed with ash-grey fine hairs; each one medially marked with a black macula. Femora black. Tibiae and legs pale light yellow. Antennae light yellow; lowest segment not longer than the others.

600. CURCULIO *quadrimaculatus* [*Nedyus quadrimaculatus* (Linnaeus, 1758). Eng. Small nettle weewil, Sw. Brokig nässelvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar],[466] blackish; rostrum long; sheath wings with four whitish maculae.

Inhabits meadows.

DESCR. Body as large as a bed bug,[467] somewhat flat, ovate, blackish above, white beneath. Rostrum, antennae, and legs black. Elytra with one common macula at tip, and one at the position of the scutellum, and also a white spot at outer margin of each elytron.

601. CURCULIO *quinquemaculatus* [*Nomen dubium*], grey; rostrum long; sheath wings with five whitish maculae.

Inhabits forests.

DESCR. Body ovate, hardly larger than a louse, blackish. Tip of rostrum rusty brown, glabrous. Thorax and elytra weakly rusty brown. White macula at posterior part of thorax. Longitudinal white elytral suture with a white macula at base and another towards tip of each elytron.

602. CURCULIO *pericarpius* [*Rhinoncus pericarpius* (Linnaeus, 1758). Sw. Syrenäsvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], subglobose, cloudy; rostrum long; sheath wings with a heart-shaped, white macula. *Fn.* 461.

Act. Ups. 1736. p. 16. n. 7. Curculio minimus cinereus subrotundus obtusus.

Furthermore, often lives on figwort, especially woodland figwort.

DESCR. The size of a white mustard seed. The colour is definitely between black and fuscous, scabrous, striate, scattered with sparse, ash-grey wool. At elytral suture, near thorax, medially a white macula, from which emerges a thin white line at the same place on each elytron. Lowest antennal segment long. A black spot is often observed in front of the heart-shaped, white macula; there is also often a white macula at cauda.

603. CURCULIO *scrophulariae* [*Cionus scrophulariae* (Linnaeus, 1758). Eng. Figwort weevil, Sw. Ljus flenörtsvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], subglobose; rostrum long; sheath wings with two dorsal, jet-black maculae.

Curculio, subglobose, with two black spots on the longitudinal suture of sheath wings; thorax whitish. *Fn.* 460.

Reaum. Gall. v. 3. t. 2. f. 12.

Act. Ups. 1736. p. 16. n. 5. Curculio globosus, proboscide reflexa.

List. Loqu. 395. Scarabaeus exiguus cinereus, duabus maculis nigris in alarum thecis insignitus.

Lives on immature pericarps of figwort. Out of the brick-red vesicle it forms a globose, inflated, brick-red nest between the capsules, which nest is also similar to these capsules. Also occurs on mullein, but then it is more grey-white.

[466] See no. 613.

[467] See no. 909.

DESCR. Rostrum blackish. Thorax rather long, which, when frightened, it bends down maximally towards venter. Thorax whitish, clothed with ash-grey hairs and with two jet-black maculae on the back. Elytra glabrous, scored, ash-greyish tending to brick-red; each elytron with five striae, interjacent elevated black lines with white spots; in the middle of dorsum, on the closed elytra and on the actual suture, there is a jet-black spot with an annexed white spot on the posterior part; behind this spot there is another black spot, on the actual suture of the sheath wings, surrounded with whiteness anally; lowest antennal segment long. Legs black. Tarsi rusty brown.
Larva dark bluish grey, smeared all over with gelatin like a slug;[468] head black.

604. CURCULIO *paraplecticus* [*Lixus paraplecticus* (Linnaeus, 1758). Sw. Sprängörtsvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], cylindrical, palish ash-grey; rostrum long; elytra mucronate.

Curculio, fuscous, oblong; elytra straight, acuminate. *Fn.* 445.

Act. Ups. 1736. p. 16. n. 1. Curculio acuminatus, longus, fuscus.

Lives on water dropwort that is lethal to horses and water parsnip; within the stems a white larva with deep yellow head.

DESCR. Rostrum long and smoothly rounded. Thorax with punctations. Elytra less gibbous than in the others, straight, terminating in a tip or pointed angle, oblong; each elytron furrowed by ten longitudinal striae, and at the same time excavated by punctations; on each elytron, these striae are merged in equal pairs in front of tip. Whole body jet-black, covered with visible, ash-grey fine hairs; hence entirely ash-grey, often dusted with light yellow moisture. Antennae large; lowest segment the longest, red-brownish, black-tipped.

605. CURCULIO *betulae* [*Bycticus betulae* (Linnaeus, 1758). Eng. Metallic leaf roller, Sw. Björkrullvivel; Fam. Rhynchitidae, Eng. Tooth-nosed snout weevils, Sw. Käkvivlar]; rostrum long; thorax often spinose anteriorly; body gold-coloured green, concolorous beneath.

Curculio, blue-green, shining; antennae jet-black. *Fn.* 456.

Pet. Gaz. p. 77. n. 6. Curculio parvus splendide viridis (*figura Petiveri nobis deest*)?[469]

Frisch. Germ. 12. p. 17. t. 8. Scarabaeus nasicornis purpureo-auratus.

Lives on birch trees in Falun.

DESCR. This weevil falls among the middle-sized species. Whole head, thorax, rostrum, elytra, abdomen, and legs strongly shining blue-green, gilded or silky. At rear entirely blunt. Whole body scattered with the minutest punctations. Only eyes and antennae black, of which the lowest segment is in no way longer than the others, as it is in the other species. But antennae are clavate, as in the congeners. This weevil barely jumps.

[468] Linnaeus only refers to *Limax*, see nos. 2088–2094.

[469] Eng. "We lack Petiver's illustration".

606. CURCULIO *populi* [*Byctiscus populi* (Linnaeus, 1758). Eng. Aspen leaf roller, Sw. Asprullvivel; Fam. Rhynchitidae, Eng. Tooth-nosed snout weevils, Sw. Käkvivlar]; rostrum long; thorax anteriorly spinose; body of a fiery green colour, beneath bluish jet-black.

Lives on aspen.

DESCR. Very similar to the preceding species, but only half as large. Head and thorax gilded green, elytra weakly striated. Head beneath and pectus greenish black. Antennae black; lowest segment no longer than the others. Small fossa between eyes.

607. CURCULIO *beccabungae* [*Gymnetron beccabungae* (Linnaeus, 1761). Sw. Dyveronikavivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], fuscous; rostrum long; elytra slightly blood-coloured, at margin and cauda fuscous.

Lives on brooklime.

DESCR. Body black, the size of a louse. Thorax dusky ash-grey above. Elytra fuscous with a rusty brown disc or weakly rusty brown at each margin, even fuscous at margin of dorsal suture.

608. CURCULIO *alni* [*Orchestes alni* (Linnaeus, 1758). Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; legs jumping; elytra dark bluish grey with two dark maculae.

Curculio, dark bluish grey; sheath wings with four dark maculae. *Fn.* 473.

Lives within the leaves of alder.[470]

DESCR. Jumping; the size of a louse with two maculae on each elytron.

609. CURCULIO *fagi* [*Orchestes fagi* (Linnaeus, 1758). Eng. Beech leaf-miner beetle, Sw. Bokhoppvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; legs jumping; body jet-black; femora pale.

Curculio, jet-black with whitish femora. *Fn.* 469. *It. Scan.* 112.

Lives on beech.

DESCR. Elytra jet-black, striate, minimally bluish. Femora, often also tibiae, pale or whitish light yellow. Antennae black; lowest segment pale and scarcely longer than the others. Head and thorax with punctations.

610. CURCULIO *salicis* [*Tachyerges salicis* (Linnaeus, 1758). Sw. Videhoppvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; legs jumping; elytra jet-black with two white fasciae.

Lives on flowers of willow.

DESCR. Body the size of a rather large flea, jet-black. Elytra with a broadish, white, undulate fascia at base, and another linear, transverse fascia in the middle. Jumps with great agility like a flea.

[470] Not recorded from Sweden. Linnaeus is wrong about the tree species, probably a mere lapsus. This weevil lives as a leaf miner on elm.

611. CURCULIO *segetis* [*Orchestes pilosus* (Fabricius, 1781). Sw. Borsthoppvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; body pitch-black; elytra oblong; femora rusty brown. *Fn.* 464.

Lives on grains of corn, which it devastates.

DESCR. The size of a rather large flea, cylindrical, oblong, red-brown tending to black or pitch-black. Elytra striate. Thorax oblong with head the length of body. All femora clavate with dark rusty brown legs.

612. CURCULIO *pomorum* [*Anthonomus pomorum* (Linnaeus, 1758). Eng. Apple blossom weevil, Sw. Äppelblomvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; anterior femora dentate; body cloudy grey. *Fn.* 458.[471]

Frisch. Germ. 1. p. 32. t. 8. Curculio in floribus arboreis.

Lives on flowers of apples.

DESCR. Somewhat larger than a louse. Entirely cloudy or grey tending to ash-grey; double transverse fascia on top of elytra, of which the anterior one merges posteriorly and medially at right angles to the juncture of the sutures, and there is yet another, more transverse, posterior, fuscous fascia; near thoracic tip a white spot on the back. Antennae and legs slightly fuscous; on the inner side of the first pair of femora, at tip, a solid denticle that differs conspicuously from the others by a mark.

613. CURCULIO *ovalis*[472] [*Nedyus quadrimaculatus* (Linnaeus, 1758). Eng. Small nettle weewil, Sw. Brokig nässelvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar],[473] rostrum long; all femora dentate; body ovate, maculate with black and white.

Occurs ubiquitously.

614. CURCULIO *carbonarius* [*Magdalis carbonaria* (Linnaeus, 1758). Sw. Björksplintvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; all femora dentate; body oblong, black; elytra striate.

Inhabits meadows.

DESCR. Body entirely jet-black. Antennae apically weakly pilose. Thorax with dense, opaque punctations. Elytra deeply striate. Almost the size of the large pine weevil.[474]

615. CURCULIO *abietis* [*Hylobius abietis* (Linnaeus, 1758). Eng. Large pine weevil, Sw. Vanlig snytbagge; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; elytra fuscous, with two linear, interrupted, grey fasciae; femora dentate.

Curculio, weakly fuscous; elytra with cloudy brick-red fasciae. *Fn.* 446.

Lives on the bark of pine.

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[471] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[472] N.B. The homonym *Curculio ovalis* Marsham, 1802 valid as *Hadroplontus litura* (Fabricius, 1775).

[473] See no. 600.

[474] See no. 615.

DESCR. It is similar to the pine weevil,[475] but only half as large; entirely grey mixed with grey-white and grey. Antennae black. Rostrum almost longer than thorax. Thorax grey; in the middle of the back, a pair of white and barely visible spots. Elytra with intimately mixed colours of grey-white and grey, and a large rusty brown macula medially on each elytron. The scutellum or thoracic tip is white.

616. CURCULIO *nucum* [*Curculio nucum* Linnaeus, 1758. Eng. Nut weevil, Sw. Nötvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; body grey, the length of the rostrum.

Roesl. Suppl. 385. t. 67. f. 5. 6.

Lives within hazelnuts.

DESCR. Stature of the pine weevil,[476] but smaller. Rostrum filiform, very slender, curved, red, the length of the whole body. All femora equipped inwardly and apically with a denticle, larger in the first.

617. CURCULIO *druparum* [*Anthonomus rectirostris* (Linnaeus, 1758). Sw. Större häggblomvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; rostrum red; elytra brick-red, with scarcely visible fasciae.

Curculio, rostrum erect. *Syst. nat.* 10. p. 383. n. 54.

Lives in the kernels of European bird-cherry.

618. CURCULIO *quinquepunctatus* [*Tychius quinquepunctatus* (Linnaeus, 1758). Sw. Gökärtsbaljvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; elytra with a white suture and two maculae.

Occurs ubiquitously.

DESCR. Body as large as a louse, rusty brown, with a white abdomen. Thorax with an apical white spot. Elytral suture longitudinal, white; white spot on each elytron at anterior angle and another medially on elytron at tip.

619. CURCULIO *hispidus* [*Trachodes hispidus* (Linnaeus, 1758). Sw. Fjällig vedvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; body grooved, scattered with erect scales.

Lives on plants.

DESCR. Body as large as a louse, grey. Rostrum red. Thoracic back fuscous. Elytra deeply furrowed, hispid with erect scales. Fascia whitish, linear, medially wave-like. All femora dentate, thick, long.

620. CURCULIO *pedicularius* [*Anthonomus pedicularius* (Linnaeus, 1758). Sw. Hagtornsblomvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; rostrum red; elytra weakly fasciated with whitish.

Inhabits small woods.

[475] See no. 589.

[476] See no. 589.

DESCR. Twice as large as a louse. Rostrum red, straight, almost the length of the body. Elytra grey, indistinctly fasciated. All femora dentate.

621. CURCULIO *ligustici* [O*tiorhynchus ligustici* (Linnaeus, 1758). Eng. Alfalfa snout beetle or Lovage weevil, Sw. Klotöronvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora subdentate; abdomen subovate, mouse-grey.

Lives on loveage.

DESCR. Body somewhat larger, longitudinally maculate with ash-grey or fuscous. Abdomen more convex and ovate above than in the others. Femora clavate, indistinctly mucronate.

622. CURCULIO *tortrix* [*Dorytomus tortrix* (Linnaeus, 1761). Sw. Kal hängevivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum long; femora dentate; body brick-red; pectus fuscous.

Lives within contorted leaves of aspen; abundant.

DESCR. Body oblong, subcylindrical, brick-red or dull whitish yellow. Pectus blackish between the two last femora. Elytra very subtly striate. All femora dentate.

623. CURCULIO *pyri* [*Phyllobius pyri* (Linnaeus, 1758). Eng. Common leaf weevil or Pear leaf-eating weevil, Sw. Kopparlövvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora dentate, dusky bronze.

Curculio, dusky bronze; rostrum shorter than thorax. *Fn.* 449.

Act. Ups. 1736. p. 16. n. 2. Curculio acuminatus oblongiusculus aeneo-fuscus.

List. Loqu. p. 394. n. 31. Scarabaeus majusculus e nigro rufescens; *an?*[477]

Occurs around us, especially on leaves of common pear; fairly abundant.

DESCR. Rostrum flat, almost shorter than thorax itself. Head and thorax with the minutest, unequal punctations. Elytra oblong, deeply excavated with seven striae and interjacent (almost elevated), crenate striae. Head, thorax, and elytra (which are all black), with barely visible, hairlike, fiery golden hairs. Legs and antennae red-brownish; lowest segment longest. Female twice as large as the male, less fuscous, more shining.

624. CURCULIO *argentatus* [*Phyllobius argentatus* (Linnaeus, 1758). Eng Silver-green leaf weevil, Sw. Silverlövvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora dentate; body silvery green.

Curculio, each femur recorded with a denticle; body oblong, green. *Fn.* 459.

Lives on oak, hazel, nettle, birch, and especially on the leaves of meadow sweet.

DESCR. Middle-sized. Body oblong shining with green. Rostrum the length of thorax. Sheath wings somewhat pointed posteriorly.

[477] See the com. to no. 130.

625. CURCULIO *oblongus* [*Phyllobius oblongus* (Linnaeus, 1758). Eng. Brown leaf weevil or European snout beetle, Sw. Brun lövvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short, oblong; femora dentate; antennae, elytra, and legs rusty brown.

Lives on trees.

DESCR. Same size as the following species. Head black. Antennae and legs brick-red. All femora dentate. Elytra dark bluish grey-rusty brown, black at the lateral, curved margin.

626. CURCULIO *ovatus* [O*tiorhynchus ovatus* (Linnaeus, 1758). Eng. Strawberry root weevil, Sw. Jordgubbsöronvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora dentate; abdomen ovate, black; legs and antennae red-brown.

Inhabits orchards.

DESCR. Twice as large as a louse. Antennae and tibiae almost pitch black or dark red-brown. Thorax convex. Abdomen ovate and strongly convex.

627. CURCULIO *cervinus* [*Polydrusus cervinus* (Linnaeus, 1758). Sw. Fläckglansvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora dentate; antennae red-brownish at base.

Lives on plants.

DESCR. Same size as the preceding species, but not gibbous; colour sordid ash-grey. Antennae rusty brown with a black capitulum. Elytra appear scattered with indistinct, black spots.

628. CURCULIO *atomarius*[478] [*Bruchus atomarius* (Linnaeus, 1761). Sw. Kråkvickersfröbagge; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], rostrum short; elytra black, relatively short, with white speckles; forelegs red-brown; hindlegs dentate.

Lives on plants.

DESCR. Stature of the Chinese bruchid.[479] Body fuscous. Elytra jet-black, with white, scarcely visible punctations. Anal area whitish. Antennae somewhat thickened, black, at the rather narrow base red-brown. Hind femora equipped with a tooth.

629. CURCULIO *viridis* [C*hlorophanus viridis* (Linnaeus, 1758). Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora without spines; body green, dark above and more light yellow beneath.

Curculio, green, opaque; legs and antennae more fuscous. *Fn.* 455.

Inhabits forests.

DESCR. The size of the common leaf-weevil,[480] watery green, not shining, striate beneath with greenish light-yellow. Antennae black or red-brownish.

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[478] N.B. The homonym *Curculio atomarius* Olivier, 1807 valid as *Polydrusus aeratus* (Gravenhorst, 1807).

[479] *Curculio chinensis*, i.e. *Callosobruchus chinensis* (Linnaeus, 1758).

[480] See no. 623.

630. CURCULIO *lineatus* [*Sitona lineatus* (Linnaeus, 1758). Eng. Pea leaf weevil, Sw. Randig ärtvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], grey; rostrum short; thorax with three paler striae. *Fn.* 450.

Inhabits gardens and meadows; abundant.

DESCR. Twice as large as a louse. Body entirely grey. Lowest antennal segment red-brownish. Thorax black on sides and on dorsum; inside this blackness a grey colour is drawn resembling striae; one line on the back and then yet another on each side; hence the thorax appears fuscous, furrowed with three longitudinal, pale or ash-grey lines. Eyes black. Elytra ash-grey; each furrowed with 4 striae. Rostrum short, distally of antennae very short and almost non-existent.

631. CURCULIO *incanus* [*Brachyderes incanus* (Linnaeus, 1758). Eng. Grey pine weevil, Sw. Gråvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], ash-grey, oblong; rostrum short; elytra somewhat blunt. *Fn.* 452.

List. Loqu. p. 394. n. 30. Scarabaeus fuscus, lanugine incanus.

Inhabits grassy places; abundant.

DESCR. It is a little smaller than the preceding weevils, oblong, jet-black, but with very fine hairs spread all over; hence ash-grey verging on black. Elytra oblong, not pointed, as in the first species, with eight concave, punctate striae on top. Legs and elytra concolorous. Antennae red-brownish at base; lowest segment longest.

632. CURCULIO *albinus* [*Platystomos albinus* (Linnaeus, 1758). Eng. Bird-dropping weevil, Sw. Alplattnos; Fam. Anthribidae, Eng. Fungus weevils, Sw. Plattnosvivlar], black; rostrum short; frons and anus white; thorax tuberculate.

Lives on plants.

DESCR. Rostrum somewhat short, flat, lacteous above. On back of thorax three mucronate tubercles transversely. Elytra dusky grey with many mucronate spots and lacteous tip. Legs and antennae with white and blackish rings; these antennae the length of the body.

633. CURCULIO *cloropus* [*Rhyncolus ater* (Linnaeus, 1758). Sw. Granvedvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar],[481] black; rostrum short; antennae and tibiae rusty brown.

Lives on plants.

634. CURCULIO *rufipes* [*Polydrusus tereticollis* (De Geer, 1775). Sw. Marmorglansvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], ash-grey, oblong; rostrum short; legs red-brown. *Fn.* 453.

Lives on plants.

DESCR. Regarding the form, size, and colour it is so similar to the grey pine weevil[482] that it could be mistaken for it, but legs, tibiae, and femora are brick-red tending to red, naked, and not scattered with any ash-grey fine hairs. Claws or the two scales on all feet, at the beginning of the claws, are black only. Basalmost antennal segment longest. Could it be a female of the preceding species?

[481] See no. 637.

[482] See no. 631.

635. CURCULIO *nebulosus* [*Coniocleonus nebulosus* (Linnaeus, 1758). Sw. Hedspolvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], oblong, grey-white; rostrum short; elytra with oblique, black fasciae.

Curculio, variably white and black; proboscis somewhat flat, carinate, the length of the thorax. *Fn.* 448.

Frisch. Germ. 11. p. 32. t. 23. f. 3. Curculio brevirostris.

Occurs in Roslagen.[483]

DESCR. Colour varied with snow-white and black, as if forming oblique fasciae. Thorax weakly rusty brown.

636. CURCULIO *ruficornis* [*Magdalis ruficornis* (Linnaeus, 1758). Eng. Plum weevil, Sw. Rönnsplintvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar], rostrum short; femora without spines; body jet-black; thorax bituberculate; antennae red.

Lives in perforated, dry wood; gregarious.

DESCR. Body as large as a flea, scattered with ash-grey powder which can easily be wiped off. Antennae clavate, red-brown, like tibiae and legs.

637. CURCULIO *ater* [*Rhyncolus ater* (Linnaeus, 1758). Sw. Granvedvivel; Fam. Curculionidae, Eng. True weevils, Sw. Äkta vivlar],[484] oblong, jet-black; rostrum short; antennae red-brown.

Occurs – – –[485]

[DESCR.] The size of a louse. Elytra are very finely striated.

Attelabus

638. ATTELABUS *coryli* [*Apoderus coryli* (Linnaeus, 1758). Eng. Hazel-leaf roller weevil, Sw. Hasselrullvivel; Fam. Attelabidae, Eng. Leaf-rolling weevils, Sw. Rullvivlar], black; elytra red.

Curculio, black; elytra red; head elongate posteriorly. *It. Oel.* 153. *Fn.* 476.

Act. Ups. 1730. p. 19. n. 4. Necydalis rubra, capite minimo nigro.

Lives on leaves of hazel, which it rolls into a cylinder closed at both ends, inside of which the egg is found.

DESCR. This species is unique and not similar to the others in appearance. Thus the head, which is entirely black and jet-black, resembles the head of a skinned fox, because it lacks the elongated rostrum, but bears a very short one, to which the black antennae are attached; lowest segment not longer than the others. Head elongate posteriorly, not insinuated into the thorax unlike the others. Thorax is anteriorly jet-black, as the head, but posteriorly red, as the elytra. Elytra saturated red, oblong, striate with punctations. Femora black. The dorsum of scutellum is jet-black.

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[483] Nowadays extinct in Sweden.

[484] See no. 633.

[485] Incomplete sentence.

639. ATTELABUS *monoceros* [*Notoxus monoceros* (Linnaeus, 1761). Fam. Anthicidae, Eng. Ant-like flower beetles, Sw. Kvickbaggar], thorax extended over head into a horn.

Lives on flowers of larkspur. *Modéer.* In Skåne, *Solander.*

DESCR. The size of a mosquito.[486] Head blackish. Antennae and legs brick-red. Thorax posteriorly rusty brown, anteriorly black, emerging straight out as a blackish horn extended over the top of the head; hence truly monstrous and with an unusual appearance for insects. Elytra brick-red with longitudinal black suture, posterior black fascia, and an anteriorly black spot. Body above with scattered short hairs.

640. ATTELABUS *betulae* [*Deporaus betulae* (Linnaeus, 1758). Eng. Birch leaf-roller weevil, Sw. Svart rullvivel; Fam. Rhynchitidae, Eng. Tooth-nosed snout weevils, Sw. Käkvivlar], legs jumping; body entirely jet-black.

Lives on leaves of birch, on which it gnaws in early spring rendering them crispy and then destroyed.

DESCR. Body larger than a louse, oblong, jet-black. Elytra oblong, striate with punctations. Head narrower in front of eyes. Femora thick. Very similar to a weevil.[487]

641. ATTELABUS *formicarius* [*Thanasimus formicarius* (Linnaeus, 1758). Eng. Ant beetle or European red-bellied clerid, Sw. Myrbagge; Fam. Cleridae, Eng. Checkered beetles, Sw. Brokbaggar], elytra, red at base, with two white fasciae.

Curculio, black; elytra black, red at base, with a double white fascia. *Fn.* 477.

Jonst. Ins. t. 15. Scarabaeus minor 69 sive ultimus.

Hoffn. Ins. t. 16. f. 13.

List. Mut. t. 31. f. 1.

Raj. Inst. p. 103. n. 29. Cantharis XXIX.

Occurs ubiquitously; fairly abundant; the fastest runner of all.

DESCR. I do not know how it resembles an ant,[488] since it is by no means similar to ants. Nevertheless, I have always considered it to be an ant in pattern and form. Head is black, insinuated into thorax, flat, without any kind of proboscis, unlike the situation in its congeners. Antennae clavate, inserted almost at mouth, black, without elongation of the lowest segment. Thorax is red-brown and scabrous; margin next to head black. Elytra oblong, blunt, rather flat, black, scabrous, with elevated spots; the elytra are red at base with a double transverse, linear, white fascia, of which the fascia closer to thorax is curved anteriorly above the middle of its length, but the other, also white, is placed slightly above elytral tips, but it is broader and curved anteriorly towards the longitudinal suture. Differs from the others by the roundish head.

The toughness of the insect, the tenacity of the legs, the insertion of the claws and antennae, and its ineffective attempt to bite reveal its affinity to the weevils.[489]

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[486] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[487] Linnaeus only refers to *Curculio*, see nos. 579–637.

[488] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[489] Linnaeus only refers to *Curculio*, see nos. 579–637.

642. ATTELABUS *mollis* [*Opilo mollis* (Linnaeus, 1758). Fam. Cleridae, Eng. Checkered beetles, Sw. Brokbaggar], grey, pubescent; elytra with three pale fasciae.

Inhabits groves.

DESCR. Body rusty brown. Thorax black, villous. Elytra black, curved, with 3 pale fasciae, of which the first is at base and third at tip. Abdomen red. Legs pale with black knees. It is somewhat pilose all over.

643. ATTELABUS *ceramboides* [*Upis ceramboides* (Linnaeus, 1758). Sw. Större svartbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], jet-black; elytra wrinkled.

Inhabits forests.

DESCR. Body the size of a dor beetle.[490] Elytra wrinkled and variegated. Antennae clavate, necklace-shaped. Feet clavate; posterior ones appendiculate at tip or with a small claw.

644. ATTELABUS *buprestoides* [*Spondylis buprestoides* (Linnaeus, 1758). Eng. Black longhorn beetle, Sw. Bitbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra veined; thorax subglobose.

Buprestis, jet-black. *Fn.* 554.

Act. Ups. 1736. p. 19. n. 2. Attelabus ater maximus cylindraceus, pectore crassiusculo: ore forficato.

Frisch. Germ. 13. p. 23. t. 19. Scarabaeus arboreus, collo crasso.

Lives in litter in dry places.

DESCR. This insect is unique. Whether it belongs to this genus is indeed unclear, because it differs in appearance, habitat, and in many features; hence the mouth is a pair of long scissors and pointed with a single denticle arising from the inner side. The body is entirely jet-black, with the minutest punctations. Antennae are filiform, rather thick, short, and not longer than thorax. Thorax by no means bordered; anteriorly and posteriorly, at the articulations, there are the minutest, red-brown hairs. Head protruding beyond thorax. The pair of hind femora is more widely spaced than in the other insects that we know. Head including thorax almost as long as elytra. Each elytron marked with two or three elevated striae.

Cerambyx

645. CERAMBYX *planatus* [*Uleiota planatus* (Linnaeus, 1761). Fam. Silvanidae, Eng. Flat grain beetles or Silvanid flat bark beetles, Sw. Smalplattbaggar], thorax marginate, scabrous, anteriorly dentate; body black; legs and antennae rusty brown.

Occurs in Sweden.

DESCR. Twice the size of a louse. Body flattened. Antennae pitch black, almost the length of the body. Thorax scabrous on each side and anteriorly mucronate. Elytra opaque, striate, with lateral, elevated stria. Legs rusty brown.

[490] See no. 388.

646. CERAMBYX *faber* [*Ergates faber* (Linnaeus, 1761). Sw. Smedbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax marginate with one tooth on each side, wrinkled; elytra pitch black.

Frisch. Ins. 13. p. t. 18. *forte.*

Occurs ubiquitously.[491]

DESCR. The size of the tanner beetle.[492] Antennae barely as long as body. Thorax wrinkled with punctations, black like the whole body. Elytra not striated.

647. CERAMBYX *coriarius*[493] [*Prionus coriarius* (Linnaeus, 1758). Eng. Tanner beetle, Sw. Taggbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar],[494] thorax marginate, dentate; body pitch black; elytra mucronate; antennae shorter than body.

Cerambyx, black; body rather flat, tridentate marginally; sheath wings pitch black. *Fn.* 480.

Frisch. Germ. 13. p. 15. t. 9. Cerambyx niger, antennis serratis.

Raj. Ins. 95. Cerambyx maxima, cornibus magnis articulatis & reflexis.

Lives in the acid areas around Medevi.

DESCR. Body very large, longer than antennae, rather flat; appearance almost as that of the tanner.[495]

648. CERAMBYX *meridianus* [*Stenocorus meridianus* (Linnaeus, 1758). Eng. Variable longhorn beetle, Sw. Lundbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra fastigiate, fuscous or weakly brick-red anteriorly; pectus shining.

Leptura meridiana. Syst. nat. 10. p. 398. n. 7.

Occurs ubiquitously.

DESCR. Femora entirely blackish. Male: Pectus, abdomen, and legs brick-red, except for the black knees. Elytra weakly brick-red, apically black. Thorax moderately spinose, truly shining, as also is the abdomen, both of which at a certain angle reflect the truly golden appearance.

649. CERAMBYX *lamed*[496] [*Pachyta lamed* (Linnaeus, 1758), Sw. Bandad skulderbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose, pubescent; elytra fastigiate, dark bluish grey, with a dark, longitudinal, winding fascia; antennae rather short.

Leptura, black; elytra variegated with blackish and dark bluish grey. *Fn.* 498.

Occurs in Roslagen.

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[491] Nowadays restricted to the islands Gotland and Gotska Sandön in the Baltic Sea.

[492] See no. 647.

[493] This species is also described in no. 406 as *Scarabaeus tridentatus.*

[494] See no. 406.

[495] See the com. above.

[496] *lamed* is the 12th letter of the Hebrew alphabet.

DESCR. Large. Elytra dark bluish grey at base and medially towards the outside dark bluish grey; otherwise blackish or with two broad fasciae, obliquely grooved. Body entirely black. Thorax bilaterally spinose.

650. CERAMBYX *nebulosus* [*Leiopus nebulosus* (Linnaeus, 1758).[497] Eng. Black-clouded longhorn beetle, Sw. Fläckig splintbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra somewhat fastigiate, with black fasciae and spots; antennae rather long.

C*erambyx*, ash-grey; elytra with black spots and black fasciae; antennae one and a half times as long as body. *Fn.* 483. *It. Gotl.* 273.

Occurs at the stone-quarries of Burgsvik in Gotland.

DESCR. This insect should in every respect be numbered among the smaller species. Head blackish. Antennae one and a half times as long as body, apically very slender; each segment black above, pale beneath. Thorax marked with a denticle on each side, ash-grey above, maculate with black spots. Elytra ash-grey, with the minutest punctations, not striated, in addition irrorated minutely with unequal, black spots, denser at base, so that fasciae appear black, transverse, rather broad in the middle of the elytra.

651. CERAMBYX *hispidus* [*Pogonocherus hispidus* (Linnaeus, 1758). Eng. Lesser thorn-tipped longhorn beetle, Sw. Svarthårig kvistbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra almost pinched out with three hispid spots; antennae rather long, hirtous.

C*erambyx*, ash-grey; elytra praemorse with black spots and white fascia; antennae one and a half times as long as body. *Fn.* 484. t. 1.

Often lives in houses.

DESCR. The length of a house fly,[498] but narrower. It is entirely ash-grey, irrorated minutely with black spots, also with some elevated striae on elytra and a white, transverse fascia, rather broad, medially on elytra, yet somewhat closer to base. Thorax with rather prominent spines, especially laterally. Antennal segments black above, ash-grey beneath. There is a variety with another whitish, heart-shaped fascia in anterior part of sheath wings, posterior elytral part apically pointedly notched, almost pinched out or dentate.[499]

652. CERAMBYX *moschatus* [*Aromia moschata* (Linnaeus, 1758). Eng. Musk beetle, Sw. Myskbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra blunt, green, shining; femora without spines; antennae ordinary.

C*erambyx*, bluish green; antennae and body subequal. *Fn.* 478.

Act. Ups. 1736. p. 120. n. 1. Cerambyx viridi-aeneus.

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[497] A very similar species *Leiopus linnei* Wallin, Nylander & Kvamme, 2009, has recently been separated from *Leiopus nebulosus*.

[498] See no. 1833.

[499] As a variety Linnaeus obviously describes the species *Pogonocherus hispidulus* (Piller & Mitterpacher, 1783).

Mouff. Lat. p. 133. *f. ult.* Cerambyx tertius. p. 134.
List. Loqu. p. 384. n. 11. Scarabaeus magnus suaviter olens.
Raj. Ins. p. 81. n. 17. Scarabaeus Capricornus dictus major viridis odoratus.
Frisch. Germ. 13. p. 17. t. 11. Scarabaeus arboreus caeruleo-viridis.
Lives in woods of willow; spreads a lovely and most fragrant smell.
DESCR. The largest body among our species. It is entirely blue-green and shining with a golden colour. Abdomen blue above. Wings black. Colour of the legs resemble that of the rest of the body. Tarsi of legs villous, greyish blue beneath. Tibia terminates in a spine. Thorax enjoys a sharp edge on each side; inside these edges there are three somewhat smaller tubercles closer to the elytra and some other even smaller tubercles anteriorly. Elytra with the minutest wrinkles, marked with three longitudinal, oblong-lanceolate, somewhat elevated and curved battens. Antennae are hardly as long as body; their segments become gradually shorter towards the extremity; this is the opposite of what can be found in the other species.

653. CERAMBYX *aedilis* [*Acanthocinus aedilis* (Linnaeus, 1758). Eng. Timberman beetle, Sw. Större timmerman; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose with four deep yellow spots; elytra blunt, cloudy; antennae very long.
C*erambyx*, cloudy, with antennae longer than body; thorax with four deep yellow spots. *Fn.* 479.
Mouff. Lat. in appendice tab. penult. (*Mas*).
p. 151. f. 2. Scarabaeus VII. ex Russia.
Pet. Gaz. 14. t. 8. f. 8. Capricornus russicus cinereus, cornubus longissimis.
Frisch. Germ. 13. p. 18. t. 12. Scarabaeus arboreus, antennis longissimis.
Act. Ups. 1736. p. 120. n. 2. & 3. Cerambyx fuscus, antennis corpore quater longioribus.
It. Oel. 8. Cerambyx nebulosus &c. ut supra.
In Småland: Timberman.
Lives in great numbers on small, light skiffs and in anything built from debarked tree trunks when the countrymen build houses; hence our children call it "Timberman", i.e. "Carpenter". A most notable species in all respects. Our common people consider it denigrates religion.[500]
DESCR. The length of the body is equal to the width of a thumb, entirely ash-grey. Elytra blunt, scattered with the minutest hairs, between which tubercles or the minutest spots appear that are very much crowded together; sheath wings are bordered by a transverse blackish shadow, medially curved posteriorly. Thorax also ash-grey with a sharp edge that is rather prominent on each side and with four deep yellow, transverse spots on the back. Eyes black; black spot behind antennae. Antennae five times longer than the actual body, consisting of 10 ash-grey segments that are black towards tip and shorter the closer they are to the head. Wings blackish with fuscous veins.
Female with prominent anus; her antennae are three times longer than the actual body, while the horns of the male are five or six times longer than the body.

[500] Lat. *religio*. Linnaeus probably means that it was a problem in those days that the nickname "carpenter", often assigned to Christ, was used for a beetle.

654. CERAMBYX *alpinus* [*Rosalia alpina* (Linnaeus, 1758). Eng. Rosalia longicorn or Alpine longhorn beetle, Sw. Alpbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; sheath wings blunt with fascia and four jet-black maculae; antennae long.

Cerambyx, weakly bluish; fascia and four black maculae. *It. Scan.* 260.*

Occurs in Skåne and Blekinge.[501]

655. CERAMBYX *sutor* [*Monochamus sutor* (Linnaeus, 1758). Eng. Pine sawyer, Sw. Tallbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra blunt, jet-black, somewhat cloudy; scutellum pale; antennae very long.

Cerambyx, jet-black; elytra spotted with scattered pale maculae. Antennae longer than body; thorax spinose. *Fn.* 482.

Inhabits forests.

DESCR. It is large and jet-black. Eyes black, extending behind antennae. Thorax is equipped with a prominent angle on each side; rusty brown macula inwardly at elytral base. Thorax and elytra scattered with almost contiguous punctations (obvious to the naked eye). Light yellow spots scattered on the surface of thorax and elytra. Male with black antennae, three or four times longer than body. Female with black antennae that are one and a half times as long as body; each segment ash-grey towards base.

656. CERAMBYX *textor* [*Lamia textor* (Linnaeus, 1758). Eng. Weaver beetle, Sw. Videbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra blunt, convex, jet-black; antennae ordinary.

Inhabits forests.

DESCR. Body black, minutely irrorated with ash-grey speckles. Rusty brown maculae on pectus and abdomen.

657. CERAMBYX *fur* [*Ptinus fur* (Linnaeus, 1758). Eng. Whitemarked spider beetle, Sw. Vanlig tjuvbagge; Fam. Ptinidae, Eng. Spider beetles, Sw. Trägnagare], thorax spinose, bulging; sheath wings ovate with a double whitish fascia; antennae filiform, ordinary.

Cerambyx, brick-red; double elytral whitish fasciae; thorax spinose. *Fn.* 487.

Often lives in old herbariums where it both makes dust of the leaves and gathers it together. Worst of all it destroys museum specimens. Even consumes very strong-smelling tobacco. It is killed with arsenic and burnt aluminum. *Kramer.* Frequent also in dry bread that has been preserved for a longer time.

DESCR. The size of a louse. Body entirely brick-red. But elytra of a more saturated colour with two white fasciae; the one nearer the pectus does not meet medially, the other one, closer to the anus, is backwardly arcuated or curved medially. Abdomen is entirely ovate and convex. Thorax narrow with a rather prominent, pointed edge on each side; when approaching anus it bends towards the

[501] Nowadays extinct in Sweden.

ground. Appears as if midway between the skin beetles[502] and the longhorn beetles,[503] since it retracts the head under its neck and bears antennae that are not setaceous but filiform.

658. CERAMBYX *cursor* [*Oxymirus cursor* (Linnaeus, 1758). Sw. Randig skulderbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra blunt, red-brown with black margin and line; antennae ordinary.

C*erambyx*, red-brown; three longitudinal black lines on sheath wings. *Fn.* 481.

Occurs in Småland, Skåne, and Dalarna.

DESCR. This species is among the largest of its genus. Abdomen, legs, mouth, and frons dark red, but abdomen covered with grey-white hairs. Thorax with rather large, lateral points, on each side single points that are red at tip, and many smaller, intermediate ones. Two red elevated tubercles between antennae. Elytra scabrous at base with elevated tubercles and scattered with tiny fine hairs. Elytra form angles at base, from which a fascia or broad black line runs out to tip, as also from scutellum through both elytra, along the length of the suture, an intermediate, broad black line the whole way to elytral tip.

659. CERAMBYX *inquisitor* [*Rhagium inquisitor* (Linnaeus, 1758). Eng. Ribbed pine borer, Sw. Barrträdslöpare; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax spinose; elytra cloudy, weakly fasciate, fuscous; antennae rather short.

C*erambyx*, ash-grey, cloudy black; antennae half the length of the body; thorax spinose. *Fn.* 485.

Act. Ups. 1736. p. 20. n. 1. Necydalis cinereo-maculata sulcata.

β C*erambyx*, ash-grey; two light yellow fasciae on sheath wings; antennae half the length of the body; thorax spinose. *Fn.* 486.

Occurs ubiquitously in forests.

DESCR. Head covered with ash-grey wool with black, hardly visible spots under the wool; behind eyes towards pectus black; behind antennae a black spot. Antennae ash-grey with eleven segments half the length of the body, extended forwards. Tibiae equipped with two spines at tip. Thorax ash-grey, with a black lateral margin, in the middle of which is a black, sharp point. Blackish longitudinal thoracic line along the middle of the back. Elytra oblong, narrow, with three longitudinal, elevated, somewhat shining striae; elytra are otherwise cloudy owing to the blackish maculae, scattered here and there (and in some a double, transverse, black fascia, laterally brick-red). Whole body otherwise ash-grey, cloudy black; this ash-grey colour arises from the minutest hairs changing into a deep cervine colour.

β[504] This species is similar to the previous species as to size, suture, and appearance, but the elytra, which are more fuscous, enjoy two flavous fasciae that are approximated medially in elytra.

[502] Linnaeus only refers to *Dermestes*, see nos. 408–439.

[503] Linnaeus only refers to C*erambyx*, see nos. 645–676.

[504] Refers to the species *Rhagium mordax* (De Geer, 1775).

660. CERAMBYX *carcharias* [*Saperda carcharias* (Linnaeus, 1758). Eng. Large poplar beetle, Sw. Större aspvedbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, cylindrical; body grey, punctate with black; antennae ordinary.

Cerambyx, grey, punctate with black; body unarmed. *Fn.* 493.

Pet. Gaz. 5. t. 2. f. 1. Capricornus norvegicus nigrescens, vaginis punctatis maculisque pallidis adspersis.

Inhabits forests. Male ash-grey. Female grey.

DESCR. Whole body, above and beneath, covered with grey or pale whitish yellow wool tending to ash-grey, through which the glabrous, densely scattered spots emerge. Body stouter than that of the preceding species; jaws black. Antennal segments grey but black-tipped.

661. CERAMBYX *populneus* [*Saperda populnea* (Linnaeus, 1758). Eng. Small poplar borer, Sw. Mindre aspvedbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, cylindrical, light yellow, lineate; elytra with four light yellow spots; antennae ordinary.

Lives on aspen.

662. CERAMBYX *cylindricus* [*Phytoecia cylindrica* (Linnaeus, 1758). Eng. Umbellifer longhorn, Sw. Hundkäxbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, cylindrical, with a whitish line; elytra fastigiate, black; forelegs pale.

Roes. Ins. 2. p. 21. t. 3.

Lives inside the wood of hazel.[505]

DESCR. Body small, jet-black, opaque, with very small, scattered punctations. Thorax cylindrical with a longitudinal, whitish line. Antennae the length of the body. Anterior pair of legs with tibiae and half of femora rusty brown.

663. CERAMBYX *linearis* [*Oberea linearis* (Linnaeus, 1761). Eng. Hazel and walnut tree twig borer, Sw. Hasselbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], antennae ordinary; thorax cylindrical, without spines, black; all legs entirely deep yellow.

Inhabits forests.

DESCR. Similar to the umbellifer longhorn,[506] but twice as large and blacker. Antennae the length of the body. Legs entirely deep yellow.

[505] In fact it lives in the stamens of umbellate plants.

[506] See no. 662.

664. CERAMBYX *oculatus* [*Oberea oculata* (Linnaeus, 1758). Eng. Eyed longhorn beetle, Sw. Videsmalbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, cylindrical, deep yellow, with two black spots; elytra fastigiate with black lines.

Inhabits forests.

DESCR. Body brick-red including abdomen and legs. Thorax cylindrical, with two black spots on dorsum. Antennae the length of the body.

665. CERAMBYX *serraticornis* [*Calopus serraticornis* (Linnaeus, 1758). Sw. Brun såghornsbagge; Fam. Oedemeridae, Eng. False blister beetles, Sw. Blombaggar], thorax without spines and subovate; body dusky dirt brown; antennae flattened, serrate, ordinary.

Inhabits forests.

DESCR. Antennae strongly flattened, strongly serrate. Whole body pale fuscous.

666. CERAMBYX *rusticus* [*Arhopalus rusticus* (Linnaeus, 1758). Sw. Brun barkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish, naked; body dirt brown; antennae awl-shaped, rather short.

Cerambyx, fuscous, with thoracic impressions. *Fn.* 492.

Frisch. Ins. 13. p. 21. t. 14.

Occurs ubiquitously in forests.

DESCR. Antennae somewhat shorter than body. Body linear, almost glabrous; each elytron with two elevated striae. Two impressed cavities on the back; abdomen dusky rusty brown except for the longitudinal line.

667. CERAMBYX *violaceus* [*Callidium violaceum* (Linnaeus, 1758). Eng. Violet tanbark beetle, Sw. Blåhjon; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish, pubescent; body violet; antennae ordinary.

Cerambyx, violet, shining; antennae black; femora clavate. *Fn.* 495.

Frisch. Germ. 12. p. 33. t. 3. ic. 6. f. 1. Scarabaeus arboreus, totus violaceus.

Act. Ups. 1736. p. 20. n. 4. Buprestis collari nigro: elytris aeneo-caeruleis.

Inhabits gardens and forests.

DESCR. Whole body shining with violet; golden colour and silkiness predominate. Thorax and elytra with contiguous punctations. Antennae almost shorter than body, black. Femora clavate and jet-black, just as legs. Abdomen black. Thorax darker than elytra; it resembles to some extent a *Leptura* longhorn.[507] Thorax rather flat and rounded without any spines. Elytra posteriorly rounded and not truncated, somewhat flat.

[507] Linnaeus only refers to *Leptura*, see nos. 677–698.

668. CERAMBYX *striatus* [*Asemum striatum* (Linnaeus, 1758). Eng. Black spruce borer, Sw. Strimmig barkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish; body black; elytra striate; antennae short.

Inhabits forests

DESCR. Habitus like that of the preceding species, but elytra not striated. Thorax orbicular, convex. Antennae shorter than body.

669. CERAMBYX *variabilis* [*Phymatodes testaceus* (Linnaeus, 1758). Eng. Tanbark borer, Sw. Vedspegelbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar],[508] thorax without spines, roundish, even, glabrous; pectus and anus rusty brown; antennae ordinary.

Frisch. Ins. 12. p. 34. t. 6. f. 3. 4.

Inhabits forests.

DESCR. Similar to the violet tanbark beetle[509] but smaller. Colour varies. One is violet with weakly rusty brown thorax, rusty brown legs, and femora with a black club; the other with dark bluish grey thorax and elytra; femora similar.

670. CERAMBYX *testaceus* [*Phymatodes testaceus* (Linnaeus, 1758). Eng. Tanbark borer, Sw. Vedspegelbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar],[510] thorax without spines, roundish, glabrous; body brick-red; antennae ordinary.

Cerambyx, brick-red; thorax glabrous. *Fn.* 491.

Act. Ups. 1736. p. 20. n. 3. Buprestis collari glabro, elytris testaceis.

Occurs in Sweden, not uncommon.

DESCR. Hardly differs from the following species except for the complete hirsuteness of thorax. Antennae the length of the body, brick-red tending to red-brownish including femora and legs. Thorax uneven, brick-red. Elytra excavated by punctations, not striated, brick-red.

671. CERAMBYX *curculionoides* [*Mesosa curculionoides* (Linnaeus, 1761). Sw. Ögonfläcksbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax unspined, with four black eyespots; those on elytra one and a half times as wide as the others; antennae rather long.

Occurs in Kalmar. *Ad. Modéer.*

DESCR. Middle-sized. Body cloudy, covered with light yellow, undulating, sparse streaks. On the back, thorax has four small, jet-black eyespots with a light yellow iris; anterior eyespots are larger than the prior ones and placed close together. Each elytron medially with a similar small eyespot and between these a common eyespot on each elytron.

[508] See nos. 670 and 674.

[509] See no. 667.

[510] See the com. to no. 669.

672. CERAMBYX *bajulus* [*Hylotrupes bajulus* (Linnaeus, 1758). Eng. House longhorn beetle or Old house borer, Sw. Husbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish, villous with two tubercles; antennae short.

Cerambyx, blackish; thorax villous, ash-grey, with two glabrous spots. *Fn.* 489.

Frisch. Germ. 13. p. 17. t. 10. Scarabaeus arboreus, antennis parvis, collari cinereo duobus punctis.

Act. Ups. 1736. p. 20. n. 1. Buprestis collari villoso, elytris cinereis.

β *Cerambyx*, brick-red; thorax villous, ash-grey, with two small, glabrous lines. *Fn.* 490.

Lives in piles of wood.

DESCR. It is entirely black, mixed with ash-grey. Body entirely scabrous or uneven with rather prominent, disordered spots and weak, ash-grey hairs. But entire thorax hirsute, ash-grey or black, with white hairs and also on the back two rather prominent, glabrous spots, by which it differs from all the others. Antennae black, small, half the length of the body. Eyes gilded in some. Legs black, tibiae terminating in a double spine; a white undulating fascia on elytral dorsum, but so indistinct that it is scarcely visible. Femora clavate. Elytra curved. No denticles on thorax.

β Appearance as that of the previous species, but on the whole smaller. Antennae shorter than body, brick-red. Thorax villous, ash-grey or black with white hairs. On the back two oblong, glabrous spots. Elytra brick-red, paler than antennae, with punctations, but nevertheless not striated. Femora black. Eyes gold-coloured. Antennae scattered with hairs; third segment the longest; often a white indistinct fascia on dorsum. Therefore, the affinity with the previous species is considerable.

673. CERAMBYX *sanguineus* [*Pyrrhidium sanguineum* (Linnaeus, 1758). Eng. Welsh oak longhorn beetle, Sw. Rödhjon; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax unspined, roundish, and elytra blood-coloured; body black; antennae ordinary.

Occurs in Uppsala. *Is. Uddman.*

DESCR. Very similar to the house longhorn beetle,[511] although thorax more depressed, jet-black. But thorax above, scutellum, elytra, and anus blood-coloured, covered with silky hairs, and having a barely visible pubescence.

674. CERAMBYX *fennicus* [*Phymatodes testaceus* (Linnaeus, 1758). Eng. Tanbark borer, Sw. Vedspegelbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar],[512] thorax without spines, roundish, with indistinct, weakly rusty brown tubercles; elytra violet; antennae longish.

Occurs in Finland.

DESCR. Thorax black, rather flat; sides including pectus red-brown. Abdomen black, apically rusty brown. Legs red-brown with black femora.

[511] See no. 672.

[512] See the com. to no. 669.

675. CERAMBYX *undatus* [*Semanotus undatus* (Linnaeus, 1758). Sw. Vågbandad barkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish, tuberculate; elytra with two undulating fasciae; antennae slightly shorter than is normal.

Cerambyx, black; elytra with two undulating, white fasciae. *Fn.* 488.

Act. Ups. 1736. p. 20. n. 6. Cerambyx cinereus, fasciis duabus pallidis.

Lives in litter.

DESCR. Antennae the length of the body. Femora jet-black. Head and thorax black, with tubercles on dorsum and without lateral angles. Elytra black, posteriorly becoming pale, with punctations, from the cavities of which a hairlike appendage arises with a double, transverse, undulating, white fascia similarly with punctations.

676. CERAMBYX *castaneus* [*Tetropium castaneum* (Linnaeus, 1758). Eng. Black spruce longhorn beetle, Sw. Allmän barkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax without spines, roundish; body black; elytra, antennae, and legs rusty brown; antennae ordinary.

Inhabits forests.

DESCR. Same size as the preceding species, but somewhat narrower. Thorax laterally red-brown. Hind femora black. Related to C. *rusticus*,[513] but smaller.

Leptura

677. LEPTURA *aquatica* [*Donacia aquatica* (Linnaeus, 1758). Eng. Zircon reed beetle, Sw. Regnbågsrörbock; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], gilded; antennae black; hind femora dentate.

Frisch. Germ. 12. p. 33. t. 3. ic. 6. f. 2. Scarabaeus arboreus purpureo-aureus medius.

Act. Ups. 1736. p. 20. n. 3. Leptura rubro-aenea.

Lives in wet areas, often seen on leaves of waterlily and sedge. Pupa often clings to the roots of water dropwort, subglobose, brunneous.

DESCR. Entirely copper gilt. Head, thorax, elytra, and legs with the minutest, almost contiguous punctations. On elytra, however, the punctations are arranged in around 10 longitudinal rows, nevertheless the elytra hardly appear striate thereby.

Eyes black. Antennae fuscous. If examined through a lens, this animal is quite distinctive; this species is smaller than all the preceding ones in all respects. Elytra apically truncated. Since this specimen is fresh, the elytra are bronze red and laterally bronze green. Blackish prominent spot behind antennae. Abdomen, viewed from head towards cauda, is of a silvery white colour, but from cauda towards head black. The femora are articulated with the body in a unique construction, namely the joint head is enclosed in the cavity. Hindlegs twice the length of the others. Femora of these legs flattened and narrower towards base, marked with a denticle on the inner side towards knees. Antennae placed quite close together and almost contiguous at base; medially, near elytra, a foveolar depression looking back at elytral angle. Body posteriorly angular.

[513] See no. 666.

β *Leptura*,[514] weakly bronze violet; hind femora dentate. *Fn.* 510.[515]
Raj. Ins. p. 100. Cantharis arundines frequentans tertia.
Act. Ups. 1736. n. 1. Leptura caeruleo-nigra.
n. 2. Leptura viridi aenea.
Lives at gritty and sandy riverbanks, as for example, on waterlily; numerous.
DESCR. Body oblong, glabrous or violet or bronze blackish blue or bronze green (perhaps different as to sex). Thorax cylindrical. Antennae filiform, directed forward, black. Abdomen ash-grey, darker, viewed from the anterior aspect whitening. Elytra striate with about ten rows of punctations; seen through a lens the elytra are very beautiful. Elytral tip truncated, black. Hind femora very large, long, stout, and red, but black where they are thicker. These femora have one or two pointed denticles beneath, just like the chelae of a crab.[516]

678. LEPTURA *melanura* [*Stenurella melanura* (Linnaeus, 1758). Eng. Black-striped longhorn beetle, Sw. Ängsblombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], elytra reddening or dark bluish grey; suture and tip black; thorax posteriorly mucronate.
Leptura, black; elytra reddening, dark bluish grey. *Fn.* 499.
Raj. Ins. p. 97. n. 6. Cerambyx capite, scapulis, antennis nigris, elytris flavis: extremitatibus nigris.
Act. Ups. 1736. p. 20. n. 5. Leptura elytris testaceis, apice nigris (*quae mas*).[517]
n. 4. Leptura elytris rubris.
Pet. Gaz. 46. t. 30. f. 5. Capricornus hamstad. exiguus, vaginis rubentibus apice nigro.
Inhabits small woods; fairly abundant.
DESCR. Whole body black including legs, antennae, and all other parts, excepting elytra, oblong, posteriorly narrow. Thorax without spines. Venter and the whole lower surface area are indeed black, but are nevertheless distinctly white in daylight if examined from the anterior. Elytra attenuated, pinched out, with pointed, apical angles on each side. Elytra differ as to colour, because in some they are saturated red without any blackness, and these are females; in others, red elytra, black at tip, as also at outer and inner elytral margins; and in yet others, brick-red elytra, black-tipped, and with an outer black margin, and these are males. Elytra with infinite punctations, nevertheless not striated, and some scattered with a hardly visible hirsuteness, especially towards the rear. In some, thorax and head are scattered with a light yellow hirsuteness. Penis very long. All tibiae terminating in a spine.
β *Leptura*, black, with whitish yellow elytra and thorax. *Fn.* 501.
Gadd. Diss. 27. Leptura thorace nigro nitido, elytris obsolete sordideque flavescentibus.

[514] Previously Linnaeus has called all longhorns *Cerambyx*. Here he continues with them under the name *Leptura* which are also typical longhorns, however more elongated and slenderer. But regarding this species Linnaeus was wrong; it is in fact a leaf beetle resembling a longhorn.
[515] See *Fn. Su.* (1761), *Addenda*, p. 559.
[516] Linnaeus only refers to *Cancer*, see nos. 2026–2043.
[517] Linnaeus's own remark: "which is male".

Occurs – – –[518]

[DESCR.] This beetle is smaller than the preceding species, but with the same appearance, and is perhaps only a variety. Elytra, however, minimally red, but indistinctly sordid whitish yellow, towards base angular. And abdomen, viewed anteriorly, does not appear to be white and shining.

679. LEPTURA *sanguinolenta* [*Anastrangalia sanguinolenta* (Linnaeus, 1761). Eng. Blood-red flower longhorn beetle, Sw. Tegelbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra blood-coloured.

Occurs in Sweden.

DESCR. Similar to the black-striped longhorn beetle[519] and red-brown longhorn beetle,[520] but entirely black except for the elytra which are solely and entirely blood-coloured.

680. LEPTURA *testacea* [*Stictoleptura rubra* (Linnaeus, 1758). Eng. Red-brown longhorn beetle, Sw. Gulröd blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra brick-red; tibiae red-brown; thorax rounded posteriorly.

Occurs in Europe.

DESCR. Stature as that of the black-striped longhorn beetle,[521] but slightly larger. Elytra brick-red, truncated, spinose, without any hint of blackness.

681. LEPTURA *rubra* [*Stictoleptura rubra* (Linnaeus, 1758). Eng. Red-brown longhorn beetle, Sw. Gulröd blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; thorax, elytra, and tibiae purple. *Fn.* 500.

Frisch. Germ. 12. p. 37. t. 3. ic. 6. f. 6. Scarabaeus arboreus major purpureo-ruber.

Occurs – – –[522]

DESCR. Twice the size of the black-striped longhorn beetle[523] (which beetle is common) and very similar to it. Elytra, thorax, and tibiae (but not femora) scarlet; rest of the body is black and beneath the venter, anteriorly viewed, shining white.

β *Leptura*, black; thorax and elytra red-brown. *De Geer.*

Occurs in Roslagen.

DESCR. It is large enough. Tibiae light yellow.

682. LEPTURA *virens* [*Lepturobosca virens* (Linnaeus, 1758). Sw. Grön blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], green-light yellow; antennae variegated with deep yellow and green. *Fn.* 496.

List. Mut. t. 18. 23?

Act. Ups. 1736. p. 20. n. 6. Leptura maxima nigra, subtus virescens.

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[518] Incomplete sentence.

[519] See no. 678.

[520] See no. 681.

[521] See no. 678.

[522] Incomplete sentence.

[523] See no. 678.

DESCR. This species is among the largest of its genus. Whole body is in itself jet-black, but pectus, thorax, abdomen, legs, and the larger part of head are covered with green wool tending to light yellow. Elytra not striated but nevertheless scattered with the minutest punctations. At base of the longitudinal suture, an elytral pubescence that has the same colour as the pectus. Body posteriorly attenuated and elytra pinched out. This species differs from all the others that are known to us only by its antennae, the segments of which are deep yellow beneath, black above;[524] hence it is like a necklace that is variegated with black and deep yellow. It also varies in its green elytra as well as the whole green body, because the deep yellow colour tending to green on the elytra is derived from the minutest wool. When the wool has been rubbed away, the elytra are black. Hind femora without a denticle and thorax without corners.

683. LEPTURA *sericea* [*Plateumaris sericea* (Linnaeus, 1758). Sw. Kärrjuvelbock; Fam. Chrysomelidae, Eng. Leaf beetles, Sw. Bladbaggar], green-blue; elytra somewhat fastigiate.

Occurs around us; rather rare.

DESCR. Body the size of the zircon reed beetle,[525] but blue, entirely shining. Antennae black and scarcely the length of the body. Thorax appears midway between *Lepturae* longhorns[526] and *Cicindelae*.[527] Elytra punctate, striate.

684. LEPTURA *quadrimaculata* [*Pachyta quadrimaculata* (Linnaeus, 1758). Eng. Four-spotted long-horned beetle, Sw. Fyrfläckig skulderbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra dark bluish grey with four black maculae. *Fn.* 502.

Inhabits forests. *R. Hast.*

DESCR. It is among the largest species. Entirely black, but thorax and abdomen with ash-grey wool. On each elytron, an anterior somewhat smaller macula, another posterior larger macula, more quadrate, more saturated rusty brown-black.

685. LEPTURA *interrogationis* [*Brachyta interrogationis* (Linnaeus, 1758). Sw. Större frågeteckenbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra dark bluish grey with a longitudinal, arcuate fascia and four black maculae.

Uddm. Diss. 35. t. 1. f. 2. Leptura Lamed. *mas & femina.*

Inhabits forests.

[524] The antennae are thus viewed in an upright, vertical position.

[525] See no. 677.

[526] Linnaeus only refers to *Leptura*, see nos. 677–698.

[527] Linnaeus only refers to *Cicindela*, see nos. 746–752.

686. LEPTURA *sexmaculata* [*Judolia sexmaculata* (Linnaeus, 1758). Sw. Trebandad blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; sheath wings brick-red with six black maculae connected at margins. *Fn.* 504.

Act. Ups. 1736. p. 20. n. 7. Leptura elytris-testaceis, maculis nigris.

Inhabits forests.

DESCR. The entire animal is black in all respects, but elytra are brick-red, apically truncated, and terminating in a black macula; medially a quadrate, black macula connected to the outer margin; close to base, an oblong macula that is angular and connected to outer margin; inside this macula, along the longitudinal suture, an ovate, small, black macula that is connected to the inner margin. Thus the brick-red or pale elytra have a black outer and inner margin. When the sheath wings are closed, the maculae at the elytral tips merge to form one black macula; in the middle the two quadrate maculae, connected to outer margin, constitute two distinct, separate maculae; the angular, somewhat sinuate maculae at elytral base, connected to outer margin, constitute two other separate maculae; but the maculae are ovate; on the inner side they are connected to the inner elytral margin, and simultaneously merge into one. Therefore, there are six maculae that are all connected to the black inner elytral margin. Legs terminating in a spine.

687. LEPTURA *quadrifasciata* [*Leptura quadrifasciata* Linnaeus, 1758. Eng. Four-banded longhorn beetle, Sw. Fyrbandad blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], black; elytra brick-red with four black fasciae; thorax posteriorly mucronate.

Leptura, black; elytra with four pairs of rusty brown maculae. *Fn.* 505.

Lives in hedges. *Malmborg.*

DESCR. Among the largest of its genus. Body entirely black, as also elytra, which are marked with four pairs of rusty brown maculae, of which the intermediate pair is undulating. Thorax as if folded up posteriorly and elytra brick-red with four black, undulating, transverse fasciae; the last of these at the elytral end.

688. LEPTURA *attenuata* [*Strangalia attenuata* (Linnaeus, 1758). Sw. Smalvingad blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], elytra fastigiate, attenuated, red-yellow, with four black fasciae; legs brick-red; thorax posteriorly mucronate.

Inhabits forests.

DESCR. Body posteriorly much attenuated. Head, thorax, and pectus black. Abdomen rusty brown, black-tipped. Elytra with four light yellow fasciae and exactly as many black ones.

689. LEPTURA *nigra* [*Stenurella nigra* (Linnaeus, 1758). Sw. Rödbukig blombock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], elytra fastigiate; body black, shining; abdomen red-brown; thorax posteriorly mucronate.

Leptura, entirely black. *Fn.* 503.

Occurs at the acidulous springs around Medevi.

DESCR. Somewhat larger. Elytra narrow.

690. LEPTURA *virginea* [*Gaurotes virginea* (Linnaeus, 1758). Sw. Blåbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, black; elytra violet; body red-brown.

Cicindela, elytra bluish green; abdomen red-yellow. *Fn.* 552.

Occurs at the base of mountains in small woods.

DESCR. Head and thorax, including legs and antennae, black. Abdomen behind legs red-yellow. Elytra bluish green, shining, with scattered punctations. Antennae with 10 segments.

691. LEPTURA *collaris* [*Dinoptera collaris* (Linnaeus, 1758). Eng. Red-collared longhorn beetle, Sw. Rödhalsad kulhalsbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, red, and abdomen also red; elytra black.

Cicindela, thorax red-brown; elytra blue-black. *Fn.* 551.

Inhabits forests.

DESCR. The whole body entirely jet-black, notably glabrous, but the globular thorax is rusty brown as is also the abdomen behind the feet, yellow at the back.

692. LEPTURA *rustica* [*Rusticoclytus rusticus* (Linnaeus, 1758). Eng. Gray tiger longicorn beetle, Sw. Gråbandad getingbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, tomentose; elytra ash-grey, with linear, undulating, white fasciae.

Inhabits forests; rather rare.

DESCR. Body middle-sized, jet-black tending to ash-grey, almost tomentose. Sheath wings with one or two linear, whitish, undulating fasciae.

693. LEPTURA *mystica* [*Anaglyptus mysticus* (Linnaeus, 1758). Eng. Rufous-shouldered longhorn beetle, Sw. Prydnadsbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, tomentose; elytra dusky ash-grey, anteriorly red-brown, with linear, arcuate, and broad grey-white fasciae.

Inhabits forests.

DESCR. Body middle-sized. Body black. Elytra from base almost to middle rusty brown. Some snow-white lines merge into an acute angle at dorsal suture. Whitish fascia in front of tip.

694. LEPTURA *detrita* [*Plagionotus detritus* (Linnaeus, 1758). Sw. Bredbandad ekbarkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, blackish; elytra fuscous, with four transverse, light yellow fasciae; legs red-brown.

Uddm. Diss. 31.

Occurs ubiquitously in forests.[528]

[528] Extremely rare in Sweden nowadays. See also no. 696.

DESCR. Thorax subglobose, fuscous, with 2 light yellow rings. Elytra weakly fuscous at base, with an indistinct light yellow line, the next line interrupted, and finally with 2 broader lines at tip; tip itself light yellow. Legs and antennae light yellow.

695. LEPTURA *arietis* [*Clytus arietis* (Linnaeus, 1758). Eng. Wasp beetle, Sw. Lövgetingbock], thorax globose, black; elytra black with light yellow fasciae, second one anteriorly arcuate; legs rusty brown.

Leptura, black; elytral lines transverse, light yellow; legs brick-red. *Fn.* 507. *It. Scan.* 188.

Raj. Ins. 82. n. 22. Scarabaeus medius, abdomine longo angusto, niger, lineolis & maculis luteis pulchre variegatus.

Frisch. Germ. 12. p. 32. t. 5. f. 3.

List. Mut. t. 31. f. 1.

Loqu. p. 385. n. 14. Scarabaeus niger, lineolis quibusdam luteis distinctus, subcroceis pedibus.

Act. Ups. 1736. p. 20. n. 8. Leptura elytris nigris lineis flavis.

Lives among trees in meadows and gardens.

DESCR. It is entirely dusky black, oblong, narrow. Thorax is light yellow at upper margin. Scutellum is marked with a light yellow spot where elytra merge. At elytral corners, an oblong, transverse macula on each elytron, but the two maculae do not merge. In the middle of each elytron, there is a light yellow and arcuate line; the flexion is curved downwards; inner foot at suture almost merges with the opposite one; hence the form is that of a ram. Inside this flexion and tip, a transverse, light yellow line, connected with the opposite one; elytral tip light yellow, as also anus. Head, thorax, and elytra are covered with very fine hairs. Elytra with truncated tip, although scarcely visible because of the hairs. Legs red-brownish. Tibiae terminating in a spine. Antennae red-brownish, on upper part fuscous. When the elytra are slightly dehiscent,[529] the wings shine with gold-coloured purple.

696. LEPTURA *arcuata* [*Plagionotus arcuatus* (Linnaeus, 1758). Sw. Smalbandad ekbarkbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax globose, black; elytra black, with three linear, light yellow fasciae that are bent backwards; legs rusty brown.

Frisch. Ins. 12. t. 3. ic. 4. f. 1.

Occurs around us; rather rare.[530]

DESCR. Antennae and hindlegs rusty brown. Body jet-black. Head with an anteriorly light yellow line, and also light yellow between and at base of antennae. Thorax anteriorly with a light yellow line and two lines laterally in the middle. Spots deep yellow: one elytral spot common at base, then another on each side, and yet another common and larger; after that a spot with a thin line; furthermore, an arch on each elytron and then a common arch; finally, elytral tips terminate in a deep yellow crescent.

[529] See the com. to no. 554.

[530] Not uncommon in Sweden nowadays. See no. 694.

697. LEPTURA *scalaris* [*Saperda scalaris* (Linnaeus, 1758). Eng. Ladder-marked longhorn beetle, Sw. Björkvedbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax roundish; sheath wings with a sutural, dentate, light yellow line and light yellow spots.

C*erambyx*, black; fascia of sheath wings longitudinal, light yellow, dentate, with light yellow spots. *Fn.* 494.

Jonst. Inst. t. 15. Scarabaeus minor 52.

Frisch. Germ. 12. p. 29. t. 3. ic. 3. Scarabaeus arboreus medius, elytris nigris, ornamentis flavis.

Act. Ups. 1736. p. 20. n. 7. Cerambyx cinereus, fascia alba.

Inhabits forests.

DESCR. It is entirely black, oblong, smooth. Thorax covered with light yellow wool; black, quadrate macula on dorsum, at both ends bulging laterally. Elytra black, glabrous, with the minutest punctations; suture longitudinal, light yellow with various opposing teeth, of which first pair curved, second transverse, third rising upwards, fourth bulging downwards, fifth very small, sixth and last one going up along outer margin; some deformed, light yellow spots medially on elytra. Antennae somewhat longer than body. All yellowness caused by the minutest fine hairs.

698. LEPTURA *praeusta* [*Tetrops praeustus* (Linnaeus, 1758). Eng. Plum longhorn beetle, Sw. Lövdvärgbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], thorax subglobose, fuscous; elytra light yellow, apically black; all four legs pale.

Leptura, black; elytra light yellow, black-tipped. *Fn.* 506.

Occurs in Skåne. *Mr Leche.*

DESCR. Barely twice the size of a louse, cylindrical, black. Antennae almost the length of the body. Elytra light yellow, black-tipped, blunt, almost truncated, less stiff, so that I could have considered it belonging to the genus of soldier beetles,[531] had the thorax not been rather smoothly rounded. Everything beneath and the whole body black.

Cantharis

699. CANTHARIS *noctiluca* [*Lampyris noctiluca* (Linnaeus, 1758). Eng. Glow-worm, Sw. Stor lysmask; Fam. Lampyridae, Eng. Fireflies, Sw. Lysmaskar], oblong, black; thorax fuscous, posteriorly truncated; pectus and anus whitish yellow.

C*antharis*, female apterous. *Fn.* 584.

Ald. Ins. p. 492.

C*olumn. Ecphr.* 1. p. 38. t. 36. Noctiluca terrestris.

Jonst. Ins. p. 108. t. 14. f. 2. Cicindela Mouff.

C*harl. Exerc.* p. 47. Cicindela.

Mouff. Lat. p. 109. f. 1. *mas.* 2. *faemina.*

Merret. Pin. p. 201. Cicindela.

[531] Linnaeus only refers to C*antharis*, see nos. 699–720.

Wagn. Helv. p. 239. Cicindela, Lampyris.
Bradl. Nat. t. 26. f. 3. A. *faemina* B. *mas.*
Raj. Ins. p. 79. Cicindela impennis sive faemina.
p. 78. Scarabaeus Lampyris sordide nigricans, corpore longo angusto sive Cicindela mas.
Dal. Pharm. p. 391. Cicindela.
In Sweden: Lysmask.
Lives during summer above ground in juniper thickets; numerous. *It. W:goth.* 134.
DESCR. Female lacks elytra and wings; consists of eleven segments, of which the first is the scutum,[532] recumbent, flat, marginate, semi-ovate, posteriorly truncated, beneath which the very small head is placed. Larva, pupa, and the full-grown insect are similar, but the larva has a white spot laterally on each segment, which the fully developed insect lacks. Pupa similar, but immobile, lacking legs; in each state, two shining spots beneath cauda; shines at night, as long as it lives; loses its brightness, when it dies. It can be preserved alive for quite a long time in a grassy, green, and succulent turf.

700. CANTHARIS *fusca* [C*antharis fusca* Linnaeus, 1758. Eng. Great soldier beetle or Dark sailor beetle, Sw. Stor flugbagge; Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar],[533] thorax marginate, red, with a black macula; elytra fuscous.
C*antharis*, elytra blackish; thorax red with a black macula. *It. Oel.* 38. *Fn.* 586.
Raj. Ins. p. 84. n. 29. Cantharus sepiarius major, elytris nigricantibus, dorso sive thorace supino obscure rufo.
Ins. p. 101. n. 2. Cantharis semunciam longa.
Frisch. Germ. 12. p. 36. t. 3. ic. 6. f. 5. Scarabaeus arboreus nigro-fuscus, elytris tenuibus.
Ephem. N. C. 1674. *obs.* 79.
Act. Ups. 1736. p. 19. n. 2. Cantharis elytris fuscis.
Occurs ubiquitously, fairly numerous around us. Larva often on the snow.
De Geer. Act. Holmens. 1749. p. 77. This animal attacks its own species.
DESCR. Animal oblong, rather soft. Head black, rather flat, red-brownish below eyes. Mouth very small, forcipate, with arcuate, simple jaws, with which it bites in vain. Palps very small near jaws. Antennae unmodified, half the length of the body, filiform, with eleven fuscous segments, but red-brownish closer to head. Thorax dorsally flat, cordate, with prominent margins, red-brownish except for a large black macula that is contiguous with head. Elytra flat, oblong-linear, very soft, curved, silky, dusky black. Wings transparent, fuscous. Venter fuscous except for the last or seventh reddish segment, and also margins laterally red. Each of these lateral, flattened margins has a folded recumbent notch, very soft, with mammilate tips to the lateral notches.

[532] See the com. to no. 452.
[533] See no. 703.

701. CANTHARIS *livida* [C*antharis livida* Linnaeus, 1758. Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate; entirely brick-red.

C*antharis*, elytra brick-red; thorax red, without maculae. *Fn.* 585.

Raj. Ins. p. 84. n. 28. Cantharus sepiatius major, e rufo flavicans, elytris non maculatis.

Act. Ups. 1736. p. 19. n. 1. Cantharis elytris testaceis.

Occurs ubiquitously; numerous.

DESCR. As to size, form, and everything else entirely as the previous species, except for the colour of the elytra, which is pale yellow, and the thorax lacking maculae. Eyes are black.

702. CANTHARIS *dermestoides* [*Elateroides dermestoides* (Linnaeus, 1761). Eng. Large timberworm, Sw. Bredhalsad varvsfluga; Fam. Lymexylidae, Eng. Ship-timber beetles, Sw. Varvsflugor], brick-red; eyes, wings, and pectus black; antennae the length of the thorax.

Occurs in Kalmar. *A. Modéer.*

DESCR. Stature of the preceding species, but slightly more smoothly rounded, entirely brick-red. Pectus and first abdominal segments jet-black. Antennae filiform, serrate, only as long as thorax, through which it differs distinctly from the other species. Bends its head like the skin beetle[534] and thorax only slightly marginate. But elytra are soft.

703. CANTHARIS *rufa* [C*antharis fusca* Linnaeus, 1758). Eng. Great soldier beetle or Dark sailor beetle, Sw. Stor flugbagge; Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar],[535] thorax marginate; entirely red-brown; epigastrium and wings black.

Occurs around us; rather rare.

DESCR. Very similar to the following species, but twice as large, less saturated red but strongly red-brown. Thorax not marked with a black macula and body largely red-brown and not black.

704. CANTHARIS *sanguinea* [*Lygistopterus sanguineus* (Linnaeus, 1758). Eng. Net-winged beetle, Sw. Rödvingebagge; Fam. Lycidae, Eng. Net-winged beetles, Sw. Rödvingebaggar], thorax marginate, entirely red with a black macula; elytra blood-coloured.

C*antharis*, elytra red; thorax red with a black macula. *Fn.* 587.

Frisch. Germ. 12. p. 41. t. 3. ic. 7. f. 2. Scarabaeus arboreus parvus ruber, elytris longis, clypeo pectorali linea nigra.

Raj. Ins. p. 101. n. 4. Cantharis prioribus similis quarta.

Act. Ups. 1736. p. 19. n. 3. Cantharis elytris ruberrimis.

Occurs in various places, especially abundant in the heaps of the iron mines of Dannemora.

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[534] Linnaeus only refers to *Dermestes*, see nos. 408–439.

[535] See no. 700.

DESCR. Smaller than the preceding beetles. Whole body (excepting thorax and elytra) jet-black. Antennae filiform, but segments antrorsely rather prominent at tip; a dorsal black macula of thorax also covers the scutellum. Elytra soft, intensely saturated red or scarlet, very weakly striate, with 6 longitudinally elevated ribs, between each one like a net of maculae arranged in a double row, with less elevated wrinkles. Thorax red, with elevated, wrinkled sutures, blackish on lower part.

705. CANTHARIS *coccinea* [*Pyrochroa coccinea* (Linnaeus, 1761). Eng. Black-headed cardinal beetle, Sw. Stor kardinalbagge; Fam. Pyrochroidae, Eng. Fire-coloured beetles, Sw. Kardinalbaggar], black; thorax and elytra blood-coloured.

Occurs in Sweden. *De Geer.*

DESCR. Very similar to the net-winged beetle,[536] but twice as large. The scutum[537] is almost orbicular, and not tetragonal. Elytra are not striated in the latter.

706. CANTHARIS *obscura* [*Cantharis obscura* Linnaeus, 1758. Sw. Mörk flugbagge; Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate, with red margins; elytra black.

Occurs in Uppsala.

DESCR. It is small. Mouth flesh-coloured. Antennae pale. Thorax flesh-coloured with a jet-black disc. Elytra dark blackish. Abdominal segments whitish yellow at margin. Legs and femora black above, rusty brown beneath.

707. CANTHARIS *lateralis* [*Cantharis lateralis* Linnaeus, 1758. Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate, red; body fuscous; elytra whitish yellow at outer margin.

Occurs in Uppsala.

DESCR. Small. Head, antennae, legs, abdomen, and elytra are fuscous. But whole thorax, anus, and outer longitudinal margin of elytra red-brown.

708. CANTHARIS *aenea* [*Malachius aeneus* (Linnaeus, 1758). Eng. Scarlet malachite beetle; Fam. Malachiidae, Eng. Soft-winged flower beetles, Sw. Blåsbaggar], thorax marginate; body bronze green; elytra outwardly red. *Fn.* 588.

Raj. Ins. 77. Scarabaeus minor; corpore longiusculo, elytris rubicundis.

Lives rarely on rather large nettles and also on various plants.

DESCR. This beetle is middle-sized. Smaller than the preceding species, larger than those that follow. Head, thorax, antennae, abdominal rings, above and beneath, and elytra at base and inner margin bronze green, but posterior elytral part red at tip and also at outer or lateral margin so that the elytra are mostly red, and from base along longitudinal suture bronze green. At thoracic and also abdominal sides, a bilateral, scarlet, bicornate vesicle. Wings fuscous.

[536] See no. 704.

[537] See the com. to no. 452.

709. CANTHARIS *bipustulata* [*Malachius bipustulatus* (Linnaeus, 1758). Eng. Common malachite beetle; Fam. Malachiidae, Eng. Soft-winged flower beetles, Sw. Blåsbaggar], thorax marginate; body bronze green; elytra red-tipped. *It. Oel.* 127. *Fn.* 589.

Raj. Ins. p. 101. n. 7. Cantharis vix tres octavas unciae longa.

Act. Ups. 1736. p. 19. n. 5. Cantharis elytris viridi-aeneis apice rubris.

Lives in grasses, especially on sedges; numerous. The rapacious larva devours the smallest insect.

DESCR. Definitely smaller than the preceding species, to which it is very similar regarding appearance. At thoracic and abdominal sides, even on each side, it wears a scarlet, tricuspid vesicle. Wings dusky black. Antennae black. Head, thorax, and elytra saturated green bronze; outermost elytral tips red or scarlet. Abdomen longer than elytra, bronze coloured beneath and red beneath wings. Elytral colour varies between blue or a greener colour.

710. CANTHARIS *pedicularia* [*Ebaeus pedicularius* (Linnaeus, 1758).[538] Fam. Malachiidae, Eng. Soft-winged flower beetles, Sw. Blåsbaggar], thorax marginate; body jet-black; elytra red-tipped.

Occurs in Uppsala.

DESCR. Appearance as that of the preceding species, but a quarter of its size, and not bronze coloured but black.

711. CANTHARIS *fasciata* [*Anthocomus fasciatus* (Linnaeus, 1758). Fam. Malachiidae, Eng. Soft-winged flower beetles, Sw. Blåsbaggar], thorax marginate, greenish; elytra black with two red fasciae. *Act. Ups.* 1736. p. 19. n. 6. *Fn.* 590.

Lives on plants.

DESCR. The size of a louse, or one tenth of the size of the preceding species. Antennae and legs black. Head and thorax greenish. Elytra jet-black with a double, transverse, red fascia; the fascia slightly above the base is interrupted in the middle at the suture; the other placed at the very elytral tips or, in some, slightly inside tips; these tips medially contiguous. Venter laterally red.

712. CANTHARIS *biguttata* [*Malthinus biguttatus* (Linnaeus, 1758). Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate, jet-black; elytra black, light yellow at tip. *Fn.* 591.

Occurs – – –[539]

DESCR. The size and appearance of the preceding species, but head and thorax entirely jet-black. Elytra light yellow or sulphur-coloured at outermost tips. Venter laterally light yellow.

[538] *Ebaeus pedicularius* (Linnaeus, 1758) is not recorded in Sweden. The species occurring in Sweden is *Ebaeus lapplandicus* Evers, 1993.

[539] Incomplete sentence.

713. CANTHARIS *minima* [*Malthodes minimus* (Linnaeus, 1758). Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate, red-brown, with a black macula; body fuscous; elytra light yellow-tipped.

Necydalis, elytra with an apical, light yellow spot. *Fn.* 598.

I have found that this beetle lives on the Jerusalem artichoke.

DESCR. Slightly larger than a louse. Head black, with light yellow jaws. Thorax light yellow, marginate. Elytra blackish, medially fuscous, terminating in a light yellow spot. Wings black, twice the length of the elytra, folded crosswise under the elytra. Antennae shorter than body, filiform, blackish, at base whitish yellow. Femora black with light yellow tibiae. Venter fuscous, laterally light yellow.

β *Cantharis*, fuscous; elytra apically light yellow; thorax red-brown. *Fn.* 592.

DESCR. The size of a louse. Body jet-black. Thorax red-brown tending to rusty brown with a black macula. Elytra fuscous, half the length of the abdomen, apically light yellow. Femora black. Tibiae pale. Abdominal segments light yellow at margins.

714. CANTHARIS *testacea* [*Rhagonycha testacea* (Linnaeus, 1758). Fam. Cantharidae, Eng. Soldier beetles, Sw. Flugbaggar], thorax marginate, light yellow, with a black macula; body black; elytra and legs dark bluish grey.

Cantharis, black; elytra dark bluish grey. *Fn.* 593.

Lives on plants.

DESCR. Among the smallest of its genus. Antennae pale. Similar to C. *livida*,[540] but a quarter of its size.

715. CANTHARIS *pectinicornis* [*Schizotus pectinicornis* (Linnaeus, 1758). Fam. Pyrochroidae, Eng. Cardinal beetles, Sw. Kardinalbaggar], thorax orbicular; elytra brick-red tending to red-brown; antennae pectinate.

Lives on plants.

DESCR. Stature of the net-winged beetle,[541] but scutum[542] orbicular, red-brown, with a medial fuscous spot. Head, body, and scutellum black. Antennae strongly pectinate, black. Elytra pale red, not striated.

716. CANTHARIS *caerulea* [*Ischnomera caerulea* (Linnaeus, 1758). Sw. Glänsande blombagge; Fam. Oedemeridae, Eng. False blister beetles, Sw. Blombaggar], thorax somwhat smoothly rounded; body blue and slightly opaque.

Inhabits forests.

DESCR. Very similar to the following species, but somewhat larger and thorax more flattened; colour of the whole body blue except for the black antennae, but less shining.

[540] See no. 701.

[541] See no. 704.

[542] See the com. to no. 452.

717. CANTHARIS *viridissima* [*Chrysanthia viridissima* (Linnaeus, 1758). Sw. Grön blombagge; Fam. Oedemeridae, Eng. False blister beetles, Sw. Blombaggar], thorax rather smoothly rounded; body green.

Occurs in Uppland.

DESCR. Antennae filiform, blackish, somewhat shorter than body. Thorax not marginate, but rounded as that of the longhorn beetle.[543] Body shining green, silky, only head golden green.

718. CANTHARIS *navalis* [*Lymexylon navale* (Linnaeus, 1758). Sw. Skeppsvarvsfluga; Fam. Lymexylidae, Eng. Ship-timber beetles, Sw. Varvsflugor], thorax rather smoothly rounded; body deeply yellow; elytra black at margin and tip.

Cantharis, rusty brown; thorax rounded; elytra blackish at outer margin and tip.

It. W:Goth. 153. t. 2. f. 2, 3, 4.

Frisch. Ins. 13. p. 24. t. 20.

Lives in cut oak logs; very detrimental to ships. There is a description in *It. W:goth.*

DESCR. Body somewhat smoothly rounded. Body, pectus, thorax, elytra, abdomen, and legs are rusty brown. Head, eyes, and elytral tips, including outer margin, black. Pectus is covered by a convex layer.

719. CANTHARIS *melanura* [*Nacerdes melanura* (Linnaeus, 1758). Eng. Wharf borer, Sw. Skeppsbagge; Fam. Oedemeridae, Eng. False blister beetles, Sw. Blombaggar], thorax rounded; body deep yellow; elytra black-tipped.

Lives in trees.

DESCR. Very similar to the preceding species as to size, stature, and colour. But thorax flatter, uneven, and head not black; only outermost elytral tips black.

720. CANTHARIS *cardiacae* [*Nepachys cardiacae* (Linnaeus, 1761). Fam. Malachiidae, Eng. Flower beetles, Sw. Blåsbaggar], jet-black; elytra with an apical blood-coloured spot; antennae pectinate.

Lives on the common motherwort. *Joh. Alströmer.*

DESCR. The size of a louse. Abdominal segments marginally, laterally, and also beneath, red-brown.

[543] Linnaeus only refers to *Leptura*, see nos. 677–698.

Elater

721. ELATER *brunneus* [*Sericus brunneus* (Linnaeus, 1758). Sw. Ljus fältknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax black, bilaterally red-brown; elytra and body rusty brown.

Occurs in Sweden.

DESCR. Body almost middle-sized. Head and antennae black. Thorax black with a broad, longitudinal, red line on each side. Elytra dirt brown tending to brick-red, indistinctly striate. Pectus red, medially black. Abdomen black, medially red-brown. Legs rusty brown.

722. ELATER *cruciatus* [*Selatosomus cruciatus* (Linnaeus, 1758). Sw. Korsknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax black; laterally rusty brown; sheath wings light yellow, with black cross and margin.

Occurs around us; less abundant.

DESCR. Middle-sized or somewhat larger. Antennae rusty brown. Thorax laterally rusty brown. Sheath wings light yellow; longitudinal suture broadly black. Lateral margins blackish and fascia also rather indistinctly black. Pectus laterally red-brown. Abdominal sides posteriorly blood-coloured. Legs red.

723. ELATER *linearis* [*Denticollis linearis* (Linnaeus, 1758). Sw. Brun ögonknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare],[544] thorax black, laterally red-brown; elytra rusty brown, linear.

Elater, thorax red; elytra grey. *Fn.* 582.

Occurs in Uppsala.

DESCR. It is among the smaller members of its genus. Head black. Thorax red. Elytra grey; each striate with seven rows of punctations. Whole area beneath, including abdomen, legs, and thorax, fuscous.

724. ELATER *ruficollis* [*Cardiophorus ruficollis* (Linnaeus, 1758). Sw. Kraghjärtknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax shining red, anteriorly black; elytra and body black.

Elater, black; thorax red. *Fn.* 576.

Act. Ups. 1736. p. 19. n. 3. Attelabus oblongus niger, collari testaceo.

Occurs around us on the outskirts of fields, but very rare.

DESCR. The smallest among our click beetles or almost half as large as the others. Entirely jet-black, but elytra, which are also striate, verge somewhat on blue. Thorax mostly red, but anteriorly black, but even more black medially; posteriorly also black with a very smooth margin facing the elytra; hence thorax with an almost transverse fascia, broad, red, crescent-shaped, with a lunule-like excavation facing the head. Antennae black, not pectinate, but with segments slightly bulging anteriorly.

[544] See no. 725.

725. ELATER *mesomelus* [*Denticollis linearis* (Linnaeus, 1758). Sw. Brun ögonknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare],[545] thorax and elytral margin rusty brown; body and elytra black.

Occurs in Sweden; less abundant.

DESCR. Body black, middle-sized, rather narrow. Mouth rusty brown. Thorax rusty brown with an excavated, longitudinal line. Elytra black, striate, with black punctations, and brick-red at outer margin; hence the appearance is unusual. Scutellum black, notably glabrous.

726. ELATER *aterrimus* [*Ectinus aterrimus* (Linnaeus, 1761). Sw. Långhalsknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], jet-black; thorax opaque, punctate; elytra striate. *Uddm. Diss.* 45.

Inhabits forests.

DESCR. Middle-sized. Whole body densely jet-black like coal. Thorax somewhat scabrous. Elytra rather deeply striate, as if with crenulate depressions.

727. ELATER *castaneus* [*Anostirus castaneus* (Linnaeus, 1758). Eng. Chestnut coloured click beetle, Sw. Kamgrusknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax brick-red, pubescent; elytra light yellow, black-tipped; body jet-black.

Elater, thorax villous; elytra brick-red, black-tipped. *Fn.* 573.

List. Loqu. p. 387. n. 18. Scarabaeus ex fusco rufescens sive castaneus.

Raj. Hist. p. 92. n. 6. Scarabaeus antennis articulatis quarto & quinto aequalis.

Inhabits cornfields and meadows; numerous.

DESCR. Legs, wings, branched antennae, and elytral tips black. Thorax covered with palish ash-grey fine hairs tending to brick-red. Elytra reddish or pale flesh-coloured, very lightly striate, black-tipped.

728. ELATER *livens* [*Nomen dubium*], black; thorax notably glabrous, with a red anterior margin; elytra brick-red.

Occurs in Sweden. *P. Forsskål.*

DESCR. Stature of the preceding species. Whole body, also antennae and legs, black. Elytra entirely dull whitish yellow or brick-red. Anterior thoracic margin, especially laterally, is of a dark blood colour.

729. ELATER *ferrugineus* [*Elater ferrugineus* Linnaeus, 1758. Eng. Rusty click beetle, Sw. Mulmknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax and elytra rusty brown; body and posterior margin of thorax black.

Occurs around us; less abundant.

DESCR. Larger than most of our other click beetles. Entirely black except for the rusty brown thorax and elytra. Thorax barely jet-black at posterior margin and the posterior thoracic teeth are dark. Scutellum is black. Antennae rusty brown, slightly longer than thorax.

[545] See no. 723.

730. ELATER *germanus* [*Selatosomus aeneus* (Linnaeus, 1758). Eng. Brilliant click beetle, Sw. Bronsknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare],[546] black; thorax and elytra bluish jet-black.

Elater, black; elytra blue. *Fn.* 579.

Occurs in Uppsala, but rare; in German speaking countries[547] numerous.

DESCR. Whole body beneath, including legs and antennae, jet-black. Thorax and elytra bluish black; elytra furrowed with 10 striae.

731. ELATER *sanguineus* [*Ampedus sanguineus* (Linnaeus, 1758). Sw. Tallrödrock; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax jet-black; elytra red; body black.

Elater, black; elytra red. *Fn.* 574.

Inhabits forests.

DESCR. As to size and appearance it is close to *E. testaceus*, but thorax glabrous and, together with the head, black. Elytra red with very fine striae from 9 rows of punctations on each elytron. Antennae semi-pectinate. Mouth toothless.

732. ELATER *balteatus* [*Ampedus balteatus* (Linnaeus, 1758). Sw. Bandrödrock; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax jet-black; elytra anteriorly dimidiately red; body black.

Elater, black; elytra anteriorly dimidiately red-brown. *Fn.* 580.

Occurs in Roslagen.

DESCR. It belongs to the smaller species. Antennae filiform.

733. ELATER *marginatus* [*Dalopius marginatus* (Linnaeus, 1758). Sw. Blåbärsknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax weakly fuscous; elytra rusty brown, at margins entirely black.

Elater, black; outer elytral side dark bluish grey. *Fn.* 581.

Occurs around us.

DESCR. Body rather small, fuscous beneath. Head black. Thorax fuscous, laterally rusty brown. Elytra pale rusty brown, entirely black at margins. Legs pale rusty brown. Antennae dusky brick-red.

734. ELATER *sputator* [*Agriotes sputator* (Linnaeus, 1758). Eng. Common click beetle, Sw. Mindre sädesknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax fuscous, shining; elytra rusty brown; body black.

Elater, black; elytra fuscous; antennae and legs red-brown. *Fn.* 583.

Inhabits fields. While agitated, it simultaneously crepitates and spits saliva very far away from the mouth. *Rolander.*

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[546] See no. 740.

[547] See the com. to no. 453.

DESCR. Entirely black, but elytra fuscous or ash-greyish. Legs red-brown, but antennae even redder brown.

735. ELATER *obscurus* [*Agriotes obscurus* (Linnaeus, 1758). Eng. Wireworm click beetle, Sw. Mörk sädesknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax fuscous, dark; elytra dark brick-red.

Occurs around us; very abundant.

DESCR. This species is distinguished and identified with great difficulty except for the fact that the mere colour is dark fuscous and minimally shining. The stature and size of *E. linearis*.[548] Elytra striate, of a very dark colour.

736. ELATER *tristis* [*Ampedus tristis* (Linnaeus, 1758). Sw. Epålettsvartrock; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax shining jet-black; elytra dark bluish grey at base and outer margin.

Occurs in Sweden; rather rare.

DESCR. Body black, of a rather small size. Elytra with an oblong, dull light yellow macula at base and pale or light yellow outer margin. Tarsi rusty brown.

737. ELATER *fasciatus* [*Danosoma fasciatum* (Linnaeus, 1758). Sw. Bred trollknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], variegated with black and pale markings; elytra blackish with a white, undulating fascia.

Occurs in Sweden; rather numerous.

DESCR. Body black, somewhat larger. Antennae short. Thorax not uniform, variegated with black and pale markings. Elytra black, not striated, but spotted with black speckles. Behind the middle runs a pale, undulating fascia, often interrupted, and anteriorly a lateral, pale fascia.

738. ELATER *murinus* [*Agrypnus murinus* (Linnaeus, 1758). Sw. Gråknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax dark ash-grey; elytra cloudy ash-grey; tarsi and antennae red-brown.

Occurs around us; rather rare.

DESCR. Body middle-sized or somewhat larger, blackish ash-grey; only antennae and tarsi rusty brown.

739. ELATER *tessellatus* [*Prosternon tessellatum* (Linnaeus, 1758). Eng. Chequered click beetle, Sw. Tallknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], body dark bronze; elytra fuscous, with rather pale maculae crowded together; claws red.

Occurs around us; abundant.

DESCR. Body middle-sized, black beneath, black even above, but as if variegated with ash-grey or mouse-grey hairs shining according to the direction of the light. Legs pitch black or red-brownish black.

[548] See no. 723.

740. ELATER *aeneus* [*Selatosomus aeneus* (Linnaeus, 1758). Eng. Brilliant click beetle, Sw. Bronsknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare],[549] thorax and elytra bluish bronze coloured; legs blood-coloured.

Elater, bronze green; legs red-yellow. *Fn.* 578.

Lives here around us; numerous.

DESCR. It is among the somewhat larger species. Elytra striate. Antennae filiform. Colour varies between shining black, bronze, and green.

741. ELATER *pectinicornis* [*Ctenicera pectinicornis* (Linnaeus, 1758). Sw. Kamglansknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax and elytra bronze coloured; antennae pectinate.

Elater, dusky greenish bronze. *Fn.* 575.

List. Mut. t. 17. f. 15. *mas* & f. 14. *faemina.*

Loqu. p. 387. n. 19. Scarabaeus e nigro-virens, corniculis altero tantum versu pectinatis (*Mas*).

Act. Ups. 1736. p. 15. n. 3. Notopeda nigro-aenea, antennis simplicibus.

Lives occasionally on pine, the pollen on which it feeds.

DESCR. Male: As to thorax and elytra it is more saturated green and narrower. Antennae strongly pectinate.

Female: More bronze coloured. Thorax broader, more shining greenish; elytra more blackish. Antennae filiform, weakly pectinate.

742. ELATER *buprestoides* [*Melasis buprestoides* (Linnaeus, 1761). Sw. Tjockhuvad skenknäppare; Fam. Eucnemidae, Eng. False click beetles, Sw. Skenknäppare], body entirely black; antennae pectinate; head retracted into thorax.

Occurs in Kalmar. *Modéer.* On willow. *Joh. Forsskål.*

DESCR. Middle-sized or smaller. Body entirely black. Antennae rather pale, the length of the thorax, pectinate in a simple row, not bilaterally. Head retracted into the gibbous thorax, as in the jewel beetle;[550] hence appearance unique, but thorax posteriorly marked on each side with a tooth, as in the congeners. Elytra very finely striate. Legs short. Owing to its nature it seems rather to belong to the genus *Dermestes.*[551]

743. ELATER *niger* [*Hemicrepidius niger* (Linnaeus, 1758). Sw. Svart buskknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], body smooth; elytra, legs, and body black.

Elater, entirely dusky black. *Fn.* 577.

Raj. Ins. 78. Scarabaeus minor longo & angusto corpore; totus niger, saltatrix.

α *Raj. Ins.* p. 92. n. 1. Scarabaeus antennis articulatis primus maxime vulgaris.

Act. Ups. 1736. p. 15. n. 4. Notopeda atra, antennis simplicibus.

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[549] See no. 730.

[550] Linnaeus only refers to *Buprestis*, see nos. 753–763.

[551] See nos. 408–439.

β *Raj. Ins.* p. 92. n. 3. Scarabaeus antennis articulatis tertius.
Act. Ups. 1736. p. 15. n. 5. Notopeda fusca, antennis simplicibus.
List. Mut. t. 17. f. 14.
Inhabits pastures.
DESCR. Entirely black or verging on ash-grey or fuscous or mouse-grey colours. As far as I can see, the antennae lack branches. As to size of body shorter than the others.

744. ELATER *minutus* [*Limonius minutus* (Linnaeus, 1758). Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], body black, shining; elytra dark black.
Occurs around us; rather rare.[552]
DESCR. Body entirely black. Thorax glabrous. Elytra striate, of a dark colour. It is not as large as the preceding species, but twice as large as the following one.

745. ELATER *pulchellus* [*Negastrius pulchellus* (Linnaeus, 1761). Sw. Fläcksandknäppare; Fam. Elateridae, Eng. Click beetles, Sw. Knäppare], thorax and head jet-black; elytra black with whitish yellow maculae; legs light yellow.
Occurs in Skåne. *Mr* C. *Solander.*
DESCR. Slightly larger than a louse. Head and thorax jet-black. Elytra black, striate, anteriorly with a repand, slightly interrupted, light yellow fascia; behind the middle, a light yellow spot. Close to tip, a longitudinal, light yellow macula. Body black. Legs light yellow.

Cicindela[553]

746. CICINDELA *campestris* [C*icindela campestris* Linnaeus, 1758. Eng. Green tiger beetle, Sw. Grön sandjägare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], green; elytra with five white spots.
C*icindela*, green above; sheath wings with ten white spots. *Fn.* 548.
Mouff. Lat. p. 145. *f. infim.* Cantharis quarta.
Jonst. Ins. t. 16. Cantharis Mouff. minor 4.
List. Mus. t. 17. f. 12.
Loqu. p. 386. n. 17. Scarabaeus viridis, cui decem maculae albae supra alarum thecas sunt.
Inhabits very sterile meadows; in spring fairly abundant. Runs very fast and flies most swiftly.
DESCR. Among the beetles, this species should indeed be called unique owing to its most spectacular characteristics, since a golden glitter radiates from the whole body or shines like silk. Elytra green above, rather flat, smooth, marked with some white spots, of which the first is angular at base; second round and close to margin; third crescent-shaped and close to margin; fourth oblong at margin; fifth inside the third spot or in the elytral middle, inside all the others. Moreover, also the elytral tip is whitish. Wings fuscous. Thorax narrow, rounded, shining green. Head golden green,

[552] Not with certainty recorded from Sweden. All checked Swedish records are *Limonius poneli* Leseigneur & Mertlik, 2007. Sw. Gräsknäppare.

[553] Linnaeus has treated the ground beetles C*arabidae* in both C*icindela* and C*arabus.*

with a flat vertex. Eyes black, prominent. Mouth prominent. Upper lip blunt, white. Upper jaws prominent with many strong teeth; lower jaws armed with a single apical tooth; beneath these, two pairs of palps, of which the upper consists of two segments, lower of four segments each. At the position of the lower lip, there are two palps each with two pilose segments. Venter golden green. Legs very long and very slender. At the femoral base there is something like an oval, hard structure. Antennae filiform, shorter than body, 10 segments.

747. CICINDELA *hybrida* [C*icindela hybrida* Linnaeus, 1758. Eng. Northern dune tiger beetle, Sw. Brun sandjägare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], weakly purplish; elytra with two white spots and a thin, terminal line.

Inhabits forests; very rare.

DESCR. Stature entirely as that of the preceding species, but colour dusky purplish. Elytra medially with a white undulating fascia, similar to that of the following species, and at outer basal margin, as also at tip, a white crescent.

748. CICINDELA *sylvatica* [C*icindela sylvatica* Linnaeus, 1758. Eng. Wood tiger beetle or Heath tiger beetle, Sw. Skogssandjägare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], black; elytra with white fascia and two white spots.

C*icindela*, jet-black; sheath wings with six white maculae and fascia. *Fn.* 549.

Act. Ups. 1736. p. 19. n. 1. Cicindela atrea, punctis quatuor fasciaque albis.

Pet. Gaz. p. 77. t. 50. f. 5. Cantharis chusan. viridis elegantissime variegatus. *quod ad figuram*?

Inhabits forests and thickets of conifers in Västerbotten, where it is abundant; runs very rapidly and flies over paths; rarer in other provinces; always in coniferous forests. Rather rare around us in Uppsala.

DESCR. Appearance entirely as that of the first species,[554] but one and a half times as large. It is entirely jet-black. Sheath wings flat, somewhat broad; white spot at outer angle of elytral base. Slightly above, close to outer margin, another spot that is almost crescent-shaped; at elytral tips, on each elytron, a round, white spot, and a linear, curved or undulating, arcuate fascia, posteriorly and medially turned downwards, surrounding the middle part of the elytra. All these maculae are not covered by hairs, since the glabrous elytra are scattered with an infinite number of punctations, but they are translucent through the very crust. Membranous wings pointed, with fuscous veins, and a longitudinal fuscous fascia at outer margin. Femora and feet long, slender, jet-black, scattered with some setae. Tibiae terminating in two spines. Thorax rather narrow, somewhat smoothly rounded, with a depressed black cross, the head is also black. Eyes rather prominent. Mouth prominent; upper lip jet-black above, rounded, pointed. Upper jaws large, projecting, black, at base outwardly white, armed with many (5) hard teeth.

[554] See no. 746.

749. CICINDELA *riparia* [*Elaphrus riparius* (Linnaeus, 1758). Eng. Green-socks peacock beetle, Sw. Grön groplöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], bronze green; elytra with broad punctations. *It. Oel.* 38. 121. *Fn.* 550.

List. Loqu. p. 385. n. 12. Scarabaeus parvus inauratus.

Act. Ups. 1736. p. 19. n. 3. Cicindela aenea: punctis excavatis.

Lives in damp sand at riverbanks; abundant. Runs very rapidly, even under the very water, however not swimming.

DESCR. It is decidedly small, scarcely equal to two rice seeds. Mouth prominent. Head, thorax, abdomen, femora (not tibiae), and feet shine with gold and copper colours. Eyes black, prominent. Thorax narrow, rather smoothly rounded. Elytra bronze green, with broad pits. A prominent punctation in the middle of each pit. The larger pits are connected longitudinally by an elevated blackish line. A remarkable colour emerges while the surface is greenish, but the bases of the pits are bronze coloured.

750. CICINDELA *flavipes* [*Asaphidion flavipes* (Linnaeus, 1761). Sw. Guldsidenlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], dark bronze coloured; legs deep yellow; elytra somewhat cloudy.

Inhabits forests.

DESCR. The size of the black-legged springtail stalker.[555] Base of antennae whitish yellow. Legs deep yellow. Elytra weakly bronze coloured, dark, cloudy.

751. CICINDELA *quadrimaculata* [*Bembidion quadrimaculatum* (Linnaeus, 1761). Eng. Four-spotted ground beetle, Sw. Fyrfläckig kvicklöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], black; elytra fuscous with two pale maculae each; tibiae red-brown.

Occurs around us; rather rare.

DESCR. Body black, the size of a louse. Thorax almost globose. Elytra fuscous; each with two maculae: one anterior, the other posterior. Antennae and tibiae red-brown.

752. CICINDELA *aquatica* [*Notiophilus aquaticus* (Linnaeus, 1758). Eng. Black-legged springtail stalker, Sw. Hedögonlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], bronze coloured, shining.

Buprestis, dusky bronze, glabrous, shining; thorax weakly marginated. *Fn.* 558.

List. Mut. t. 31. f. 13.

Act. Ups. 1736. p. 19. n. 20. Cicindela minima aurea levis.

Lives at water bodies.

DESCR. This species is very small. Antennae short, filamentous. Eyes prominent, entirely shining. Thorax fairly broad, carinate, marginate. Elytra shining with minute striae formed from the minutest punctations. Abdomen black, shining. Legs black. Rostrum rather prominent.

[555] See no. 752.

Buprestis

753. BUPRESTIS *octoguttata* [*Buprestis octoguttata* Linnaeus, 1758. Eng. Eight-spotted jewel beetle, Sw. Åttafläckig praktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra fastigiate, lacking spines, with four white maculae; body blue.

Inhabits pine thickets.

DESCR. Rather rare. Antennae the length of the thorax. Thorax white marginally. Elytra striate, blunt, with four white maculae longitudinally arranged. Venter with a thin, transverse, white line bilaterally at base and a pair of white spots on each segment. Four posterior femora with a white spot.

754. BUPRESTIS *mariana* [*Chalcophora mariana* (Linnaeus, 1758). Eng. Flat-headed pine borer, Sw. Jättepraktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra serrate, longitudinally wrinkled, with two impressed maculae on each wing; thorax sulcate.

Buprestis, bronze coloured, shining, ash-grey above; sheath wings apically attenuated. *Fn.* 557.

Inhabits forests.

DESCR. This species is among the largest. Elytra apically truncated, attenuated, ash-grey above, striate, without maculae, with an interlucent golden brightness.

755. BUPRESTIS *chrysostigma* [*Chrysobothris chrysostigma* (Linnaeus, 1758). Sw. Barrpraktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra serrate, furrowed; with two golden, impressed maculae on each wing; thorax punctate.

Buprestis, dusky bronze; elytra with impressed, bronze coloured maculae. *Fn.* 556.

Lives at riverbanks.

DESCR. Head, as in the others, mostly retracted into thorax; hence a savage appearance of these species. Eyes posteriorly greenish. Thorax bronze red. Elytra dusky bronze; each exarate with four or five furrows; four pits (two each on each elytron), impressed, gilded, and arranged in the form of a quadrate. Antennae setaceous, very short. Abdomen dorsally blue.

756. BUPRESTIS *rustica* [*Buprestis rustica* Linnaeus, 1758. Eng. Peasant jewel beetle, Sw. Stubbpraktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra striate, fastigiate; thorax punctate.

Buprestis, bronze green, without maculae. *Fn.* 555.

Act. Ups. 1736. p. 19. n. 4. Cicindela aenea, elytris striatis.

Inhabits forests by water.

DESCR. The length like the width of a finger. Thorax bronze green, with punctations, broad, even as wide as the sheath wings; head mostly retracted into thorax. Elytra bronze coloured, less green, without maculae; each exarate with about eight striae.

757. BUPRESTIS *nitidula* [*Anthaxia nitidula* (Linnaeus, 1758). Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra absolutely entire; thorax marginate, bilaterally flat; body strongly shining with green.

Occurs ubiquitously.[556]

DESCR. Body somewhat larger than a bed bug,[557] in some intensely green. Thorax is golden red, in some concolorous, always somewhat flattened. Antennae black, entirely green beneath, smooth, rather shining.

758. BUPRESTIS *aenea* [*Dicerca aenea* (Linnaeus, 1767). Sw. Guldpraktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra emarginate, with punctations forming scars, apically striate.

Occurs ubiquitously.

DESCR. Body rather large, bronze grey above, of a strongly shining copper-colour beneath. Thorax and elytra uneven, with punctations crowded together like variolous[558] scars; hence elytra appear striate, especially on dorsum and at posterior parts.

759. BUPRESTIS *quadripunctata* [*Anthaxia quadripunctata* (Linnaeus, 1758). Eng. Metallic wood-boring beetle, Sw. Fyrprickig praktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra absolutely entire, punctate; thorax with four punctations; body dark.

Buprestis, jet-black, thorax with punctations. *Fn.* 559.

Inhabits rather humid areas.

DESCR. This species is small, entirely fuscous or jet-black. Thorax dorsally with four transversely arranged, depressed or concave punctations. Antennae shorter than thorax, filiform. Elytra not striated but with the minutest punctations. Head markedly blunt, retracted.

760. BUPRESTIS *minuta* [*Trachys minuta* (Linnaeus, 1758). Sw. Videpraktbagge; Fam. Buprestidae, Eng. Jewel beetles, Sw. Praktbaggar], elytra absolutely entire, transversely wrinkled; thorax almost trilobed, smooth, bronze coloured.

Inhabits humid areas. When head or legs are touched, it contracts, just as *Dermestes pertinax*.[559] It does not move, even if exposed to all forms of disturbance.

DESCR. Body ovate, blunt, the size of a rice seed, shining, black.

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[556] Not recorded from Sweden.

[557] See no. 909.

[558] From Lat. *variola*, Eng. "smallpox".

[559] See no. 414.

761. BUPRESTIS *tenebrionis* [*Capnodis tenebrionis* (Linnaeus, 1761). Eng. Mediterranean flatheaded root-borer or Peach flatheaded root-borer; Fam. Buprestidae, Eng. Jewel beetles or Metallic wood-borer beetles, Sw. Praktbaggar], jet-black; elytra entire, linearly punctate; thorax variolous,[560] dilated.

Occurs around us; very rare.[561]

DESCR. Head almost as that of the flat-headed pine borer[562] and stature of a mealworm beetle,[563] entirely dull jet-black. Thorax almost broader than elytra; sides rounded; surface like smallpox scars. Elytra with barely visible linear punctations, not striated.

762. BUPRESTIS *viridis* [*Agrilus viridis* (Linnaeus, 1758). Eng. Beech splendour beetle, Sw. Sälgpraktbagge; Fam. Buprestidae, Eng. Jewel beetles or Metallic wood-borer beetles, Sw. Praktbaggar], green; elytra absolutely entire, linear; thorax curved; body green, elongated.

Lives on leaves of birch, the margins of which it eats.

DESCR. Whole body intensely green, middle-sized or smaller, narrower than the others. Elytra not striated and not punctate except for the close standing granules.

763. BUPRESTIS *granularis* [*Helophorus granularis* (Linnaeus, 1761). Fam. Helophoridae, Eng. Water scavenger beetles, Sw. Halsrandbaggar], cloudy bronze coloured; antennae clavate.

Inhabits fields.

DESCR. Almost smaller than a flea, entirely black beneath, dark bronze coloured above, with a fuscous macula medially on dorsum touching both elytra. Elytra very weakly striate. Thorax striate with 5 oblique furrows. Antennae clavate, as in the skin beetle.[564]

Dytiscus

* *With perfoliate antennae*[565]

764. DYTISCUS *piceus* [*Hydrophilus piceus* (Linnaeus, 1758). Eng. Great silver water beetle, Sw. Större vattenbagge; Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], antennae perfoliate; body pitch black, smooth, acuminate.

Dytiscus, antennae perfoliate, fuscous. *Fn*. 561.

Inhabits water bodies.

DESCR. Body very large, pitch black, smooth, posteriorly acuminate.

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[560] See the com. to no. 758.

[561] Does not occur in Sweden, only in South and Central Europe, Northern Africa and the Middle East.

[562] See no. 754.

[563] Linnaeus only refers to *Tenebrio*, see nos. 815–825.

[564] Linnaeus only refers to *Dermestes*, see nos. 408–439.

[565] Thus fam. Hydrophilidae.

765. DYTISCUS *caraboides* [*Hydrochara caraboides* (Linnaeus, 1758). Eng. Lesser silver water beetle, Sw. Stor rotvattenbagge; Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], antennae perfoliate; body glabrous with some curved striae.

Dytiscus, antennae perfoliate, black; elytra smooth. *Fn.* 562.

Inhabits still water bodies.

DESCR. Middle-sized, posteriorly less pointed.

766. DYTISCUS *fuscipes* [*Hydrobius fuscipes* (Linnaeus, 1758). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar],[566] antennae perfoliate; elytra striate, dark bluish grey marginally; legs fuscous.

Dytiscus, antennae perfoliate, black; legs fuscous; elytra striate. *Fn.* 563.

Inhabits still water bodies.

DESCR. This species is small.

767. DYTISCUS *luridus* [*Berosus luridus* (Linnaeus, 1761). Fam. Hydrophilidae, Eng. Water scavenger beetles, Sw. Palpbaggar], antennae perfoliate, dirt brown; elytra with three darkish spots; thorax laterally yellowish.

Occurs in Sweden.

DESCR. Size as a middle-sized leaf beetle,[567] entirely dirt brown. Head bronze black. Elytra striate with a black spot medially at margin and two indistinct spots barely obvious at longitudinal suture. Legs rusty brown.

* *With setaceous antennae*[568]

768. DYTISCUS *latissimus* [*Dytiscus latissimus* Linnaeus, 1758. Sw. Bredkantad dykare; Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], black; elytra with dilated margins and a light yellow line. *Fn.* 564.

Act. Ups. 1736. p. 14. n. 1. Dytiscus maximus; elytris margine prominentibus.

Frisch. Germ. 2. p. 33. t. 7. f. 1. 2. Scarabaeus aquaticus magnus niger, margine luteo.

Inhabits water bodies.

DESCR. It is the largest of our species. Elytral margin, especially in the middle of the side, really prominent with a light yellow colour; tip of sternum bifurcate, acuminate.

[566] See no. 404.

[567] Linnaeus only refers to *Chrysomela*, see nos. 506–578.

[568] Thus fam. Dytiscidae.

769. DYTISCUS *marginalis* [*Dytiscus marginalis* Linnaeus, 1758. Eng. Great diving beetle, Sw. Gulbrämad dykare; Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare],[569] black; thorax and elytral margin light yellow. *Fn.* 565.

Aldr. Ins. p. 707.

Mouff. Lat. p. 164. *fig. bona.*

Raj. Ins. p. 93. n. 1. Hydrochantharus nostras.

List. Mut. t. 5. f. 2.

Inhabits water bodies; numerous.

DESCR. Entirely black, smooth.[570] On vertex, a crescent-shaped reddening line or obtuse angles. Thorax is bordered by a deep yellow margin. Elytra light yellow at outer margin; two longitudinal striae, barely visible, marked with the minutest punctations. A hardly noticeable light yellow shadow at elytral tips. Tip of sternum bifurcate.

770. DYTISCUS *striatus* [*Colymbetes striatus* (Linnaeus, 1758). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], fuscous; elytra very subtly striate transversely.

Inhabits water bodies; numerous.

DESCR. Body middle-sized. Elytra with such fine, dense transverse striae so that they are barely visible to the armed eye.

771. DYTISCUS *cinereus* [*Graphoderus cinereus* (Linnaeus, 1758). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], ash-grey; margins of elytra and thorax medially light yellow. *Fn.* 566.

Hoffn. Ins. 2. t. 12.

List. Mut. t. 5. f. 1.

Raj. Ins. 94. n. 3. Hydrochantharus minor, corpore rotundo plano.

Inhabits water bodies. Perhaps it only differs from the preceding species as to sex?

DESCR. The size of a very large fly. Thorax light yellow, at anterior and posterior margins (not sides) black. Elytra ash-grey, covered with very small spots crowded together and deep yellowish or almost diaphanous. Outer margin of elytra whitish yellow. On vertex, a cordate, light yellow macula black marginally. Tip of sternum bifurcate, blunt.

772. DYTISCUS *semistriatus* [*Dytiscus marginalis* Linnaeus, 1758. Eng. Great diving beetle, Sw. Gulbrämad dykare; Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare],[571] fuscous; elytra of female, each with ten dimidiate, villous furrows.

Dytiscus, elytra with twenty dimidiate striae. *Fn.* 567.

Bradl. Nat. 1. 26. f. 2. *l.* A.

Raj. Ins. 94. n. 2. Hydrocantharus elytris stiatis sive canaliculatis.

Frisch. Germ. 2. p. 35. t. 7. f. 4.

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[569] See no. 772.

[570] Here Linnaeus describes the male of *Dytiscus marginalis*. The female is described in no. 772.

[571] See no. 769.

Inhabits especially still water bodies.

DESCR. Elytra deeply striate or furrowed, but not along the whole length; rest of area smooth at tip; these striae and elytra are glabrous; elytral margin pale; ten striae on each elytron.[572]

β *Dytiscus*, fuscous above, jet-black beneath. *Fn.* 568.

Inhabits water bodies.

DESCR. It is among the rather small species,[573] entirely very smooth. Tip of sternum bifurcate, blunt.

773. DYTISCUS *sulcatus* [*Acilius sulcatus* (Linnaeus, 1758). Eng. Lesser diving beetle; Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], elytra with ten longitudinal furrows. *Fn.* 569.

Raj. Ins. 94. f. 3. Hydrocantharus minor, corpore rotundo plano.

Inhabits water bodies. *Malmborg.*

DESCR. It falls among the rather small species and much smaller than the next previous one.[574] Thorax black; margin and transverse line light yellow. Elytra black; each excavated longitudinally by four or five broad furrows and with grey hairs tending to ash-grey; interjacent margins glabrous, black. Tip of sternum is bifurcate.

774. DYTISCUS *erythrocephalus* [*Hydroporus erythrocephalus* (Linnaeus, 1758). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], oval-oblong, black; head and legs red-brown. *Fn.* 570.

Inhabits still water bodies, very agile.

DESCR. The size of a rice seed; smooth, black above. Head except for the eyes, red-brown. Legs red-brown. Antennae black.

775. DYTISCUS *palustris* [*Hydroporus palustris* (Linnaeus, 1761). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], black, very smooth; elytra with two, whitish blotches laterally.

Inhabits water bodies.

DESCR. Smaller than *D. erythrocephalus*.[575] Entirely black, shining, but with whitish light yellow blotches, curved at outer elytral margin; one blotch in the middle, the other either towards tip or towards base of lateral margin.

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[572] Here Linnaeus describes the female of *Dytiscus marginalis*. The male is described in no. 769.

[573] This description "β" is of another species than the one described above in the first paragraph of no. 772. Linnaeus sometimes uses this solution to describe closely related species that he does not identify further.

[574] Linnaeus means *Dytiscus marginalis* no. 772 (main text); hence he counts no. 772 (β) as one species and no. 772 (main text) as another species, and then his statement becomes correct.

[575] See no. 774.

776. DYTISCUS *uliginosus* [*Agabus uliginosus* (Linnaeus, 1761). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], jet-black, shining; antennae, legs, and outer elytral side rusty brown.

Inhabits water bodies.

DESCR. Body hardly exceeds that of a bed bug,[576] ovate, jet-black, notably glabrous, scattered with weak punctations. Elytra rusty brown at lateral margins. Legs and antennae red-brown.

777. DYTISCUS *maculatus* [*Platambus maculatus* (Linnaeus, 1758). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], ovate, black; thorax black with a pale fascia; elytra maculate with white.

Inhabits water bodies.

DESCR. Body the size of a cucumber seed. Thorax pale, anteriorly and posteriorly blackish. Elytra fuscous, with longitudinal pale striae and a few pale maculae along sides.

778. DYTISCUS *minutus* [*Laccophilus minutus* (Linnaeus, 1758). Fam. Dytiscidae, Eng. Diving beetles, Sw. Dykare], elytra fuscous, pale at base and sides; thorax light yellow, without maculae; body ovate.

Inhabits springs and small brooks.

DESCR. Body the size of a cucumber seed. Thorax pale. Elytra ash-grey, with pale sides and striae, some striae also oblique.

* *With clavate antennae*[577]

779. DYTISCUS *natator* [*Gyrinus natator* (Linnaeus, 1758). Eng. Common whirligig beetle; Fam. Gyrinidae, Eng. Whirligig beetles, Sw. Virvelbaggar], ovate, glabrous; antennae shorter than head, blunt. *Fn.* 572.

Merr. Pin. 203. Pulex aquaticus.

Pet. Gaz. p. 21. t. 13. f. 9. Scarabaeus niger nostras supra aquam velociter circumnatans.

Raj. Ins. p. 87. n. 9. Scarabaeus aquaticus subrotundus e caeruleo viridi colore splendente undique tinctus.

In Småland: Watten-bagge.

Inhabits water bodies, on which it runs or swims very rapidly making rapid circles and rings. When attacked it also swims under water.

DESCR. Our specimen is entirely black. But legs light yellow, broad, very short. Antennae clavate or certainly not narrower towards tip; they are not split, as far as I can see.

[576] See no. 909.

[577] Thus fam. Gyrinidae.

Carabus[578]

** *Rather large ones*

780. CARABUS *intricatus* [*Carabus intricatus* Linnaeus, 1758. Eng. Blue ground beetle, Sw. Bokskogslöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], violet-black; elytra intricate, elevated, striated, and punctate.

Occurs in Sweden and in German speaking countries.[579]

DESCR. Elytral striae and elevated punctations so interconnected that they can scarcely be distinctly discerned. This beetle is distinguished from C. *coriarius*[580] through the fact that there are no signs of striae in the latter.

781. CARABUS *granulatus* [*Carabus granulatus* Linnaeus, 1758. Eng. Granulated ground beetle, Sw. Bronslöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; elytra convexely punctate longitudinally.

Carabus, jet-black; elytra convexely punctate and striated. *Fn.* 511.

Hoffn. Ins. 2. t. 3.

Lives in decayed wood; runs very rapidly; disseminates the odour of tobacco oil.

DESCR. Body small. Eyes prominent. Antennae setaceous, with eleven segments, half the length of the body. Maxillary bones prominent. Lower jaws larger, arcuate, pointed, at base armed with a denticle at inner side. Lower jaws acuminate, arcuate, also equipped with a denticle internally at base. Each of the maxillary upper palps consists of three segments; the outermost one thicker than the others. These palps are three times as long as the jaws; the lower, small labial palps are constructed of a single segment, and they are no longer than the jaws. Upper oral lip bluntly emarginate. Thorax jet-black, convex, rather smooth dorsally; lateral margin prominent at base, angular. Thorax flattened, from the side of pectus, with sword-shaped cartilage or scutellum towards abdomen. Elytra ovate, narrow, jet-black, elevated at outer margin or dilated; on each elytron, three longitudinal rows of elevated, ovate punctations; in each row twelve punctations in all. Venter glabrous together with the whole body. Femora rather smoothly rounded. Tibiae ending in two setae at tip.

β *Carabus*, black; elytra weakly greenish, convexely punctate and striated. *Fn.* 512. Lives in garbage.

DESCR. Size, stature, odour, and in all respects the same as those of the previous species, but elytra blackish greenish. Do they differ owing to sex?

γ *Carabus*, black; elytra bronze coloured, convexely punctate and striated. *Fn.* 513. Lives in decayed wood.

DESCR. Entirely as in the first species, but elytra, thorax, and head bronze coloured on the back.

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[578] See the com. above to *Cicindela*, no. 746. sqq.

[579] See the com. to no. 453.

[580] Although spelled C. *coriarius* as in no. 647 *Cerambyx coriarius*, this obviously refers to *Carabus coriaceus* in *Syst. nat.* (1758), however not included in *Fn. Su.* (1761).

782. CARABUS *clatratus* [*Carabus clathratus* Linnaeus, 1761. Sw. Nätlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous, blackish; elytra with interjacent ridges having longitudinal punctations.

Lives in decayed wood.

DESCR. Body of a rather large size, black. Each elytron with three broad furrows, in which there are oblong, elevated punctations. There are ridges separating the furrows on the pointed dorsum.

783. CARABUS *hortensis* [*Carabus hortensis* Linnaeus, 1758. Eng. Garden ground beetle, Sw. Trädgårdslöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; elytra with bronze coloured punctations in three rows.

Carabus, purplish-black; elytra concavely punctate and striated. *Fn.* 514.

Raj. Ins. 96. n. 2. Cerambyx purpurea punctata.

List. Mut. t. 18. f. 4.

Act. Ups. 1736. p. 19. n. 1. Carabus niger, elytris sulcatis punctatis.

Occurs among decayed vegetables.

DESCR. In all respects the same as in the preceding beetles. Elytra with longitudinal rows of round punctations; each row consisting of twelve punctations. The longitudinal lines separating the punctations are also concave.

784. CARABUS *leucophthalmus* [*Sphodrus leucophthalmus* (Linnaeus, 1758). Sw. Kvarnlöpare or Källarlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; elytra smooth, with eight indistinct striae.

Carabus, black; each elytron with eight striae. *Fn.* 515.

List. Loqu. 390. Scarabaeus ex toto niger, alarum thecis crustaceis sulcatis.

Lives along with the preceding beetles.[581]

DESCR. In form and almost in size it corresponds to the preceding beetles. Whole body black. The elytra have sixteen longitudinal and parallel striae in all.

785. CARABUS *nitens* [*Carabus nitens* Linnaeus, 1758. Sw. Guldlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; with gilded and somewhat scabrous furrows and ridges having striae everywhere interrupted.

Carabus, green; elytra bluntly furrowed and without punctations; legs and antennae rusty brown. *Fn.* 517.

Act. Ups. 1736. p. 19. n. 3. Carabus viridis; elytris sulcatis laevibus.

Occurs in Öland.

DESCR. All features as in the preceding beetles, but it is entirely green, verging slightly towards blue. Elytra with three broad, blunt, and longitudinal furrows, without any interjacent punctations. The furrows or elytral grooves are vividly green and silky, but the convexities are darker, however, not black, but rather to a greater degree bluer. Legs and antennae rusty brown or brick-red in other specimens, but whole body shining green.

[581] Extinct in Sweden.

β *Carabus*, black; green, bluntly furrowed; legs and antennae black. *Fn.* 518.
Raj. Ins. 96. n. 6. Cerambyx dorso in longas rugulas diviso, omnium pulcherrimus.
It. Oel. 96. Scarabaeus niger, elytris viridibus obtuse sulcatis, pedibus antennisque nigris.
DESCR. The size and appearance entirely as that of the preceding species. Body entirely black beneath including antennae and legs. Head, thorax, and elytra shining green above. Each elytron is exarate with 3 furrows or 4 wrinkles, which are beautifully green and silky with interjacent, black convexities. Outer elytral margin is of a fiery colour. Antennae short. Thus it differs from the previous beetle by its black body with black legs and antennae; antennae half as long as in the previous species. On the elytra, the interstitial gap between the furrows is black and rather narrow.

786. CARABUS *auratus* [*Carabus auratus* Linnaeus, 1761. Eng. Golden ground beetle, Sw. Gyllenlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; elytra ridged, with smooth, gilded striae and furrows.
Occurs in Sweden.[582]
DESCR. Similar to C. *nitens*[583] but larger. Likewise gold-coloured above. Elytra with uninterrupted ridges that are smooth and not black; they also have smooth furrows not scabrously punctate.

787. CARABUS *violaceus* [*Carabus violaceus* Linnaeus, 1758. Eng. Violet ground beetle, Sw. Purpurlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], winged; elytra rather smooth, black, with a golden margin; thorax weakly violet.
Carabus, violet-black; elytra smooth, somewhat wrinkled. *Fn.* 516.
Raj. Ins. p. 96. n. 1. Scarabaeus major, corpore oblongo e purpura nigricans.
Frisch. Germ. 13. p. 25. t. 23. Scarabaeus terrestris niger, clypeo thoracis cordiformi marginato.
Act. Ups. 1736. p. 19. n. 3. Carabus nigricans laevis.
List. Mut. t. 18. f. 5.
Lives along with the preceding beetles.
DESCR. All features the same as in the preceding beetles, but margins of thorax and elytra purplish violet. Elytra lack both punctations and striae and have only longitudinal and transverse wrinkles. The minute punctations can only be seen through a lens and are not discernable to the naked eyes.

[582] Not recorded from Sweden until the 21st century when it was passively introduced in southeastern provinces.
[583] See no. 785.

788. CARABUS *cephalotes* [*Broscus cephalotes* (Linnaeus, 1758). Sw. Grävlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; elytra jet-black, smooth; thorax elongated and oblong.

Frisch. Ins. 13. p. 25. t. 22.

Inhabits forests.

DESCR. Body of a rather large size, jet-black, smooth. Thorax obovate, smooth, barely marginate, posteriorly rounded. Elytra not striated.

789. CARABUS *inquisitor* [*Calosoma inquisitor* (Linnaeus, 1758). Eng. Lesser searcher beetle or Caterpillar-hunter, Sw. Mindre larvmördare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], elytra striate, bronze green, with punctations in three rows.

Roland. Act. Holmens. 1750. p. 292. t. 7. f. 3.

Inhabits forests. At nights it runs about among plants to gather insects.

DESCR. Body resembles closely the following beetle, but it is only half as large, green bronze above, dusky greenish beneath. Elytra very finely striated and marked with three rows of intensely dark punctations.

790. CARABUS *sycophanta* [*Calosoma sycophanta* (Linnaeus, 1758). Eng. Forest caterpillar hunter, Sw. Praktlarvmördare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], shiny golden; thorax blue; elytra golden green, striate; abdomen almost jet-black.

Reaum. Ins. 2. t. 37. f. 18.

Robert. Ic. t. 20. f. 2.

Lives in trees, where it devours lepidopterous larvae at night.

DESCR. Body larger than any other of our species. Antennae and legs black. Thorax bronze blue. Elytra golden bronze with a multitude of striae. Jet-black and slightly greenish beneath.

*** Rather small ones*

791. CARABUS *lividus* [*Nebria livida* (Linnaeus, 1758). Sw. Spöklöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax rusty brown; elytra black, laterally dark bluish grey.

Lives among fallen leaves.

DESCR. Body larger than that of the ordinary beetles, black. Antennae, thorax, and legs pale rusty brown. Elytra black, surrounded by a broad edge or margin at outer and posterior sides.

792. CARABUS *crepitans* [*Brachinus crepitans* (Linnaeus, 1758). Eng. Bombardier beetle, Sw. Bombarderbagge; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax, head, and legs rusty brown; elytra bluish black.

Inhabits small woods.

DESCR. Body smaller than those of the middle-sized beetles, rusty brown. Elytra bluish black, barely shining clearly with blue. Thorax narrower than those of the congeners. Abdomen fuscous. Tibiae posteriorly and postero-laterally, bluish jet-black.

793. CARABUS *spinipes* [*Amara aulica* (Panzer, 1796). Sw. Dikeskornlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], pitch black; thorax with an excavated, longitudinal line; forelegs spinose.
Inhabits forests.

794. CARABUS *cyanocephalus* [*Lebia cyanocephala* (Linnaeus, 1758). Eng. Blue plunderer, Sw. Blå örtlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax and legs rusty brown; elytra and head cyaneous.
C*arabus*, head and elytra blue; thorax red. *Fn.* 525.
Raj. Ins. 89. Cantharis sive Scarabaeus exiguus, elytris & capite caeruleis, scapulis croceis.
Inhabits fields.
DESCR. This is an insect that is barely larger than the common mosquito.[584] Head blue. Elytra saturated blue, shining, hardly striate. Thorax red. Antennae mostly black. Legs varying with red and black.

795. CARABUS *melanocephalus* [C*alathus melanocephalus* (Linnaeus, 1758). Sw. Rödhalsad marklöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax and legs rusty brown; elytra and head jet-black.
C*arabus*, head and elytra jet-black; thorax red. *Fn.* 526.
β C*arabus*, black; thorax, antennae, and legs rusty brown. *Fn.* 524.
Inhabits forests.
DESCR. The size is as that of the immediately preceding species and the appearance is the same, but the head is black. Elytra jet-black, striate. Thorax red. Legs and antennae entirely unicoloured, rusty brown.

796. CARABUS *vaporariorum* [C*ymindis vaporariorum* (Linnaeus, 1758). Sw. Hedskulderlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax fuscous; legs, antennae, and elytra anteriorly rusty brown.
C*arabus*, jet-black; elytra anteriorly grey. *Fn.* 529.
Lives in the hotbeds of the Academical Garden.[585]
DESCR. It is among the smallest members of this genus, barely twice the size of a louse, entirely black. Elytra grey at base in front of the middle and the longitudinal suture is also grey.

797. CARABUS *meridianus* [*Acupalpus meridianus* (Linnaeus, 1761). Sw. Lerdammlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax black; legs and antennae rusty brown; elytra fuscous, with whitish yellow base and suture.
Inhabits forests.
DESCR. The size of a louse. Body black. Antennae and legs dusky rusty brown. Elytra whitish at base, with a longitudinal, brick-red suture.

[584] Linnaeus only refers to C*ulex*, see nos. 1890–1894.
[585] See the com. to no. 378.

798. CARABUS *ferrugineus* [*Leistus ferrugineus* (Linnaeus, 1758). Sw. Roströd kindlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], rusty brown; thorax notably glabrous.

Inhabits forests.

DESCR. Body of a rather small size, entirely rusty brown. Thorax notably glabrous, smooth. Elytra striate. Legs and antennae rather pale.

799. CARABUS *vulgaris* [*Pterostichus melanarius* (Illiger, 1798). Sw. Åkersvartlöpare], bronze black; legs and antennae black. *Fn.* 525.

β *Carabus*, jet-black; legs and antennae black. *Fn.* 530.

Lives in decayed wood. *P. Kalm.*

DESCR. The size and appearance of the preceding species, of a bronze black colour. Thorax almost jet-black and rather shiny, with two concave, indistinct punctations. Elytra striate, but outermost elytral stria serrate. Thorax posteriorly as wide as elytra. Punctations variable in being impressed or not impressed on elytra. Antennae often grey at base. This ground beetle is black beneath.

800. CARABUS *caerulescens* [*Poecilus cupreus* (Linnaeus, 1758). Eng. Copper greenclock, Sw. Kopparsollöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare],[586] green-blue, antennae red at base.

β *Carabus*, bronze coloured above; sheath wings with six punctations; tibiae red-brown. *Fn.* 520.

Act. Ups. 1736. p. 20. n. 8. Buprestis capite nigro, collari elytrisque nigro-aeneis.

Occurs around us in meadows; very numerous.

DESCR. About the size of the house fly.[587] The whole little animal is dusky bronze, on the back green and red. Elytra striate, each elytron with three punctations longitudinally arranged. Femora black, with red-brown tibiae. Antennae equipped with three setae on lower segments.

801. CARABUS *cupreus* [*Poecilus cupreus* (Linnaeus, 1758). Eng. Copper greenclock, Sw. Kopparsollöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare],[588] bronze coloured; antennae red at base.

Inhabits forests.

DESCR. Body black, almost the size of the preceding species, but on top of head, thorax, and elytra of a bronze colour. First antennal segment is rather often red.

802. CARABUS *piceus* [*Agonum piceum* (Linnaeus, 1758). Sw. Blek kärrlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], black; legs and antennae pitch black.

Inhabits forests.

DESCR. Body more than twice the size of a louse, black, minimally shining. Legs and antennae almost pitch black. Elytra dusky black.

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[586] See no. 801.

[587] See no. 1833.

[588] See no. 800.

803. CARABUS *velox* [*Bembidion velox* (Linnaeus, 1761). Sw. Sandspegellöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], blackish; legs and tibiae pale. *It. Gotl.* 207. *Fn.* 522.

Occurs on the sandy and marine riverbanks of the Island of Fårö, situated off the coast of Gotland; the most rapid and prompt runner and flier of all the beetles.

DESCR. Smaller than the house fly.[589] Head, thorax, and elytra (which have eight striae) copper black. Legs black except for the pale middle tibiae.

804. CARABUS *marginatus* [*Agonum marginatum* (Linnaeus, 1758). Sw. Gulkantad kärrlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], black; elytra light yellow at margins.

Inhabits forests.

DESCR. Body entirely strongly green. Antennae black. Margin of thorax barely manifestly rusty brown. Elytra not clearly striate; outer margin entirely light yellow. Varies by the bronze coloured head and thorax.

805. CARABUS *multipunctatus* [*Blethisa multipunctata* (Linnaeus, 1758). Sw. Mässingsgroplöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], slightly bronze coloured; elytra with many weak punctations.

Inhabits forests.

DESCR. Body middle-sized, black, glabrous, slightly bronze coloured beneath. Thorax with a longitudinal, excavated line. Elytra slightly bronze coloured at lateral margin, striate at disc, scattered with rather large, blunt punctations.

806. CARABUS *bipunctatus* [*Bembidion bipunctatum* (Linnaeus, 1761). Sw. Kopparstrandlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], slightly bronze coloured; each elytron with two punctations.

Lives at water bodies.

DESCR. Body barely larger than a louse, black, but head, thorax, and elytra are bronze coloured above. Each elytron is marked with two punctations, the one is anterior, the other posterior.

807. CARABUS *sexpunctatus* [*Agonum sexpunctatum* (Linnaeus, 1758). Sw. Juvellöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], slightly bronze coloured; each elytron with six punctations longitudinally arranged.

Carabus, shining; head and thorax cyaneous; elytra purple. *Fn.* 519.

Act. Ups. 1736. p. 20. n. 6. Buprestis capite collarique caeruleo, elytris rubro-aeneis.

Bauh. Ballon. p. 212. f. 4. Cantharis auricolor.

Goed. Belg. 2. p. 126. t. 31.

Occurs in Uppsala; fairly abundant.

[589] See no. 1833.

DESCR. The size of a fly, but narrower, shining like the most glistening gold. Head and thorax shining with green-blue. Elytra of a fiery colour or Japanese copper; the many striae can barely be seen with the naked eye; outermost lateral margin cyaneous; this beetle is dusky bronze beneath, 6 punctations on each elytron, longitudinally arranged between the second and third stria at the suture. Venter shining with fuscous. Thorax narrower posteriorly.

808. CARABUS *crux major* [*Panagaeus cruxmajor* (Linnaeus, 1758). Eng. Major crucifix ground beetle, Sw. Strandkorslöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax and head black-reddish; sheath wings rusty brown, with a black cross.

Chrysomela, thorax black; sheath wings red; cross black. *Fn.* 439.

Lives on plants.

DESCR. Stature of the leaf beetle,[590] black. Thorax orbicular, convex, pubescent. Sheath wings deep yellow; base, tip, and suture black, and then a broad and black fascia medially. It is different from this genus owing to its pubescence and orbicular thorax, but I cannot think of any other genus to which it could be more appropriately referred.

809. CARABUS *crux minor* [*Lebia cruxminor* (Linnaeus, 1758). Sw. Röd örtlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax deep yellow, glabrous; elytra black posteriorly, with two light yellow maculae.

Inhabits forests.

DESCR. Body twice the size of a louse, black. Head black. Thorax and pectus rusty brown tending to deep yellow. Elytra deep yellow anteriorly, jet-black posteriorly, with a round, deep yellow macula at base. Legs deep yellow. The thorax of this beetle is also almost orbicular.

810. CARABUS *ustulatus* [*Nomen dubium*], thorax blackish; elytra dark, bifasciate.

Carabus, black; sheath wings with a rusty brown fascia posteriorly; sides with a rusty brown macula. *Fn.* 528.

Occurs around us; abundant.

DESCR. Body twice the size of a louse, black. Legs rusty brown. Elytra black, with a few dark fasciae posteriorly; not seldom also a pale macula at base on the outer part of each elytron.

811. CARABUS *quadripustulatus* [*Mycetophagus quadripustulatus* (Linnaeus, 1761). Sw. Stor vedsvampbagge; Fam. Mycetophagidae, Eng. Hairy fungus beetles, Sw. Vedsvampbaggar],[591] winged; head rusty brown; thorax jet-black; sheath wings black with 4 light yellow maculae.

Occurs in Sweden. *Da. Solander.*

DESCR. The size barely that of the house fly.[592] Colour of body light yellow tending to rusty brown. Palps chestnut-coloured. Antennae the length of the thorax, somewhat blunt, rusty brown at base, fuscous medially, and whitish yellow at tip. Thorax jet-black, smooth, posteriorly broader. Elytra

[590] Linnaeus only refers to *Chrysomela*, see nos. 506–578.

[591] See no. 549.

[592] See no. 1833.

striate, black, each elytron with two light yellow maculae; anterior macula close to base and larger, posterior macula behind the centre, transverse. Light yellow beneath with an abdominal, black macula. Wings blackish, twice the length of the elytra.
At first sight the declivity of elytra and the somewhat blunt antennae make this beetle different from other species of ground beetles.

812. CARABUS *testaceus* [*Nomen dubium*], pale brick-red; elytra glabrous. *Fn.* 523.
Occurs in Roslagen.
DESCR. Middle-sized. Elytra without spots and striae. Antennae filiform.

813. CARABUS *quadrimaculatus* [*Dromius quadrimaculatus* (Linnaeus, 1758). Sw. Fyrfläckig grenlöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], thorax light yellow; elytra somewhat blunt, fuscous, with two white maculae. *Fn.* 532.[593]
C*arabus*, black; thorax rusty brown; four elytral dark bluish grey maculae.
Occurs in Skåne. *J. Leche.* In Uppland. *L. Klase.*
DESCR. Twice the size of a louse. Head black. Thorax red-brown or rusty brown. Each elytron dark bluish grey at base and with an ovate macula (which sometimes meets medially in both), and another dark bluish grey, ovate macula on each elytron, close to tip (sometimes distinct in all respects through the blackness of the actual sheath wing). Legs rusty brown or pale, with a fuscous macula at alar inflexion. Antennae rusty brown.

814. CARABUS *truncatellus* [*Syntomus truncatellus* (Linnaeus, 1761). Sw. Svart stumplöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], black, weakly bronze coloured above; elytra moderately truncated at tip.
Occurs in Sweden; rather rare.
DESCR. Small, hardly larger than a bed bug.[594] Elytra weakly striated; tip obliquely truncated.

Tenebrio

815. TENEBRIO *molitor* [*Tenebrio molitor* Linnaeus, 1758. Eng. Yellow mealworm, Sw. Stor mjölbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], entirely black.
Mordella, antennal segments lentiform, last one globose. *Fn.* 547.
Act. Ups. 1736. p. 19. n. 1. Attelabus ater oblongus depressus.
The glabrous, pale larva lives in the meal of bakers, and in war in military bread, in which it often remains for two years before it develops fully. It is in itself a most delicious food for nightingales.[595]

[593] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.
[594] See no. 909.
[595] See no. 244.

DESCR. In length the width of a finger. It is entirely black; the colour is entirely that of pitch. Elytra weakly striate. Thorax with a slightly prominent margin. Antennae short, blunt, and as if necklace-shaped, with eleven lentiform, black segments (except for the first three, which are rather long), last segment globose, paler. Mouth, antennae, thoracic margin, and legs are rusty brown tending to jet-black.

816. TENEBRIO *culinaris* [*Uloma culinaris* (Linnaeus, 1758). Sw. Större sågsvartbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], rusty brown; elytra striate.

Mordella, rusty brown tending to red-brown; thorax depressed anteriorly. *Fn.* 546.

Occurs in Skåne. *Mr Leche.*

DESCR. Does not jump. The size and appearance as those of an ordinary ground beetle.[596] Antennae the length of the thorax, outermost segment globose. Head very small. Thorax smooth, apically notched or depressed above anteriorly. This applies at least to the rather large individuals or females. Each elytron crenate with 8 striae or exarate with punctations.

817. TENEBRIO *fossor* [C*livina fossor* (Linnaeus, 1758). Sw. Mörk mullvadslöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], pitch black; anterior tarsi palmate and digitate.

Mordella, red-brown; anterior tibiae dentate. *Fn.* 543.

Lives in sandy hills, into which it digs, and in decayed beech trees.

DESCR. Body longer than a bed bug,[597] fuscous. Thorax black, glabrous, with a longitudinal line; large interspace to elytra. Elytra pitch black, striate. Legs and antennae rusty brown tending to pitch black. Tarsi anteriorly like those of the European mole cricket,[598] split into lateral digits and spines.

818. TENEBRIO *cursor* [*Nomen dubium*], fuscous; thorax oblong, with five denticulate angles.

Lives in putrefying vegetables.

DESCR. Body the size of a louse, oblong, flattened, blackish. Thorax denticulate at margin, just as the longhorn[599] of the 2nd order; hence very distinct in appearance to the mealworms.[600]

819. TENEBRIO *erraticus* [*Nomen dubium*], black; antennae orbicular; thorax and elytra rusty brown; elytra apically fuscous.

Lives around us; not uncommon.

DESCR. Antennae rusty brown, longer than thorax, with lentiform segments. Head, thorax, and pectus black. Thorax almost orbicular, flattened, blunter anteriorly, not marginate. Elytra oblong, striate, rusty brown, apically darkish. Abdomen rusty brown.

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[596] Linnaeus only refers to C*arabus*, see nos. 780–814.

[597] See no. 909.

[598] See no. 866.

[599] Linnaeus only refers to C*erambyx*, see nos. 645–676.

[600] Linnaeus only refers to *Tenebrio*, see nos. 815–825.

820. TENEBRIO *pallens* [*Antherophagus pallens* (Linnaeus, 1758). Fam. Cryptophagidae, Eng. Silken fungus beetles, Sw. Fuktbaggar], pale brick-red.

Carabus, pale brick-red; eyes black. *Fn.* 531.

Lives in the soil at the beginning of spring.

DESCR. The total length is similar to a rather large louse, fairly smoothly rounded, opaque, unicoloured; pale colour verging on brick-red except for the black eyes, slightly striate.

821. TENEBRIO *quisquilius* [*Crypticus quisquilius* (Linnaeus, 1761). Sw. Slät sandsvartbagge; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], winged; legs rusty brown tending to pitch black.

Occurs in Kalmar. *A. Modéer.*

DESCR. Body black, size of a bed bug,[601] opaque. Legs pitch black tending to rusty brown [*sic!*].

822. TENEBRIO *mortisagus* [*Blaps mortisaga* (Linnaeus, 1758). Eng. Churchyard beetle or Cellar beetle, Sw. Vanligt dödsbud; Fam. Tenebrionidae, Eng. Darkling beetles, Sw. Svartbaggar], apterous; sheath wings mucronate.

Tenebrio, jet-black; sheath wings acuminate posteriorly. *Fn.* 594.

Aldr. Ins. p. 499.

Mouff. Lat. p. 138. f. 139. Blatta foetida tertia.

Charl. Exerc. p. 48. Blatta foetida.

Jonst. Ins. t. 16.

Merr. Pin. 202. Blatta foetida.

Pet. Gaz. p. 38. t. 24. f. 7. Scarabaeus impennis tardipes.

List. Loqu. p. 388. n. 21. Scarabaeus e toto niger minime nitens foetidus?

Raj. Ins. 89. Scarabaeus niger rotundus laevis, antennis globosis.

Frisch. Germ. 13. p. 27. t. 25. Scarabaeus terrestris & stercorarius niger foetidus.

Dal. Pharm. p. 91. Blatta officinarum.

It. Oel. 62. Tenebrio primus.

In Sweden: Skrobba.

Lives in the waste of gardens and fields. When common people see this beetle walking around inside houses, they are convinced that it is a harbinger of death.

DESCR. It is entirely black and all over pitch black. Elytra fused along the whole length. No wings. Antennae longish; segments lentiform, outermost segment globose; elytra often terminate dorsally at tip with a small chink. Thorax marginate, punctate. Elytra wrinkled.

[601] See no. 909.

823. TENEBRIO *rostratus* [*Cychrus caraboides* (Linnaeus, 1758).[602] Eng. Snail hunter, Sw. Snäcklöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous, black; elytra somewhat smooth and entirely fused; thorax rather narrow; head very narrow.

Inhabits forests.

DESCR. Entirely jet-black, with barely visible punctations crowded together. The tips of the sides are not carinate except laterally. Thorax as that of the ground beetle,[603] very narrow, and head most narrow.

824. TENEBRIO *gibbus* [*Nomen dubium*],[604] apterous, black, smooth; thorax rounded posteriorly.

Lives in litter.

DESCR. Size as that of a rather small churchyard beetle;[605] strongly convex, smooth all over, including laterally, neither punctate nor grooved. Thorax rounded posteriorly, with a slightly trunctated base.

825. TENEBRIO *caraboides* [*Cychrus caraboides* (Linnaeus, 1758).[606] Eng. Snail hunter, Sw. Snäcklöpare; Fam. Carabidae, Eng. Ground beetles, Sw. Jordlöpare], apterous; thorax oval, marginate; sheath wings carinate.

Tenebrio, jet-black, sheath wings rounded posteriorly; jaws prominent. *Fn.* 595.

Frisch. Germ. 13. p. 27. n. 22.

Lives in litter.

DESCR. Rather small. Thorax as that of a ground beetle.[607] Femora clavate. Jaws the length of the head, but shorter than in the preceding species.

Meloe

826. MELOE *proscarabaeus* [*Meloe proscarabaeus* Linnaeus, 1758. Eng. Black oil beetle, Sw. Svart majbagge; Fam. Meloidae, Eng. Blister beetles, Sw. Oljebaggar], apterous; body violet. *Fn.* 596.

Mouff. Lat. 164. *f. med.* Proscarabaeus.

Jonst. Ins. p. 74. t. 15. Proscarabaei faemina.

Charl. Exerc. p. 46. Proscarabaeus sive anti-Cantharus.

Hoffn. Ins. 2. t. 9.

Merr. Pin. p. 201. Proscarabaeus.

Wagn. Helv. p. 234.

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[602] See no. 825.

[603] Linnaeus only refers to *Carabus*, see nos. 780–814.

[604] Not to be confused with the tenebrionid *Phylan gibbus* (Fabricius, 1775).

[605] See no. 822.

[606] See no. 823.

[607] Linnaeus only refers to *Carabus*, see nos. 780–814.

Goed. Belg. 2. p. 152. f. 42.
List. Goed. p. 292. f. 120.
Loqu. Scarabaeus mollis ex nigro viola nitens.
Frisch. Germ. 6. p. 14. t. 6. f. 5.
Dal. Pharm. 5. p. 361. Proscarabaeus.
Schroed. Pharm. 5. p. 345. Chantnarus unctuosus.
Lives at the edges of fields and in hills exposed to sun in the month of May. Eats windflower and buttercup. When touched, it secretes the clearest oil from all the knees of the legs.
DESCR. The whole animal is soft and jet-black; legs, antennae, and abdomen slightly more violet. Elytra leathery, soft, wrinkled, minimally shining. Antennae necklace-shaped. Abdomen longer than elytra in female. No wings.

827. MELOE *vesicatorius* [*Lytta vesicatoria* (Linnaeus, 1758). Eng. Spanish fly, Sw. Spansk fluga; Fam. Meloidae, Eng. Blister beetles, Sw. Oljebaggar], winged, strongly green, shining; antennae black.
Cantharis officinarum. It. Scan. 186.
Mouff. Ins. 144. Cantharides.
Aldr. Ins. 276. Cantharis major.
Jonst. Ins. 76. t. 7. Cantharis major.
Raj. Ins. 101. Cantharis vulgaris officinarum.
Occurs on leaves of privet, European ash, elderberry, and honeysuckle on the outer field edges in Skåne.
These beetles are the most famous vesicatoria in all pharmacies in Europe, called *Cantharides.*[608] But the soldier beetle of the old authors is the blister beetle of chicory.[609]

828. MELOE *bimaculatus* [*Apalus bimaculatus* (Linnaeus, 1761). Eng. Early blister beetle, Eng. Bibagge; Fam. Meloidae, Eng. Blister beetles, Sw. Oljebaggar], winged, black; sheath wings deep yellow, with two posterior black maculae.
Udd. Diss. 32. Cerambyx ater, elytris fusco-flavis maculis duabus nigris.
Occurs in Uppsala, but rather rare; found at the beginning of spring in sandy, dry ditches.
DESCR. Body and almost entire stature as those of the longhorn beetle,[610] jet-black. Antennae almost the length of the body. Thorax rounded, slightly pubescent. Elytra soft, deep yellow. In posterior part, a black, round macula. Abdomen of female whitish yellow posteriorly beneath.

[608] Linnaeus only refers to *Cantharis*, see nos. 699–720.
[609] *Meloe cichorii* Linnaeus, 1767 valid as *Mylabris variabilis* (Pallas, 1782). Fam. Meloidae.
[610] Linnaeus only refers to *Leptura*, see nos. 677–698.

829. MELOE *antherinus* [*Anthicus antherinus* (Linnaeus, 1761). Fam. Anthicidae, Eng. Ant-like flower beetles, Sw. Kvickbaggar], winged, black; elytra with two rusty brown fasciae.

Tenebrio pedicularius. Syst. nat. 10. p. 418. n. 7.

Lives on flowers; rather numerous.

DESCR. Body the size of a louse, black. One fascia on the sheath wings rusty brown, more indistinct at base, the other behind the middle. Thorax subglobose, black.

830. MELOE *floralis* [*Omonadus floralis* (Linnaeus, 1758). Eng. Narrow-necked grain beetle or Predator beetle; Fam. Anthicidae, Eng. Ant-like flower beetles, Sw. Kvickbaggar], winged, black; elytra with two indistinct maculae.

Lives on flowers of the plumeless thistle; abundant.

DESCR. Body with the same stature as the preceding species and very similar to it, but thorax notably glabrous and elytra fuscous, with two ovate, transverse, pale maculae, the one is anterior, the other posterior, neither touching elytral margin.

Mordella

831. MORDELLA *paradoxa* [*Metoecus paradoxus* (Linnaeus, 1761). Eng. Wasp nest beetle or Bish eyelash bug; Fam. Ripiphoridae, Eng. Wedge-shaped beetles, Sw. Kamhornsbaggar], antennae pectinate; thoracic sides and elytra brick-red.

Occurs in Kalmar. *Modéer.* In the German speaking countries.[611] *Schreber.*

DESCR. Head black. Antennae the length of the thorax, a single row of pectinations, jet-black. Thorax bulging, trilobed posteriorly, with lateral, brick-red lobes, dorsally excavated with a deep, broad cavity. No scutellum. Elytra like those of the longhorn beetle,[612] brick-red, posteriorly attenuated, apically black; black thoracic laminae attached. Wings fuscous. Abdomen brick-red; first segment black marginally and black at anus. Legs black. Larger in size than our others.

832. MORDELLA *aculeata* [*Mordella aculeata* Linnaeus, 1758. Sw. Svart tornbagge; Fam. Mordellidae, Eng. Tumbling flower beetles, Sw. Tornbaggar], jet-black; cauda ending in a sting.

Mordella, oblong, jet-black; cauda ending in a sting. *Fn.* 534.

Act. Ups. 1736. p. 15. n. 1. Mordella cauda aculeata.

Lives commonly on flowers of hawkweeds.

DESCR. The size of a fennel seed. Entirely jet-black, glabrous, oblong. Head small, curved. Elytra oblong, jet-black, not striated. Thorax glabrous, convex. Antennae setaceous, truncated, distinctly segmented. Body gradually narrowing towards cauda. Abdomen flattened, ending in a sting or awl-shaped spine that is pointed, black, and longer than elytra, slightly pungent. Legs rather long, with which it jumps. It varies in the sense that the elytra have one or two greyish white fasciae.

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[611] See the com. to no. 453.

[612] Linnaeus only refers to *Leptura*, see nos. 677–698.

833. MORDELLA *humeralis* [*Mordellistena humeralis* (Linnaeus, 1758). Sw. Skulderfläckad gaddbagge; Fam. Mordellidae, Eng. Tumbling flower beetles, Sw. Tornbaggar], jet-black; thoracic sides and elytral base whitish yellow.
Lives on flowers.
DESCR. Stature and size as those of the preceding species, even caudal sting stretched out. Head light yellow. Thorax whitish yellow, medially blackish. Elytra rusty brown at base.

834. MORDELLA *frontalis* [*Anaspis frontalis* (Linnaeus, 1758). Fam. Scraptiidae, Eng. False flower beetles, Sw. Ristbaggar], jet-black; frons and legs whitish yellow.
Lives on flowers.
DESCR. The size of the following beetles or half the size of the two preceding ones, black. Frons and legs, especially anterior legs, light yellow.

835. MORDELLA *thoracica* [*Anaspis thoracica* (Linnaeus, 1758). Fam. Scraptiidae, Eng. False flower beetles, Sw. Ristbaggar], black; head and thorax light yellow.
Lives on flowers.
DESCR. Body black, twice the size of a flea. Head, thorax, and legs whitish yellow. Elytra fuscous.

836. MORDELLA *flava* [*Anaspis flava* (Linnaeus, 1758). Fam. Scraptiidae, Eng. False flower beetles, Sw. Ristbaggar], light yellow; abdomen and elytral tips black.
Lives on flowers; abundant.
DESCR. The size and stature as those of the preceding species. Head, thorax, antennae, and elytra light yellow, only elytral tips black. Abdomen entirely jet-black.

Necydalis

837. NECYDALIS *minor* [*Molorchus minor* (Linnaeus, 1758). Eng. Spruce shortwing beetle, Sw. Kortvingad granbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], elytra brick-red with white tip and thin line; antennae longer than body.
Necydalis, elytra with a thin white line at tip. *It. Oel.* 74. *Fn.* 597.
Act. Ups. 1736. p. 38. n. 16. Cimex longus depressus griseus: genubus globosis.
Lives in hedges.
DESCR. Head black. Thorax oblong, jet-black, with two shining, dorsal spots. Elytra grey, angular at base, shorter than half the abdomen, dehiscent[613] apically; each elytron marked with a linear, white macula at tip. Wings half-covered, as in the true bugs,[614] cruciform, and not retracted under elytra. Antennae grey, twice as long as body, setaceous; basal segment broad, the second minimal, the third and the remaining ones oblong. Legs grey. Femora very broad towards tip, clavate, and at this point almost globose. As for the antennae, this beetle could be a *Cerambyx* longhorn beetle,[615]

[613] See the com. to no. 554.
[614] Linnaeus only refers to *Hemiptera*, see nos. 879–1030.
[615] Linnaeus only refers to *Cerambyx*, see nos. 645–676.

as for the legs a *Leptura* longhorn beetle,[616] and as for the elytra an earwig![617] It is, however, most closely related to *Cerambyx*, though different regarding outer appearance.

838. NECYDALIS *major* [*Necydalis major* Linnaeus, 1758. Sw. Stekelbock; Fam. Cerambycidae, Eng. Longhorn beetles, Sw. Långhorningar], elytra rusty brown, without maculae; antennae shorter than body.

Occurs around us; very rare.

DESCR. Eight times as large as the preceding species. Antennae half the length of the body, black, rusty brown at base. Palps rusty brown. Head black. Thorax black, with an elevated, blunt spot laterally. Elytra very short, only the length of thorax, ovate, saturated rusty brown, slightly villous, shining, marginate. Abdomen as that of the cranefly,[618] longish, linear, black, with five segments. Pectus bulging, blackish. Legs rusty brown; hind femora with a black tip.

Staphylinus

839. STAPHYLINUS *hirtus* [*Emus hirtus* (Linnaeus, 1758). Sw. Humlekortvinge; Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], hirsute, black; thorax and abdomen light yellow posteriorly. *Fn.* 601.

Act. Ups. 1736. p. 15. n. 1. Forficula hirsuta, nigra, nitida: capite, collo, cinguloque ventris flavis.

Inhabits sandy places; rather rare around us. We have observed that it is very abundant in East Frisia.

DESCR. The size of a bumble bee;[619] whole beetle strongly hirsute. Head black. Thorax light yellow. Elytra ash-grey. Abdomen black anteriorly, deep yellow posteriorly. Legs black, also hirsute.

840. STAPHYLINUS *murinus* [*Ontholestes murinus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], pubescent, cloudy blackish ash-grey. *Fn.* 602.

Lives in horse manure.

DESCR. This insect should be numbered among the rather large species, but not the largest. It is oblong, pubescent, bronze ash-grey, with black, strongly shining maculae. Antennae with 9 segments. Head depressed. Mouth forcipate. Thorax narrow. Elytra short, concolorous with head and thorax. Abdomen fuscous, with black maculae. Cauda with two villous setae; at the compressed abdomen, two soft, curved, white, and pellucid cornicles emerge near cauda.

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[616] Linnaeus only refers to *Leptura*, see nos. 677–698. For *Cerambyx* and *Leptura*, see also the com. to no. 677.

[617] Linnaeus only refers to *Forficula*, see nos. 860–861.

[618] Linnaeus only refers to *Tipula*, see nos. 1735–1778.

[619] Linnaeus only refers to *Bombylius*, see nos. 1918–1920. Linnaeus is inconsequent in the text, sometimes calling the bumble bee *Bombus* and sometimes *Bombylius*, although he has named a bee-fly genus *Bombylius*.

841. STAPHYLINUS *maxillosus* [*Creophilus maxillosus* (Linnaeus, 1758). Eng. Hairy rove beetle; Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], pubescent, black, with ash-grey fasciae; jaws the length of the head.

Staphylinus, jet-black, glabrous; jaws the length of the head. *Fn.* 603.

Jonst. Inst. t. 17. f. 1. 2. 3. Staphylinus.

Mouff. Lat. p. 197. Staphylinus.

List. Loqu. p. 391. n. 2. Scarabaeus majusculus niger, forcipibus infestis.

Raj. Ins. p. 109. n. 1. Staphylinus major, totus niger.

Act. Ups. 1736. p. 15. n. 2. 3. Forficula collari nigro: elytris nebulosis.

Inhabits forests; feeds on other insects. When alarmed, it reflects the cauda and extends two cordate vesicles.

DESCR. This species is among our largest. Head and thorax jet-black, glabrous. Elytra jet-black (in some they are cloudy palish ash-grey), blunt. Abdominal dorsum concolorous with cauda. Legs black. Mouth with two arcuate, hard, strongly acuminate simple jaws that are longer than the head.

842. STAPHYLINUS *erythropterus* [*Staphylinus erythropterus* Linnaeus, 1758. Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], jet-black; elytra and legs red-brown. *Fn.* 604.

Act. Ups. 1736. p. 15. n. 6. Forficula collari nigro, ventre atro, elytris testaceis.

Frisch. Germ. 5. p. 49. t. 25. Scarabaeus rapax, elytris brevibus.

Lives in manure; eats other insects.

DESCR. It should be numbered among the larger species, but not the largest. Head and thorax black. Abdomen black with a bilateral shining, gilded spot on each segment. Elytra and legs red-brown. Antennae black at base and apically red-brownish.

843. STAPHYLINUS *politus* [*Philonthus politus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; thorax and elytra blackish, shining.

Staphylinus, black; thorax bronze coloured, shining; elytra bluish jet-black. *Fn.* 605.

Act. Ups. 1736. p. 16. n. 7. Forficula collari nigro, ventre atro, elytris caerulescentibus.

DESCR. It falls among the mid-sized species. Head and thorax smooth. Elytra scattered with the minutest punctations. Antennae with 11 segments.

Colour of thorax and sheath wings varies in this species. In some, thorax bronze coloured and elytra bluish jet-black, and in others thorax jet-black, shining, and elytra jet-black.

The specific, essential difference lies in the ten punctations on the thorax, but these are hardly visible without a lens.

844. STAPHYLINUS *rufus* [*Oxyporus rufus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], red-brown; head, posterior parts of elytra and abdomen black; femora black at base. *Fn.* 606.

Act. Ups. 1736. p. 15. n. 8. Forficula collari testaceo, elytris ventreque testaceis; apicibus nigris.

Occurs frequently.

DESCR. This species is middle-sized. Thorax, legs, most of abdomen, and elytra anteriorly, red-brown. But mouth, head, elytra posteriorly and medially, close to suture, and also the three last abdominal segments are all black. Antennae almost clavate.

845. STAPHYLINUS *lunulatus* [*Lordithon lunulatus* (Linnaeus, 1761). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], red-brown; head and posterior parts of elytra and abdomen black; femora entirely red-brown.

Occurs in Sweden.

DESCR. Similar to *S. rufus*,[620] but only half as large; femora not black at base.

846. STAPHYLINUS *riparius* [*Paederus riparius* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], red-brown; elytra blue; head and abdominal tip black. *It. Gotl.* 173. *Fn.* 607.

Occurs on the sandy shores of Gotland.

DESCR. The size of the black garden ant.[621] Entirely flesh-coloured, but head and the three or four terminal abdominal segments are jet-black. Elytra entirely blue. Femora flesh-coloured with black knees. Antennae with 11 oval segments, which become slender at head except for the last segment, which narrows distally. Antennae are also pale and black-tipped. Jaws pointed with an internal, lateral denticle.

847. STAPHYLINUS *bipustulatus* [*Aleochara bipustulata* (Linnaeus, 1761). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra with a rusty brown spot.

Occurs in Uppsala; rather rare. *Kallenberg.*

DESCR. Body markedly oblong, the size of a rather small louse; completely black. Antennae clavate. Elytra short; each medially with a rusty brown spot.

848. STAPHYLINUS *lignorum* [*Tachinus lignorum* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], fuscous; elytral suture, abdomen, and legs rusty brown. *Fn.* 608.

Lives in decayed wood.

DESCR. The size of a very small ant.[622] Body entirely linear, rather long. Head and thorax glabrous, fuscous. Thorax marked with two punctations towards elytra. Elytra fuscous, but rusty brown at longitudinal suture. Abdomen and legs rusty brown.

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[620] See no. 844.

[621] See no. 1723.

[622] Linnaeus only refers to *Formica*, see nos. 1720–1726.

849. STAPHYLINUS *subterraneus* [*Tachinus subterraneus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra anteriorly and antrorsely light yellow; legs black.

Often lives underground in cellars.

DESCR. Body jet-black, shining; twice the size of a louse. Antennae filiform, half the length of the body. Elytra black, truncated; in the middle of the anterior part, but at outer side, there is a large whitish yellow macula. Thorax smooth, convex. Abdomen glabrous, twice the length of the elytra; tip with two small, awl-shaped setae.

850. STAPHYLINUS *flavescens* [*Nomen dubium*], jet-black; legs red-brown; elytral margin light yellow. *Fn.* 610.

Occurs in Uppsala. *P. Kalm.*

DESCR. It is the smallest of all our rove beetles being not larger than a flea. Thorax and elytra shiny glabrous, jet-black; elytral margin, facing anus, red-brown. Legs brick-red. Resembles the previous species but a quarter of its size. Abdomen almost awl-shaped.

851. STAPHYLINUS *biguttatus* [*Stenus biguttatus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra with a red-yellow spot.

Lives in litter.

852. STAPHYLINUS *littoreus* [*Sepedophilus littoreus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra grey anteriorly; legs red-brown. *It. Gotl.* 173. *Fn.* 611.

Occurs in damp sand on shores, under which it makes tunnels, especially in Gotland.

DESCR. The size of a louse. Abdomen beneath elytra entirely acuminate, black. Thorax black, with sides at base slightly brick-red. Legs rather long, brick-red. Elytra black, medially grey at base or with a large dusky rusty brown macula covering both elytra near base. Mouth light yellow.

853. STAPHYLINUS *sanguineus* [*Aleochara sanguinea* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra blood-coloured. *Fn.* 612.

Act. Ups. 1736. p. 15. n. 12. Forficula nigra, elytris sanguineis.

Wandering around ubiquitously.

DESCR. The size of a louse. Entirely jet-black, glabrous except for the blood-coloured elytra.

854. STAPHYLINUS *caraboides* [*Anthophagus caraboides* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], light yellow.

Staphylinus, entirely brick-red. *Fn.* 613.

Lives on plants and in manure.

DESCR. The size of the previous species. Whole insect of the same colour or watery brick-red or whitish yellow except for the abdomen; on the back behind elytra slightly more fuscous or dark.

Antennae are rather long and with almost the same appearance as the ground beetle.[623] I have not yet seen two setae on the cauda.

855. STAPHYLINUS *chrysomelinus* [*Tachyporus chrysomelinus* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; thorax, elytra, and legs weakly brick-red. *Fn.* 614.

Occurs ubiquitously.

DESCR. The size of a louse. Head black. Thorax glabrous, convex, above and beneath wax-coloured or pale brick-red. Elytra of the same colour as thorax but anteriorly and at outer margin blackish, posteriorly of the same colour and glabrousness as the thorax. Legs more saturated rusty brown. Abdomen black, hispid with hairs behind elytra. Appearance as that of a leaf beetle,[624] but elytra short and abdomen pilose.

856. STAPHYLINUS *flavipes* [*Phloeostiba plana* (Paykull, 1792). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], black; elytra, antennae, and legs rusty brown. *Fn.* 615.

Occurs in Skåne. *Mr Leche.*

DESCR. As small as half a louse, oblong, black, but elytra rusty brown and antennae and legs less rusty brown than elytra.

857. STAPHYLINUS *fuscipes* [*Nomen dubium*], black; elytra and tibiae fuscous. *Fn.* 616.

Occurs in Skåne.

DESCR. Almost larger than a louse. Entirely jet-black, glabrous. Elytra fuscous; tibiae whitish yellow, but not femora. Thorax, head, and jaws insignificant compared with the size.

858. STAPHYLINUS *rufipes* [*Tachinus rufipes* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], jet-black, glabrous; legs red-brown. *Fn.* 609.

Act. Ups. 1736. p. 15. n. 10. Forficula tota atra.

Occurs ubiquitously.

DESCR. The size of an ant.[625] Entirely jet-black, glabrous except for the red-brown legs; neither thorax nor elytra punctate. Mouth whitish yellow. Head and antennae black. Abdomen glabrous on the back.

859. STAPHYLINUS *boleti* [*Gyrophaena boleti* (Linnaeus, 1758). Fam. Staphylinidae, Eng. Rove beetles, Sw. Kortvingar], fuscous; elytra palish; antennae and legs dark bluish grey.

Lives in the pores of fungi.

DESCR. The size of a flea. Head fuscous. Elytra and cauda paler fuscous. Only legs and antennae pale.

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[623] Linnaeus only refers to *Carabus*, see nos. 780–814.

[624] Linnaeus only refers to *Chrysomela*, see nos. 506–578.

[625] Linnaeus only refers to *Formica*, see nos. 1720–1726.

Forficula[626]

860. FORFICULA *auricularia* [*Forficula auricularia* Linnaeus, 1758. Eng. Common earwig or European earwig, Sw. Vanlig tvestjärt; Fam. Forficulidae, Eng. Common earwigs, Sw. Hjärtfottvestjärtar], elytra white-tipped. *Fn.* 599.

Mouff. Lat. p. 171. *f. infim.* Forficula sive Auricularia vulgatior.

Jonst. Ins. t. 16. f. 2. Forficula.

Merian. Europ. Gall. t. 30.

List. Mut. t. 31. f. A.

Loqu. p. 391. n. 25. Scarabaeus subrufus, cauda forcipata.

Pet. Gaz. t. 74. f. 5. Forficula vulgaris.

Frisch. Germ. 8. p. 31. t. 15. f. 2. *mas.* 1. *faemina.* Vermis auricularis.

Act. Ups. 1736. p. 15. n. 4. & 6. Forficula mollis cinerea, cauda forcipata. (*Larva?*)

In Sweden: Twestiert, Oernmask.

Lives in fertile soil.

DESCR. Oblong insect. Antennae setaceous, long, with thirteen or fourteen segments. Scutum flat, truncated anteriorly, rounded posteriorly, pale, medially black. Elytra pale red-brown. Wings slightly protruding beyond elytra, outwardly white at tip, with an ovate macula. Abdomen red-brownish, naked. Cauda forcipate, with two arcuate, hornlike claws, meeting at tip.

861. FORFICULA *minor* [*Labia minor* (Linnaeus, 1758). Eng. Lesser earwig or Small earwig, Sw. Liten tvestjärt; Fam. Spongiphoridae, Eng. Little earwigs, Sw. Dvärgtvestjärtar], elytra without maculae, brick-red.

Forficula, wings concolorous with elytron. *Fn.* 600.

Lives in dung-heaps.

DESCR. This species is only half as large.[627] Chestnut-coloured. Head and thorax blackish. Elytra and wings (which are folded up and protruding apically) chestnut-coloured. Abdomen chestnut-coloured. Caudal forceps rather straight. Antennae with only 10 segments and not 14 as in the preceding species. Legs and abdomen paler beneath.

Blatta[628]

862. BLATTA *orientalis* [*Blatta orientalis* Linnaeus, 1758. Eng. Oriental cockroach, Sw. Orientalisk kackerlacka; Fam. Blattidae, Eng. Cockroaches, Sw. Storkackerlackor], dusky rusty brown; elytra impressed with an oblong groove. *Fn.* 617.

Mouff. Lat. p. 138. f. 2. 3. Blatta molendinaria & pistrinaria.

Column. Ecphr. 1. p. 40. 36. Scarabaeus alter testudinatus minor atque alatus.

Jonst. Ins. t. 13. f. A. Grylli.

List. Mut. t. 18. f. 2. *faemina.*

Barthol. Act. 1671. p. 107. t. 108. Gryllus alatus (& repens) vermis in saccharo.

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[626] Order Dermaptera.

[627] Compared with no. 860.

[628] Order Blattodea.

Raj. Ins. p. 68. Blatta prima sive mollis Mouffeti.

Frisch. Germ. 5. p. 11. t. 3. Blatta lucifuga sive molendinaria.

In Finland: Torraka, Dracan.

Lives in mills, especially in the smoky hypocausts ("Pyrten") of the Finns, where it devastates bread, boots, and various utensils of the inhabitants. Found in Stockholm and other places, but rather rare; preys at night; flies quickly away from lighted candles.

DESCR. The size of a cricket,[629] entirely dusky brick-red or blackish rusty brown, and as if burnt. Scutum incumbent, flat, oval, and transverse. Elytra diaphanous, shorter than abdomen, oval-oblong; from each elytral base three striae originate, of which the middle one is elevated; the inner one excavated, curved and together with the corresponding line forming an enclosed, ovate space, outer one excavated close to margin, short, and these striae without any determined order. Cauda with two points. Legs spiny. Male bears wings and elytra, female only rudiments of them.

863. BLATTA *lapponica* [*Ectobius lapponicus* (Linnaeus, 1758). Eng. Dusky cockroach, Sw. Skogskackerlacka; Fam. Blattellidae or Ectobiidae, Eng. Wood cockroaches, Sw. Småkackerlackor], whitish yellow; elytra maculate with black. *Fn.* 618.

Act. Ups. 1736. p. 35. n. 2. Lampyris alis superioribus ad angulum acutum striatis.

Occurs in the huts of forest Lapps; very numerous between the scales of fish. Since the Lapps dry a fish without salt, it is often entirely consumed in a day by the cockroach.

DESCR. The size of a rather large fly. Scutum membranous, wide, marginate, oval, diaphanous. Elytra membranous and pellucid, horn-coloured, with a longitudinal, elevated stria; on these elytra, the striae are extended bilaterally towards the posterior margins so that the smaller ones are fused together at an acute angle into a longitudinal stria; elytra scattered with some blackish spots here and there. Legs horn-coloured; tibiae spiny. Antennae long, setaceous. Lower wings watery. Two cornicles, distinctly segmented, bent backwards above anus.

Gryllus[630]

864. GRYLLUS *bipunctatus* [*Tetrix bipunctata* (Linnaeus, 1758). Eng. Two-spotted groundhopper, Sw. Punkttorngräshoppa; Fam. Tetrigidae, Eng. Pygmy grasshoppers, Sw. Torngräshoppor], scutum the length of the abdomen.

Gryllus, no elytra; thorax extended like a longitudinal elytron, with a bilateral, rhomboid, black macula. *Fn.* 623.

Raj. Ins. p. 60. Locusta minor fuscescens, cucullo longo rhomboide.

Act. Ups. 1736. p. 34. n. 9. Gryllus alis superioribus nullis, collari producto ad longitudinem abdominis.

Inhabits rather dry meadows.

DESCR. It falls among the smallest species of this genus. Clearly distinguished by the scutum extending the length of abdomen, and with a longitudinal, elevated line and two opposite rhomboid

[629] Linnaeus only refers to *Gryllus*, see nos. 864–878.

[630] Order Orthoptera.

jet-black spots, often at mid point. The white wings are hidden beneath this cover. Antennae are shorter in this species than in all others. Elytra extended from the thorax along the length of the abdomen.

865. GRYLLUS *subulatus* [*Tetrix subulata* (Linnaeus, 1758). Eng. Slender ground-hopper, Awl-shaped pygmy grasshopper or Slender grouse locust, Sw. Strandtorngräshoppa; Fam. Tetrigidae, Eng. Pygmy grasshoppers, Sw. Torngräshoppor], scutum longer than abdomen.

Gryllus, no elytra. Since the thorax is protracted, it is longer than the abdomen. *Fn.* 624.

Inhabits meadows, near ditches, and still water bodies during early spring.

DESCR. Stature as that of the preceding species, but narrower. Scutum almost twice the size of the very body. Antennae short.

866. GRYLLUS *gryllotalpa* [*Gryllotalpa gryllotalpa* (Linnaeus, 1758). Eng. European mole cricket, Sw. Mullvadssyrsa; Fam. Gryllotalpidae, Eng. Mole crickets, Sw. Mullvadssyrsor], thorax rounded; wings caudate, longer than elytron; forelegs palmate, tomentose.

Gryllus, forelegs palmate. *Fn.* 619.

Imp. Alt. p. 962. Talpa insectum.

Aldr. Ins. p. 571. Talpa ferrantis imperati.

Welsch. Hecatost. 1. p. 39. Talpa ferrantis imperati.

Mouff. Lat. p. 104. Gryllo-talpa.

Jonst. Ins. t. 12. 13. Gryllo-talpa.

Hoffn. Ins. t. 4. *f. ult. ae. edit. alt.* 3. t. 6.

Goed. Belg. 1. p. 168. t. 76. Gryllo-talpa.

List. Goed. p. 288. f. 119. Gryllo-talpa.

Barth. Act. 4. p. 9. f. 1. Gryllo-talpa.

Worm. Mus. p. 243. Gryllo-talpa.

Wagn. Helv. 233. Gryllo-talpa.

Charl. Exerc. p. 44. Gryllo-talpa.

Raj. Ins. p. 64. 67. Gryllo-talpa. Mouffeti.

Eph. N. C. dec. 2. *anm.* 1. p. 154. Gryllo-talpa.

Frisch. Germ. 11. p. 28. t. 5. Gryllus campestris pedibus talpae.

Black. Herb. t. 81. f. 10.

Inhabits the fields of Skåne, where it sings like a common tree frog[631] or corn-crake[632] at night; noxious to gardens.

DESCR. Differs significantly from the other species through various marks. 1. It is in fact larger than all our insects except for the crayfish.[633] 2. Forelegs villous, palmate. 3. Upper wings ash-grey

[631] See no. 280.

[632] See no. 194.

[633] Linnaeus only refers to *Cancer*, see nos. 2026–2043.

with blackish vessels, lower wings longer, acuminate. The cauda is bisetose, as that of the following species.

867. GRYLLUS *domesticus* [*Acheta domestica* (Linnaeus, 1758). Eng. House cricket, Sw. Hussyrsa; Fam. Gryllidae, Eng. True crickets, Sw. Syrsor], thorax rounded; wings caudate, longer than elytron; legs simple; body glabrous.

Gryllus, cauda bisetose; lower wings acuminate, longish; legs simple. *Fn.* 620.

Mouff. Lat. p. 135. Gryllus domesticus.

Jonst. Lat. t. 12. Grylli Mouffeti & t. 13. f. D.

Charl. Exerc. p. 44. Gryllus domesticus.

Hoffn. Ins. p. 11. f. 4.

Raj. Ins. p. 63. Gryllus domesticus.

In Sweden: Syrsa.

Occurs around us in houses, where it forms tunnels in the clay walls and sings harshly, especially during the nights; it is not appreciated by the inhabitants. It is driven away with the roots of waterlily and the wood of aspen. *It. Oel.* 84.

868. GRYLLUS *brachyterus*[634] [*Metrioptera brachyptera* (Linnaeus, 1761). Eng. Bog bush-cricket, Sw. Ljungvårtbitare; Fam. Tettigoniidae, Eng. Katydids or Bush crickets, Sw. Vårtbitare], dusky grey; elytra and wings half the length of the body.

Occurs in Sweden. *De Geer.*

DESCR. Thorax ends with a white line posterolaterally. Entirely greenish. Femora with a longitudinal black line. Wings shorter than elytra and elytra shorter than abdomen. Sword directed upwards.

869. GRYLLUS *viridissimus* [*Tettigonia viridissima* (Linnaeus, 1758). Eng. Great green bush-cricket, Sw. Grön vårtbitare; Fam. Tettigoniidae, Eng. Katydids or Bush crickets, Sw. Vårtbitare], thorax rounded; wings green, without maculae; antennae setaceous, very long.

Frisch. Ins. 12. t. 2. f. 1. Locusta major viridis.

Robert. Icon. t. 28.

Raj. Ins. 61. Locusta viridis major.

Inhabits meadows; rather rare.

DESCR. It has the largest body of our species. Head and thorax are olive-coloured. Thorax smooth and not angular; dorsum rather flat, with a markedly blunt scutellar lobe. Wings green, without maculae. Sword straight.

[634] *Gryllus brachyterus* is most certainly an error for *Gryllus brachypterus*.

870. GRYLLUS *verrucivorus* [*Decticus verrucivorus* (Linnaeus, 1758). Eng. Wartbiter, Sw. Större vårtbitare; Fam. Tettigoniidae, Eng. Katydids or Bush crickets, Sw. Vårtbitare], thorax subquadrate, smooth; wings green with fuscous maculae; antennae setaceous, the length of the body.

Gryllus, cauda bearing a straight sword; body weakly green. *It. Gotl.* 253. *Fn.* 621.

Jonst. Ins. t. 11. f. 1. 2. 3. Locusta hewschrecken Mouffeti. t. 13. f. 13.

Hoffn. Ins. t. 5. f. 16. 17.

Rob. Ic. t. 27.

Merian. Europ. t. 176.

Eph. N. C. dec. 2. *anm.* 11. *obs.* 16. p. 40.

In Sweden: Wårtbit.

Inhabits meadows. Peasants stretch out their warty hands towards this insect, which it bites and vomits in the wound a fluid, through which the warts dwindle away.

DESCR. Distinguishes itself from the others by various marks. Thoracic armature triangular or extended downwards at sides and dilated on the back towards wings. The female bears a bivalved sword at anus. Elytra of male with ample opening towards base, consolidated with a pellucid membrane; with these elytra it makes a singing sound. Colour of the whole body mostly green.

871. GRYLLUS *migratorius* [*Locusta migratoria* (Linnaeus, 1758). Eng. Migratory locust, Sw. Europeisk vandringsgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax subcarinate, with a single segment; head blunt; jaws jet-black.

Frisch. Ins. 9. t. 1. f. 8.

Lives infrequently around us. Migrates during the first or second year and returns more sparsely.

872. GRYLLUS *stridulus* [*Psophus stridulus* (Linnaeus, 1758). Eng. Rattle grasshopper, Sw. Trumgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax subcarinate; wings red, at outermost part black; elytra cloudy.

Gryllus, elytra cloudy; wings red, at outermost part black. *It. Oel.* 158. *Fn.* 625.

Uddm. Diss. 50.

Wagn. Helv. p. 230. Locusta prima.

Frisch. Germ. 9. p. 4. t. 1. f. 2. Locustae secunda species.

Act. Ups. 1736. p. 34. n. 4. Gryllus alis superioribus umbrosis, inferioribus rubris apicibus nigris.

Inhabits meadows in the month of July; stridulous.

DESCR. Antennae half the length of the body, fuscous, medially thicker. Elytra cloudy. Wings plicate, reticulate, undulating marginally, black towards tip, otherwise red. Femora adapted for jumping, angular, fringed at knee; inner side light yellow and black; tibiae light yellow. The four front legs blackish.

873. GRYLLUS *apricarius* [*Chorthippus apricarius* (Linnaeus, 1758). Sw. Solgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax bearing a cross; antennae the length of the body. *It. Oel.* 157. *Fn.* 628.

Inhabits the plains ("Alvar")[635] of Öland in the month of July, especially abundant around Borgholm, where it is dispersed like a volatile powder in front of the pedestrian's feet.

DESCR. Body among the smallest of this genus or the size of the following species, but then rather lighter yellow than greenish. Antennae longer than the actual body. Elytra pale, reticulate with white, and with blackness shining through; thorax pale above with black macula at thoracic sides. Femora pale with an oblong, blackish fascia. Abdomen pale above, fuscous laterally, greenish light yellow beneath.

874. GRYLLUS *viridulus* [*Omocestus viridulus* (Linnaeus, 1758). Eng. Common green grasshopper, Sw. Grön ängsgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax cruciform; body green above; elytral margin whitish. *Fn.* 626.[636]

Frisch. Germ. 9. p. 6. n. 7. Locustae septima species minima.

Occurs most abundantly of all places at Burgsvik at the sea, where it falls down in front of the feet like corn bearing seeds.

DESCR. This species should be numbered among our smallest (if it is not the smallest of them all). Body green above, but head and thorax saturated green above. Wings watery green; outer wings or elytra green and at outer or lateral margin white. Abdomen, pectus, femora, and face pale. Antennae consisting of about 23 segments.

Varies in some by way of a thin white line dorsally at the thoracic angle on each side, and then another thin, white line between elytral margin and alar disc.

875. GRYLLUS *biguttulus* [*Chorthippus biguttulus* (Linnaeus, 1758). Eng. Bow-winged grasshopper, Sw. Slåttergräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax cruciform; elytra cloudy, with an oblong, whitish spot at tips.

Inhabits fields.

DESCR. Body rather small in size. Thorax with a black cross. Elytra ash-greyish, with pale maculae, and at tip a thin, oblique, whitish line.

876. GRYLLUS *rufus* [*Gomphocerippus rufus* (Linnaeus, 1758). Eng. Rufous grasshopper, Sw. Större klubbgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], thorax cruciform; body red-brown; elytra grey; antennae subclavate.

Gryllus, antennae subclavate, pointed. *Fn.* 629.

Act. Ups. 1736. p. 34. n. 6. Gryllus abdomine pallido, alis griseis unicoloribus.

Inhabits the meadows of Roslagen.

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[635] I.e. the bare limestone soil.

[636] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

DESCR. It falls among the smaller species, but not the smallest. Entirely red-brown. Thoracic angles black, with a thin white line. Femora red. Elytra without maculae, grey. Antennae clavate, just as in the butterflies, but nevertheless only slightly elongated at tip and whitish at outermost part of tip.

877. GRYLLUS *grossus* [*Mecostethus grossus* (Linnaeus, 1758). Eng. Large marsh grasshopper, Sw. Kärrgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], femora blood-coloured; elytra greenish tending to light red-brown; antennae cylindrical. *Fn.* 627.

Frisch. Germ. 9. p. 5. t. 4.

Inhabits meadows, for example, at Bolstavik[637] and elsewhere in Roslagen; rather rare.

DESCR. It falls among the largest of our grasshoppers and is paler than the others; femora more saturated red beneath. Abdomen greenish light yellow beneath. Elytra pale light yellow, especially at front margin, otherwise reticulate, just as wings. Antennae cylindrical with 24 segments. Posterior tibiae black, with white teeth, terminating in four claws except for the claws of the forefeet. Hind femora red on lower surface. Indistinctly dark brown or dusky dark bluish grey above. Between the forelegs thorax has a sharpened, whitish yellow point.

878. GRYLLUS *pedestris* [*Podisma pedestris* (Linnaeus, 1758). Eng. Common mountain grasshopper or Brown mountain grasshopper, Sw. Skogsgräshoppa; Fam. Acrididae, Eng. Short-horned grasshoppers, Sw. Gräshoppor], body dark bluish grey tending to flesh-coloured, apterous.

Inhabits meadows rather sparsely.

DESCR. Body the size of our larger grasshoppers, which resembles very closely the pupa[638] of this genus, since it is apterous, only with the rudiments of wings, but when it develops it is possible to consider it a perfect individual that is dark bluish grey tending to flesh-coloured, smooth. Antennae filiform, blunt, shorter than body. Thorax subcarinate posteriorly, furrowed with two transverse sutures. Hind femora red. Posterior tibiae with ten pairs of spines.

[637] A manor in Roslagen.

[638] Linnaeus writes "pupa" obviously meaning the immature stage, since the Orthoptera have an incomplete metamorphosis with no pupae.

II. HEMIPTERA

Cicada

879. CICADA *cornuta* [*Centrotus cornutus* (Linnaeus, 1758). Eng. Thorn-hopper, Sw. Hornstrit; Fam. Membracidae, Eng. Treehoppers, Sw. Hornstritar], thorax bicornate, posteriorly awl-shaped, the length of the abdomen; wings naked. *Fn.* 641.

Pet. Gaz. t. 47. f. 2. 3. Ranatra cornuta.

Lives on thistles. *R. Hast* in Lund. *Mr Leche* in Uppsala.

DESCR. Body blackish. Eyes fuscous. Thorax black, scattered with grey hairs; on each side strongly mucronate, posteriorly extended into a sharpened point, which is as long as abdomen and awl-shaped, triangular, wavy. 4 dark bluish grey wings striate with fuscous vessels; lower wings minimal. Abdomen black. Femora black. Tibiae rusty brown. Sternum with an oblong edge. Does not jump.

880. CICADA *coleoptrata* [*Lepyronia coleoptrata* (Linnaeus, 1758). Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar], elytra entirely leather-like and covering wings.

Occurs around Gottsunda and elsewhere. *Dr Haartman.*

DESCR. Body black beneath, entirely dark bluish grey or dusky rusty brown above. Elytra entirely leather-like and covering abdomen, as in the beetles, with an indistinct fascia, formed by a fuscous line arranged as a rhomboid. Wings concealed, very small, white. Posterior tibiae with two reciprocal strong teeth, as in the scarab beetles.[639]

881. CICADA *spumaria* [*Philaenus spumarius* (Linnaeus, 1758). Eng. Meadow froghopper or Meadow spittlebug, Sw. Allmän spottstrit; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar],[640] fuscous; elytra with two lateral, white maculae each, and with a double, interrupted, whitish fascia. *Fn.* 636.

Raj. Cantabr. 112.

Ins. p. 67. Locusta-pulex Svammerdamio, nobis Cicadula.

Swamm. Quart. p. 83. Locusta-pulex.

Gall. p. 86.

Bibl. 1. p. 215.

Poup. Act. Gall. 1705. p. 161.

Blank. Belg. p. 97. t. 11. f. N. O. P.

Pet. Gaz. t. 61. f. 9. Ranatra bicolor, capite nigricante.

Frisch. Germ. 8. p. 26. f. 12. Vermis spumans.

De Geer. Act. Stockh. 1741. p. 221. t. 7. Cicada fusca, alis superioribus maculis albis, in spuma quadam vivens.

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[639] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

[640] Species nos. 881, 883, 885, 886, and 897 are identical. Linnaeus is misled by the extreme variability of this species.

Lives on willow. Its larva and pupa are hidden inside the spittle, expelled through the anus and amassed as bubbles; this spittle is commonly called "Grodspott" ("Frog spittle"), see *De Geer, Act. Holmens.* loc. cit.

882. CICADA *nervosa* [C*ixius nervosus* (Linnaeus, 1758). Fam. Cixiidae, Eng. Cixiid planthoppers, Sw. Kilstritar], fuscous; wings hyaline, maculated with fuscous and with punctate veins. *Fn.* 632.
Inhabits meadows.
DESCR. Rather large foam. Wings curved downwards, with elevated veins which are maculate and punctate.

883. CICADA *leucophthalma* [*Philaenus spumarius* (Linnaeus, 1758). Eng. Meadow froghopper or Meadow spittlebug, Sw. Allmän spottstrit; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar],[641] black; eyes white. *Fn.* 638.
Inhabits pastures.
DESCR. Entirely black or dusky black and not jet-black. Only eyes white.

884. CICADA *albifrons* [*Anoscopus albifrons* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], black; frons white.
Occurs in Uppsala.
DESCR. Body small, jet-black. Elytra fuscous. Head beneath and on anterior margin white. Hindlegs ciliate.

885. CICADA *leucocephala* [*Philaenus spumarius* (Linnaeus, 1758). Eng. Meadow froghopper or Meadow spittlebug, Sw. Allmän spottstrit; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar],[642] black; head white. *Fn.* 640.
Inhabits pastures.
DESCR. Entirely black, except for the small, dark macula at outer margin close to the elytral tips. Head and anterior half of thorax white.

886. CICADA *lateralis* [*Philaenus spumarius* (Linnaeus, 1758). Eng. Meadow froghopper or Meadow spittlebug, Sw. Allmän spottstrit; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar],[643] elytra laterally white. *Fn.* 639.
Act. Ups. 1736. p. 35. n. 13. Gryllus fuscus alarum margine albo.
Raj. Ins. p. 68. n. 2. Locusta-pulex fusca.
Inhabits pastures.
DESCR. This species is also black or dusky black, but a broad, white line surrounds the outer elytral margins. Eyes and mouth white.

[641] See the com. to no. 881.
[642] See the com. to no. 881.
[643] See the com. to no. 881.

887. CICADA *striata* [*Psammotettix striatus* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], elytra striated with white and black at the acute angle of dorsal suture. *Fn.* 642.

Raj. Ins. p. 68. n. 1. Locusta pulex prima.

Inhabits moist pastures.[644]

888. CICADA *lineata* [*Neophilaenus lineatus* (Linnaeus, 1758). Eng. Lined spittlebug; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar], whitish, with a longitudinal, black line on each side. *Fn.* 637.

Inhabits pastures.

DESCR. Entirely pale or whitish. A white line runs on each side from frons close to sides towards elytral tips, broader at posterior parts, ending before reaching alar tip; inside these lateral lines, the striae are directed towards suture, close to the acute angle at cauda.

889. CICADA *interrupta* [*Evacanthus interruptus* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], elytra light yellow, with a double, interrupted, longitudinal, black line. *Fn.* 631.

Pet. Gaz. 61. f. 10. Ranatra bicolor ex fusco & pallido striata.

Inhabits meadows at the time of haymaking.

DESCR. The size is rather large for our species. It is entirely light yellow, but elytra are closed. On both dorsal sides, there is a longitudinal black line, which is interrupted obliquely in the middle, as if one line were drawn from the thorax and the other from the tip of wings. Although both lines are of the same length, they nevertheless do not meet or touch each other medially. Close to thorax, these two fasciae merge into one. On head and thorax, a bilateral macula, which is confluent and of a black colour. Antennae short. Frons light yellow, with bilateral, transverse striae. Head and thorax with black maculae on the back. Elytra light yellow. A longitudinal black line, and another shorter line from tip looking towards elytral base. Abdomen light yellow on the back and black on each side.

890. CICADA *populi* [*Populicerus populi* (Linnaeus, 1761). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar],[645] whitish yellow beneath; frons with two black spots; wings hyaline.

Lives on aspen. *P. Forsskål.*

DESCR. Resembles a middle-sized spittlebug, entirely whitish yellow beneath including legs and frons; two black spots on frons. Scutellar tip whitish yellow. Wings hyaline; at the thinner margin of elytra, two white dots, barely visible, but often provided with a fuscous margin.

891. CICADA *flavicollis* [*Oncopsis flavicollis* (Linnaeus, 1761). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], fuscous; head and thorax light yellow.

Inhabits pastures.

DESCR. Resembles a rather small spittlebug. Wings dusky rusty brown.

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[644] Not occurring in Sweden.

[645] See no. 901.

892. CICADA *lanio* [*Iassus lanio* (Linnaeus, 1761). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], green; head and thorax light red.

Inhabits pastures.

DESCR. Resembles a middle-sized spittlebug. Head and thorax light red above. Elytra and wings green, without maculae. The four anterior legs somewhat light red.

893. CICADA *vittata* [*Eupteryx vittata* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], light yellow, with a double black band that is longitudinal, repand, and dentate. *Fn.* 634.

Occurs on C*ronstedt's* estate, Fullerön.

DESCR. The size of a louse; hence tiny. Body oblong, flat, sulphur-coloured; on the back, above elytra, a black fascia, resembling two black, proliferous horns of a bull, of which the base then would be the thorax or to put it in another way: try to imagine a black, elytral base, from which, on each side, there is a line inscribing the ovate form and at tip it is connected with its counterpart, but turned back; hence another short line that is turned back. What I really mean is that the black, oblong fascia in front of the middle is a deep yellow, ovate macula; beneath the middle on each side a double bilateral denticle.

894. CICADA *aptera* [*Halticus apterus* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], apterous, jet-black; elytra relatively short; tibiae and antennae pale.

Occurs on *Tessin's* estate, Åkerö, in Södermanland.

DESCR. Body the size of a flea; jet-black except for the pale antennae and legs. Elytra shorter than abdomen and without wings.

895. CICADA *leporina* [*Pentastiridius leporinus* (Linnaeus, 1761). Fam. Cixiidae, Eng. Cixiid planthoppers, Sw. Kilstritar], wings curved downwards, whitish, with pale anastomoses anteriorly above the thin blackish line; anus woolly.

Occurs in Uppsala.

DESCR. Stature as that of C*icada lanata*,[646] but smaller and blackish. Frons carinate and laterally marginate. Wings whitish; upper wings with thin, transverse lines constituting anastomoses that are scattered and pale, and above lower margin, towards posterior part, a thin, pointed, black line. Anus very woolly, with starkly white, very soft wool.

896. CICADA *viridis* [C*icadella viridis* (Linnaeus, 1758). Eng. Green leafhopper, Sw. Blågrön kärrstrit; Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], elytra green; head light yellow with black spots. *Fn.* 630.

Act. Ups. 1736. p. 34. n. 11. Gryllus alis superioribus viridibus, inferioribus fuscis, capite flavo.

Raj. Ins. p. 68. n. 3. Locusta-pulex tertia.

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[646] *Lystra lanata* (Linnaeus, 1758). Fam. Fulgoridae, Eng. Lanternflies, Sw. Lyktstritar. Ocurring in South America.

Inhabits swampy meadows in Uppland at the end of August; often very common on horsetail and bulrush.

DESCR. This species is the largest of our leafhoppers, although not larger than the house fly[647] in length, but much smaller in terms of width. Elytra saturated green. Wings of a lead grey colour. Thorax and scutellum green. Head whitish yellow, with two black spots on occiput and another on sides of head. Frons with transverse striae. Abdomen of a lead grey colour on the back. Legs whitish yellow.

897. CICADA *flava* [*Philaenus spumarius* (Linnaeus, 1758). Eng. Meadow froghopper or Meadow spittlebug, Sw. Allmän spottstrit; Fam. Aphrophoridae, Eng. Spittlebugs, Sw. Spottstritar],[648] light yellow, flattened. *Fn.* 643.

Inhabits the meadows of Falun.

DESCR. It is entirely light yellow and rather small. Two fuscous spots at base of head on the back.

898. CICADA *bifasciata* [*Planaphrodes bifasciatus* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], fuscous, with two alar white fasciae.

Cicada, black, with three transverse, equal, white fasciae. *Fn.* 633.

Act. Ups. 1736. p. 35. n. 14. Gryllus alis nigris, fasciis tribus transversis albis.

Inhabits meadows; rather rare; all around "Mora stenar" outside Uppsala.

DESCR. More narrow than flattened.[649] Elytra dusky black, with two transverse, white fasciae, the width of the interjacent blackness. Thorax black, with a thin, transverse, white line near upper margin. Mouth white, the other parts black. Abdomen black beneath. Thorax verging on white beneath.

899. CICADA *aurata* [*Eupteryx aurata* (Linnaeus, 1758). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], light yellow; elytra decorated with a red-yellow colour and four black maculae, posteriorly gold-coloured. *Fn.* 635.

Occurs in Skåne. *Mr Leche.*

DESCR. It is oblong and two or three times larger than C. *vittata*,[650] which it resembles; it is light yellow, but the eyes are black; a black macula on both thoracic sides. Scutellum black, with an incorporated light yellow triangle and a light yellow line extended from the thorax. Elytra decorated with a red-yellow colour, and medially marked with two black spots near suture (one on each elytron), and with two other black spots, thicker near margin at posterior alar parts. Elytra posteriorly translucent with gold. Body is blackish. Legs light yellow.

900. CICADA *ulmi* [*Ribautiana ulmi* (Linnaeus, 1758). Eng. Elm leafhopper, Sw. Almdvärgstrit; Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], wings green tending to deep yellow, with blackish, gilded tips. *Fn.* 644.

Lives on the leaves of elm; runs rapidly and flees away.

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[647] See no. 1833.

[648] See the com. to no. 881.

[649] I. e. more compressed laterally than dorso-ventrally.

[650] See no. 893.

DESCR. Differs from other leafhoppers, beacause it is compressed and runs rather than jumps.

901. CICADA *coryli* [*Populicerus populi* (Linnaeus, 1761). Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar],[651] wings rolled, fuscous, with a whitish fascia behind the cordate, bluish macula.

Lives on hazel.

DESCR. Frons whitish yellow, as are legs. Wings rolled, weakly fuscous, somewhat shining with bronze; common cordate, bluish macula in the middle of the dorsum; fascia whitish posteriorly. Claws blackish.

902. CICADA *rosae* [*Edwardsiana rosae* (Linnaeus, 1758). Eng. Rose leafhopper, Sw. Rosenstrit; Fam. Cicadellidae, Eng. Leafhoppers, Sw. Dvärgstritar], light yellow; wings white, apically membranous. *Fn.* 645.

Frisch. Germ. 11. p. 13. t. 20. Pulex foliorum.

Lives on rose leaves.

DESCR. Semi-cylindrical, white. Abdomen whitish yellow. Wings with white, watery tips, not gilded; hence different from the preceding species, otherwise very similar.

Notonecta

903. NOTONECTA *glauca* [*Notonecta glauca* Linnaeus, 1758. Eng. Common backswimmer, Sw. Allmän ryggsimmare; Fam. Notonectidae, Eng. Backswimmers, Sw. Ryggsimmare], grey; elytra grey, margin with fuscous punctations. *Fn.* 688.

Bradl. Natur. t. 26. f. 2. E.

Hoffn. Ins. t. 12. f. 19.

Pet. Gaz. t. 72. f. 5.

Frisch. Germ. 6. p. 28. t. 13. Cimex aquaticus angustior.

Lives in lakes; the largest of our species in this genus.

DESCR. Head blunt, light yellow. Eyes dark brown. Thorax large, light yellow, pellucid. Scutellum jet-black, covered entirely with silky hairs. Elytra light yellow, sides with black punctations. Lower wings white, pellucid, and covered. Forelegs shorter, intermediate ones longer. Hindlegs very long, adapted for swimming. Rostrum pointed, awl-shaped. Small antennae beneath head, consisting only of a doubled segment. Venter black; it is hirsute beneath.

904. NOTONECTA *striata* [*Sigara striata* (Linnaeus, 1758). Fam. Corixidae, Eng. Water boatmen, Sw. Buksimmare], elytra pale, with thin, transverse, undulating, striate lines. *Fn.* 689.

Pet. Gaz. t. 72. f. 7. Notonecta vulgaris compressa fusca.

Lives in water bodies, many times smaller than the preceding species; stinking.

[651] See no. 890.

DESCR. This species is oblong, flat. Frons and legs light yellow. Thorax and elytra fuscous, with transverse, undulating, parallel, very abundant, pale whitish yellow thin lines. Body whitish yellow beneath. Eyes blackish.

905. NOTONECTA *minutissima* [*Micronecta minutissima* (Linnaeus, 1758). Fam. Corixidae, Eng. Water boatmen, Sw. Buksimmare], elytra ash-grey, with longitudinal, fuscous maculae.

Notonecta, the size of a sand grain. *Fn.* 690.

Act. Ups. 1736. p. 37. n. 3. Notonecta cinerea vix conspicua.

Lives in bubbling springs and natural sources of water.

DESCR. The size of a very small sand grain. Wings and elytra ash-grey. Hindlegs rather long; first pair very small; it is flat; dorsum fuscous, as if transversely striate.

Nepa

906. NEPA *cinerea* [*Nepa cinerea* Linnaeus, 1758. Eng. Water scorpion, Sw. Klodyvel; Fam. Nepidae, Eng. Water scorpions, Sw. Vattenskorpioner], ash-grey; thorax rough; body ovate.

Nepa, abdominal margin entire. *Fn.* 691.

Mouff. Lat. p. 321. Scorpio palustris.

Bauh. Ballon. p. 212. f. 2. Araneus aquaticus.

Hoffn. Ins. t. 11. f. 2. *edit. alt.* 3. t. 4.

Jonst. Inst. t. 27. f. 1. 2. Scorpiones aquatici Mouff.
t. 28. f. *ad verb. stello. figura bona.*

Bradl. Natur. t. 26. f. 2. C.

Pet. Gaz. t. 74. f. 4. Scorpio vulgaris aquaticus.

Raj. Ins. 58. Scorpio palustris ad cimices referendus.

Swamm. Bibl. t. 3. f. 4.

Occurs in rivers, still water bodies, marshes, and at muddy places, especially in the Sala River[652] of Uppsala.

907. NEPA *cimicioides* [*Ilyocoris cimicioides* (Linnaeus, 1758). Eng. Saucer bug, Sw. Vattenbi; Fam. Naucoridae, Eng. Creeping water bugs, Sw. Vattenbin], abdominal margin serrate. *Fn.* 692.

Frisch. Germ. 6. p. 31. t. 14. Cimex aquaticus latior.

Lives in water bodies.

DESCR. Smaller than the previous species. Appearance as that of a bed bug[653] or a water boatman.[654] Dorsum convex a without caudal sting. Colour fuscous.

[652] See the com. to no. 361.

[653] See no. 909.

[654] Linnaeus only refers to *Notonecta*, se nos. 903–905.

908. NEPA *linearis* [*Ranatra linearis* (Linnaeus, 1758). Eng. Water stick-insect, Sw. Stavlik vattenskorpion; Fam. Nepidae, Eng. Water scorpions, Sw. Vattenskorpioner], linear; forelegs with a lateral spine and equipped with a thumb.
Frisch. Ins. 7. p. 24. t. 16.
Lives in water bodies; very rare.
DESCR. Body linear, convex, ash-grey. Bisetose caudal sting the length of the body.

Cimex

909. CIMEX *lectularius* [C*imex lectularius* Linnaeus, 1758. Eng. Bed bug, Sw. Vägglus; Fam. Cimicidae, Eng. Bed bugs, Sw. Vägglöss], apterous. *Fn.* 646.
Mouff. Lat. p. 269. *f. superiores.* Cimex domesticus.
Matth. Diosc. p. 257. t. 257. Cimices.
Merr. Pin. p. 202. Cimex lectularius.
Bonan. Microsc. t. 65.
Raj. Ins. p. 7. Cimex.
Charl. Exerc. p. 52. Cimex.
Aldr. Ins. p. 534. Cimex.
Jonst. Ins. p. 89. Cimex.
In Sweden: Wägglus.
Occurs around us in houses.
DESCR. It is driven away by introduced masses of the red wood ant.[655] If it is smeared with a solution of *Agaricus muscarius*,[656] it certainly dies. If hemp is put in the bed or if the bed is smeared rather often with herring brine, the bed bug dies or is driven away.

910. CIMEX *grylloides* [*Geocoris grylloides* (Linnaeus, 1761). Fam. Geocoridae, Eng. Big-eyed bugs, Sw. Markrovskinnbaggar], apterous, black; elytra ovate, deep yellow marginally, shorter than abdomen.
Occurs in Kalmar. *A. Modéer.*
DESCR. Body black, size as that of the previous species. All thoracic margins deep yellow. Elytra lacking the membranous wings, ovate, with a light yellow margin, apically divergent. No wings.

911. CIMEX *clavicornis* [C*opium clavicorne* (Linnaeus, 1758). Fam. Tingidae, Eng. Lace bugs, Sw. Nätskinnbaggar], elytra concealing the abdomen, with reticulate punctations; antennae clavate.
C*imex*, with clavate antennae; elytra and thoracic margin with reticulate punctations. *Fn.* 687.
Mordella, fuscous, opaque; elytra punctate. *Fn.* 545.
Occurs in Uppland.[657] *De Geer.* In Skåne. *Dr Leche.*

[655] See no. 1721.
[656] A fungus preparation containing toxic substances such as muscarin and others.
[657] Not occurring in Sweden, only in South and Central Europe.

DESCR. Size as that of a flea, ash-grey, ovate. Wings and thoracic margin with diaphanous, reticulate spots; vessels fuscous, with scattered, blackish maculae. Elytral margin as if dentate with spots. Thorax wrinkled.

912. CIMEX *scarabaeoides* [*Thyreocoris scarabaeoides* (Linnaeus, 1758). Sw. Violbärfis; Fam. Thyreocoridae, Eng. Ebony bugs, Sw. Glansskinnbaggar], scutellum covering the abdomen; body jet-black, bronze jet-black above.

Occurs around us, but rather rare; found on the buttercup. *Mr Haartman*.

DESCR. Body jet-black, the size of a bed bug.[658] Antennae subclavate. Thorax bronze black. Scutellum the size of the abdomen, concolorous. Elytra concolorous. Wings white. Legs spinose.

913. CIMEX *maurus* [*Eurygaster maura* (Linnaeus, 1758). Eng. Tortoise bug, Sw. Torrgräsbärfis; Fam. Scutelleridae, Eng. Shield-backed bugs, Sw. Sköldskinnbaggar], scutellum the length of the abdomen; body grey.

Occurs in Sweden; rather rare.

DESCR. Body a little smaller than that of the bed bug,[659] entirely grey. Scutellum convex, the size of the abdomen, but somewhat narrower; a bilateral, linear, pale spot at base. Antennae mostly black.

914. CIMEX *fuliginosus* [*Odontoscelis fuliginosa* (Linnaeus, 1761). Sw. Mörkhårig sköldskinnbagge; Fam. Scutelleridae, Eng. Shield-backed bugs, Sw. Sköldskinnbaggar], scutellum sooty covering the abdomen, with five black blotches, posterior blotch divided in two by white.

Occurs in Kalmar *A. Modéer.*

DESCR. Body middle-sized, sooty and weakly pubescent above, black and glabrous beneath. Scutellum convex covering the whole abdomen. Two bilateral, black blotches and a single posterior one, divided by a thin, white line.

915. CIMEX *littoralis* [*Salda littoralis* (Linnaeus, 1758). Fam. Saldidae, Eng. Shore bugs, Sw. Strandskinnbaggar], elytra concealing the abdomen, sordid, punctate with white; wings relatively short; body black.

Lives at water bodies.

DESCR. Body black. Elytra the length of the whole abdomen, hardly membranous at apical margin. Wings half the length of the elytra. Legs palish.

916. CIMEX *rugosus* [*Nabis rugosus* (Linnaeus, 1758). Eng. Common damsel bug; Fam. Nabidae, Eng. Damsel bugs, Sw. Fältrovskinnbaggar], pale elytra concealing the abdomen; body oblong.

Occurs around us; rather rare.

DESCR. Body middle-sized, markedly oblong. Elytra the length of the abdomen, inner margin from tip of scutellum to tip of elytra membranous, and not further. Anterior femora rather thick and as if transversely striate.

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[658] See no. 909.

[659] See no. 909.

917. CIMEX *corticalis* [*Aradus corticalis* (Linnaeus, 1758). Fam. Aradidae, Eng. Flat bugs, Sw. Barkskinnbaggar], abdomen membranous, flat, with imbricately cut margin; body blackish.

C*imex*, blackish, abdomen flat; margin imbricately cut. *Fn.* 649.

Lives in dried up trunks in very vast forests.

DESCR. Body the size of a rather large bed bug.[660] Entirely flat, juiceless, black beneath. Abdominal margin on each side with six blunt laciniae the colour of a tortoise shell. Body and thorax sordid. Antennae consisting of three segments. Elytra and wings ash-grey, much narrower than abdomen and with deeper impressions. Head tricuspid.

918. CIMEX *betulae* [*Aradus betulae* (Linnaeus, 1758). Fam. Aradidae, Eng. Flat bugs, Sw. Barkskinnbaggar], abdomen membranous, flat; thorax denticulate; head muricate; elytra anteriorly dilated.

Lives on birch.

DESCR. Body flat, membranous, dusky grey. Antennae the length of the thorax. Thorax grooved, scabrous, medially black, laterally grey, denticulate at margin. Elytra leathery, grey, dilated at outer margin, membranous and truly cloudy. Wings fuscous. Legs black, with red-brown tarsi.

919. CIMEX *filicis* [*Monalocoris filicis* (Linnaeus, 1758). Eng. Bracken bug; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], abdomen membranous, flat; elytral tips, head, and legs dark bluish grey; body black.

Lives on the leaves of the male fern.

DESCR. Body ovate, flat, hardly larger than a flea. Head dark bluish grey. Eyes black. Thorax black. Elytra fuscous, with whitish yellow margin and membranous, dark bluish grey tip. Abdomen black. Legs dark bluish grey.

920. CIMEX *cardui* [*Tingis cardui* (Linnaeus, 1746). Eng. Spear thistle lacebug, Sw. Tistelnätstinkfly; Fam. Tingidae, Eng. Lace bugs, Sw. Nätskinnbaggar], abdomen membranous, flat; scutellum with three elevated lines; antennae black-tipped. *Fn.* 660.

Lives on thistle capitules.

DESCR. It is small, flat and plain, oblong-ovate. Head small, ash-grey. Antennae pale, with three segments; outermost segment ovate, black. Thorax cordate, acuminate, marginate, with three elevated, pointed, longitudinal ribs. Wings or sheath wings cloudy ash-grey, with an elevated cross and an elevated line on each side. Abdomen beneath and femora blackish. Tibiae pale. Sternum black, narrow, surrounded by a whitish line and rounded at tip with a white margin. Larva ash-grey with black antennal tips.

[660] See no. 909.

921. CIMEX *bidens* [*Picromerus bidens* (Linnaeus, 1758). Eng. Spiny shieldbug or Spiked shieldbug, Sw. Spetsrovbärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, grey; thorax with pointed spines; antennae red-brown. *Fn.* 652.

Occurs in Falun.

DESCR. Body grey all over. Scutellar tip with a pale crescent. Scarlet blotches beneath on thorax. Antennae pale red. Legs concolorous with body.

922. CIMEX *rufipes* [*Pentatoma rufipes* (Linnaeus, 1758). Eng. Forest bug or Red-legged shieldbug, Sw. Rödbent bärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, grey; thorax with blunt spines; legs red. *Fn.* 651.

Occurs around Falun, Turku,[661] and elsewhere, but rather rare.

DESCR. Falls among the largest species. Antennae black and at base red. Dorsum entirely grey. Thoracic angle on each side with an elevated, blunt horn. Scutellar tip red. Abdominal margin pointed, varying with black and red. Legs red-brown.

923. CIMEX *marginatus* [*Coreus marginatus* (Linnaeus, 1758). Eng. Dock bug, Sw. Stort kantstinkfly; Fam. Coreidae, Eng. Leaf-footed bugs, Sw. Bredkantskinnbaggar], oblong and ovate, grey; thorax with blunt spines; antennae medially red.

Cimex, oblong, red-brown, without maculae; thorax angular on each side. *Fn.* 662. *Act. Ups.* 1736. p. 35. n. 1. Cimex alis testaceis, abdomine rubro.

Often lives on Vaccinium berries.

DESCR. This species is among our largest of this genus. Body entirely grey, not shining. Thorax rhomboid, with truncated, right angles facing wings. Abdominal sides elevated into an edge. Second and third antennal segments blood-coloured.

924. CIMEX *punctatus* [*Rhacognathus punctatus* (Linnaeus, 1758). Eng. Heather shield bug, Sw. Mindre rovbärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, punctate with fuscous; thorax weakly spinose; tibiae with a white ring.

Inhabits forests.

DESCR. Body fuscous, almost the size of a juniper bug,[662] weakly whitish yellow beneath. Head, thorax, and elytra scattered densely with punctations. Thoracic sides weakly angled, with a longitudinal, whitish yellow line. Tibiae surrounded by a broad ring.

925. CIMEX *haemorrhoidalis* [*Acanthosoma haemorrhoidale* (Linnaeus, 1758). Eng. Hawthorn shieldbug, Sw. Hagtornsbärfis; Fam. Acanthosomatidae, Eng. Shield bugs, Sw. Kölskinnbaggar], ovate, oblong, grey; thorax with pointed spines; antennae black; venter anteriorly spinose.

Inhabits forests.

DESCR. Body as that of our larger species, grey, variegated with green and dark bluish grey. Entirely dark bluish grey beneath including also legs. Antennae black. Thorax gibbous, bilaterally mucronate, black-tipped. Elytra inwardly grey, outwardly pale. Abdomen red above, with a bilobed anus.

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[661] See the com. to no. 450.

[662] See no. 930.

926. CIMEX *griseus* [*Elasmucha grisea* (Linnaeus, 1758). Eng. Parent bug, Sw. Mindre björkbärfis; Fam. Acanthosomatidae, Eng. Shield bugs, Sw. Kölskinnbaggar], ovate, grey; abdominal sides varying with white and black; wings cloudy; venter anteriorly spinose. *Fn.* 657.

Occurs in Uppsala; abundant.

DESCR. This species falls among the middle-sized members. It is entirely grey above and scattered with deep punctations. Scutellum more fuscous at base. Wings cloudy fuscous. Antennae almost clavate, dusky blackish, with five segments. Dorsum black under wings, dentate at the white margin, black in between.

927. CIMEX *interstinctus* [*Elasmostethus interstinctus* (Linnaeus, 1758). Eng. Birch shieldbug, Sw. Större björkbärfis; Fam. Acanthosomatidae, Eng. Shield bugs, Sw. Kölskinnbaggar], ovate, grey; abdominal sides varying with red and black; wings whitish; venter anteriorly spinose. *Fn.* 658.

Act. Ups. 1736. p. 35. n. 4. Cimex subrotundus griseus.

Occurs in the countryside; rather rare.

DESCR. In size, appearance, and colour it resembles the previous species, but all parts are paler. Scutellum more fuscous at base and outer surface, with punctations, as in the preceding species. Wings white, diaphanous. Colour of dorsum red under wings (thereby differing clearly from the preceding species, which is black and green); at base a broad and black macula; at anus transverse, black lines, especially at abdominal sides.

928. CIMEX *baccarum* [*Dolycoris baccarum* (Linnaeus, 1758). Eng. Sloe bug or Hairy shieldbug, Sw. Hårig bärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, grey; abdominal margin black, maculate. *Fn.* 650.

Raj. Ins. p. 54. n. 2. Cimex sylvestris, corpore breviori, fuscus, scapulis magis exstantibus, macula e flavo rubente in centro crucis dorsalis (alius Willugbaei).

Jonst. Ins. t. 17. f. 9.

List. Mut. t. 31. f. 19. (*non figura* 16).

Loqu. p. 396. n. 36. Cimex ex luteo virescente infuscatus, corniculis maculatis similiter ad alvi margines nigris maculis eleganter interstinctus.

In Sweden: Bärfis.

Lives commonly on berries in autumn, which it pollutes with a foul odour; hated by children.

929. CIMEX *dumosus* [*Jalla dumosa* (Linnaeus, 1758). Sw. Jallabärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], roundish, grey, with margin blood-coloured throughout.

Inhabits forests.

DESCR. Stature and size as those of the following species. Margins of thorax, abdomen, and elytra are red. Red line from head to tip of scutellum. Lateral margins of scutellum also red. Body black. All tibiae encircled with a red ring.

930. CIMEX *juniperinus* [*Chlorochroa juniperina* (Linnaeus, 1758). Sw. Grön enbärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], roundish, green, with margin light yellow all round. *Fn.* 648.

Raj. Ins. p. 53. n. 1.

Occurs throughout the countryside; numerous on juniper.

DESCR. Body roundish. Antennae with five oblong, green segments, lowest one smallest. Head, thorax, scutellum, and elytra green, slightly scabrous. Scutellar tip light yellow. Upper wings more whitish, lower ones more fuscous. Venter entirely green beneath, but black on dorsum. Rostrum with four segments, lowest one adnate. Tongue setaceous, insinuated longitudinally into rostrum. Upper jaw very short, awl-shaped, suppressing the tongue. It is the largest of our species. Dorsum not red under wings but jet-black.

931. CIMEX *prasinus* [*Palomena prasina* (Linnaeus, 1761). Eng. Common green shieldbug, Sw. Grön bärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], roundish, entirely green; scutellum concolorous.

Inhabits forests.

DESCR. Resembles the preceding species, but a little larger. Thorax more angular. Lateral margins of elytra minimally light yellow. It is green beneath and red-brownish on the wings.

932. CIMEX *morio* [*Sehirus morio* (Linnaeus, 1761). Sw. Större taggbening; Fam. Cydnidae, Eng. Burrowing bugs, Sw. Tornbenskinnbaggar], ovate, jet-black; tarsi red-brown.

Occurs in Skåne. *Mr* C. *Solander.*

DESCR. Stature as that of the following species, but entirely intensely jet-black, with membranous wings minimally maculate.

933. CIMEX *caeruleus* [*Zicrona caerulea* (Linnaeus, 1758). Eng. Blue shieldbug, Sw. Blå rovbärfis; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, blue, without maculae.

Lives on the bastard toadflax.[663]

DESCR. Body dark blue. Upper wings weakly fuscous. No dorsal groove on thorax.

934. CIMEX *oleraceus* [*Eurydema oleracea* (Linnaeus, 1758). Eng. Brassica shieldbug, Rape bug, Crucifer shield bug or Cabbage bug, Sw. Rapssugare; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, bronze blue; thorax with a thin line; tip of scutellum and elytra with a white or red spot. *Fn.* 654.

Raj. Ins. p. 59. n. 6. Cimex sylvestris caerulescens paulo reliquis minor & magis depressus.

Raj. Ins. p. 54. n. 9. Cimex sylvestris caerulescens paulo reliquis minor & magis depressus, area scapulorum rubra.

[663] Mistake by Linnaeus. *Zicrona caerulea* is a predatory hemipteran. Likewise, the dark blue species living exclusively on the bastard toadflax *Thesium alpinum* is *Canthophorus impressus* (Horváth, 1881), Sw. Spindelörtskinnbagge.

Sloan. Hist. 2. p. 203. t. 237. f. 36. 37. Cimex minor caeruleus, lineis albis variatus, testudinis forma.

Lives on cruciferous plants,[664] all of which it easily destroyed in 1760.

DESCR. Body entirely bluish, shining with bronze including head, thorax, and elytra; longitudinal line medially on thoracic dorsum ending towards elytra as a thin, transverse line. Scutellar tip, including a solitary macula from the coloured area on each elytron, and also a small spot on each side of the scutellum, finally the lateral margins of the body are all either of a whitish or red colour. Legs and antennae black. Body bluish black beneath. Varying with white or red maculae. Nevertheless, it is the same species, which is obvious from the shape and also the mating. Thus male has white maculae. Female, however, glitters with red maculae.

935. CIMEX *biguttatus* [*Adomerus biguttatus* (Linnaeus, 1758). Eng. Cow-wheat shield-bug, Sw. Tvåfläckig taggbening; Fam. Cydnidae, Eng. Burrowing bugs, Sw. Tornbenskinnbaggar], ovate, black, with margin entirely white; elytra with white spot.

Occurs ubiquitously.

DESCR. Stature as that of the preceding species, however smaller; entirely black, but on each elytron a very small, white spot. Margin of thorax and elytra white.

936. CIMEX *bicolor* [*Tritomegas bicolor* (Linnaeus, 1758). Eng. Pied shieldbug, Sw. Svartvit taggbening; Fam. Cydnidae, Eng. Burrowing bugs, Sw. Tornbenskinnbaggar], ovate, black; elytra varying with black and white; wings white. *Fn.* 655.

Pet. Gaz. p. 22. t. 14. f. 7. Cimex niger nostras albo maculatus.

List. Loqu. p. 396. n. 37. Cimex niger maculis candidis notatus.

Raj. Ins. p. 54. n. 5. Cimex sylvestris parvus, corpore rotundiore, colore nigro splendente, maculis albis picto.

Lives with the preceding species on plants.

DESCR. Size and shape as those of the previous species. Dorsum entirely black. Elytra black. At outer margin, a white and crescent-shaped macula close to base, and another white one close to margin at tip. Anteriorly at thoracic margin, a bilateral, white macula.

937. CIMEX *ornatus* [*Eurydema ornata* (Linnaeus, 1758). Eng. Ornate shieldbug or Red cabbage shieldbug, Sw. Kålsugare; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], roundly ovate, variegated with black and red; head and wings black. *Fn.* 661.

Occurs mainly in southern Sweden.

DESCR. This bug falls among the broadest and largest species. Head and thorax red on the back, with two large, bifid, dehiscent[665] maculae connected to the head. Scutellum black, with an oblong macula that is bifurcate at thorax, capitate at tip. Elytra red, with two black spots, the one close to the tip, the other close to the middle part of the outer margin; black and oblong macula along inner

[664] Lat. Tetradynamiae.

[665] See the com. to no. 554.

margin, enlarged into the two spots. Wings and legs black. Abdominal margin dorsally variegated with red and black.

938. CIMEX *ruber* [*Deraeocoris ruber* (Linnaeus, 1758). Eng. Red-spotted plant bug; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], red; wings fuscous; elytra with a thin, transverse, whitish line. *Fn.* 653.

Lives on nettles and other plants.

DESCR. The size of a bed bug.[666] Entirely red, without any significant black macula. Elytra in the middle with a black spot or jet-black macula tending to purple. Wings fuscous. Abdomen blackish under elytra. Thin transverse, whitish line in the middle of the elytra near outer margin.

939. CIMEX *acuminatus* [*Aelia acuminata* (Linnaeus, 1758). Eng. Bishop's mitre shield-bug, Sw. Mindre spetsnäsa; Fam. Pentatomidae, Eng. Stink bugs, Sw. Bärfisar], ovate, anteriorly attenuate, whitish ash-grey; antennae flesh-coloured. *Fn.* 656.

List. Mut. t. 31. f. 20.

Raj. Ins. p. 56. n. 6. Musca cimiciformis sexta Willughby.

Occurs in Uppsala.

DESCR. It is ovate. Thorax, however, with rather unmarked points, but tip or rather frons nevertheless blunt. Head, thorax, and scutellum whitish ash-grey, scattered with the minutest, blackish spots. From thorax, through head, two weakly fuscous longitudinal fasciae, extended towards frons. Antennae flesh-coloured or red-brownish. Abdomen posteriorly truncated and almost bidentate.

940. CIMEX *leucocephalus* [*Strongylocoris leucocephalus* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], ovate, black; head and legs light yellow.

Occurs ubiquitously.

DESCR. Body small, ovate, entirely jet-black, shining. Head light yellow. Eyes black. Antennae black, at base light yellow. Legs light yellow.

941. CIMEX *minutus* [*Orius minutus* (Linnaeus, 1758). Fam. Anthocoridae, Eng. Minute pirate bugs or Flower bugs, Sw. Näbbskinnbaggar], ovate; elytra dark bluish grey, fuscous at tip. *Fn.* 659.[667]

Occurs in Skåne.

DESCR. The size of a flea. Antennae and legs whitish yellow. Body black. Elytra dark bluish grey, fuscous-tipped. Wings hyaline.

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[666] Lat. *Cimex domesticus*. Obviously referring to *Cimex lectularius*, no. 909.

[667] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560 (where no. 914 is wrong for no. 941).

942. CIMEX *personatus* [*Reduvius personatus* (Linnaeus, 1758). Eng. Masked hunter, Sw. Smutsstinkfly; Fam. Reduviidae, Eng. Assassin bugs, Sw. Rovskinnbaggar], rostrum arcuate; antennae apically filamentous; body oblong, weakly villous, fuscous. *Fn.* 647.

Frisch. Germ. 10. p. 22. t. 20. Cimex stercorarius major oblongus.

Raj. Ins. p. 56. n. 3. Musca cimiciformis 3:tia graviter olens.

List. Loqu. p. 397. n. 38. Cimex maximus pullus sive atratus, alis nudis ex toto membranaceis. *an?*[668]

Occurs in Stockholm, where a larva was captured in a certain house by the Commissioner Carl Clerck. It feeds on the bed bug[669] and other insects. Therefore, whenever it is found, it should be introduced into houses because it is noxious to bugs.

DESCR. The larva was horrible to see, since it looked like a spider or the European harvestman,[670] entirely hirsute, mutilated, ash-grey, feigning to be sand or rather dry soil. Head and antennae were, as other parts, also naked. It had a crooked, arcuate proboscis beneath the head. Antennae setaceous, naked, with lowest segment villous and three naked segments. Six legs, posterior ones the longest, clavate; all legs thickened towards claws. It runs about in a peculiar way and does not move the corresponding legs simultaneously when walking, but the other very opposite ones; hence its walking is entirely monstrous. Entirely covered with filth, which it easily gets rid of as soon as it is cleaned with a feather; hence it is apparent that its hair is not its own, but borrowed, and imposed on the body from everywhere so that it should not be observed by anybody. It feeds on prey; eats flies and other insects.

943. CIMEX *annulatus* [*Rhynocoris annulatus* (Linnaeus, 1758). Fam. Reduviidae, Eng. Assassin bugs, Sw. Rovskinnbaggar], rostrum arcuate; antennae apically filamentous at tip; body oblong, beneath with blood-coloured spots.

Occurs in the countryside.

DESCR. Body oblong. Head tiny, very narrow, black, extended. Antennae setiform, long. Abdomen with a pointed, uprising, scarlet margin with five black fasciae; anus red. Rostrum long, black, arcuate. Tibiae blood-coloured. First femora with three scarlet rings; middle femora entirely scarlet.

944. CIMEX *ater* [*Capsus ater* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], ovate, jet-black; antennae apically filamentous.

Cimex, jet-black; antennae ending in a seta. *Fn.* 677.

Inhabits meadows.

DESCR. Differs from the common shorebug[671] because *Cimex ater* is larger and without maculae and it lives in dry areas and does not jump, furthermore because the clavate antennae end in a very fine, palish seta. Rostrum whitish yellow at base.

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668 See the com. to no. 130.

669 See no. 909.

670 See no. 1992.

671 See no. 954.

945. CIMEX *hyoscyami* [*Corizus hyoscyami* (Linnaeus, 1758). Eng. Cinnamon bug, Sw. Rödlus; Fam. Rhopalidae, Eng. Scentless plant bugs, Sw. Smalkantskinnbaggar], ovate, oblong, variegated with red and black; wings fuscous, without maculae. *Fn.* 665.

Bauh. Ballon. p. 212. f. 4. Scarabaeus parvus.

Pet. Gaz. t. 62. f. 2. Cimex hyoscyamoides ruber, maculis nigris.

List. Mut. t. 31. f. 21.

Loqu. p. 397. n. 39. Cimex miniatus nigris maculis notatus Hyoscyamo fere gaudens.

Raj. Ins. p. 55. Cimex sylvestris minor, corpore oblongo angusto, colore desuper rubro nigris maculis picto.

Lives on leaves of henbane 184.[672]

DESCR. Head black, medially red. Thorax red, anteriorly black, posteriorly with two black, angular maculae. Elytra red; a macula medially black on elytron or two maculae medially on dorsum. Scutellum black, red-tipped. Abdominal area beneath scutellum black. Abdomen red, above anus black, beneath with transverse, black lines. Wings fuscous or black, striate, without any white maculae. Antennae and legs black. Rostrum with four segments.

946. CIMEX *equestris* [*Lygaeus equestris* (Linnaeus, 1758). Eng. Black-and-red bug, Sw. Riddarskinnbagge; Fam. Lygaeidae, Eng. Seed bugs, Sw. Fröskinnbaggar], oblong, variegated with red and black; wings fuscous, maculate with white. *Fn.* 664.

It. Oel. 155. Cimex oblongus rubro nigroque variegatus. &c.

Lives in cemeteries; abundant.[673]

DESCR. It resembles the cinnamon bug,[674] but is twice the size. Body red above. Head red in the middle, black at sides. Thorax anteriorly red and posteriorly black. Scutellum medially black, laterally red; the blackness is enlarged with a black, cordate macula near scutellar tip. Black irregular, transverse fascia in the middle of the sheath wings. Wings fuscous, with white maculae. Thorax black beneath. Abdomen laterally red, with five bilateral black spots in a double row and marked beneath with three thin, bilateral, black lines. Anus, antennae, and legs black. Antennae with four segments.

947. CIMEX *pabulinus* [*Lygocoris pabulinus* (Linnaeus, 1761). Eng. Common green capsid, Sw. Trädgårdsstinkfly; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], somewhat elongate, entirely whitish yellow tending to green.

Inhabits pastures ubiquitously.

DESCR. Head, thorax, elytra, abdomen, and legs greenish light yellow. Outermost antennal segments rather slender.

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672 Ref. to *Flora Svecica* (1745), p. 65.

673 *Lygaeus equestris* lives exclusively on *Vincetoxicum hirundinaria* (Sw. Tulkört), which is hardly a cemetery plant. Linnaeus has probably been misled here by the similar species *Pyrrhocoris apterus*, which lives in large numbers at the foot of mainly lindens, which are typical cemetery trees. Linnaeus is, however, aware of the other similar species *Corizus hyoscyami*, which is mentioned in the next line.

674 See no. 945.

948. CIMEX *kalmii* [*Orthops kalmii* (Linnaeus, 1758). Sw. Mindre ängsstinkfly; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, green; scutellum with a cordate, light yellow macula; elytra with two black maculae. *Fn.* 663.

Inhabits forests. *P. Kalm.*

DESCR. Head black, with a whitish yellow nape.[675] Thorax light yellow, with anterior and posterior margins black. Scutellum cordate, light yellow, surrounded by the blackness of elytral base. Elytra green tending to whitish yellow, with black tips and bilateral black macula in the middle of a cross. Wings almost white. Abdomen green with black sides and black longitudinal line.

949. CIMEX *pratensis* [*Lygus pratensis* (Linnaeus, 1758). Sw. Vanligt ängsstinkfly; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, grey; scutellum with a cordate, light yellow macula; elytra with a fuscous apical spot. *Fn.* 666.

Inhabits meadows.

DESCR. Watery brick-red. Cordate, light yellow macula covering scutellum. Elytra grey, with a very small fuscous spot at tip. Wings white. It is clearly distinguished by these marks.

950. CIMEX *campestris* [*Orthops campestris* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, green; scutellum with a cordate, green macula; elytra with a rusty brown macula. *Fn.* 667.[676]

Occurs around us in gardens and meadows; very common.

DESCR. Smaller than the preceding species and more oblong. Large, dusky rusty brown macula towards posterior parts of elytra. Legs green. Antennae fuscous, with 4 segments. No spot at elytral tip. Head and thorax fuscous. Abdomen green; on the back, 7 or 8 transverse, fuscous lines, and just as many fuscous maculae beneath on each side close to margin. This species and the preceding one are easily distinguished from the others by the cordate macula of the scutellum.

951. CIMEX *umbratilis* [*Nomen dubium*], oblong, black; elytra maculate with white. *Fn.* 673.

Act. Ups. 1736. p. 36. n. 13. Cimes oblongiusculus fuscus, alis nigricantibus puncto albo.

Inhabits forests.

DESCR. Entirely black. Legs pale. Elytra scattered above with rather large and small spots, of which the posterior ones are the largest, so that anyone incidentally passing by can see only two white spots.

952. CIMEX *crassicornis* [*Stictopleurus crassicornis* (Linnaeus, 1758). Fam. Rhopalidae, Eng. Scentless plant bugs, Sw. Smalkantskinnbaggar], oblong, grey, punctate with red; antennae clavate.

Occurs ubiquitously.

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[675] Here Linnaeus uses a term *nucha* for a necklike constriction behind the head, although the true meaning of the term is the posterior part of the thorax in front of the petiole (in the Hymenoptera).

[676] See *Fn. Su.* (1761), *Addenda*, p. 559.

DESCR. Body oblong, pale grey, irrorated minutely above on all sides. Hardly visible red dots, also on the wings. Antennae clavate at tips with a singular mark. Around ten bilateral, black spots dorsally, light yellow margins.

953. CIMEX *nemorum* [*Anthocoris nemorum* (Linnaeus, 1761). Eng. Common flowerbug, Sw. Allmänt näbbstinkfly; Fam. Anthocoridae, Eng. Minute pirate bugs or Flower bugs, Sw. Näbbskinnbaggar], black; legs brick-red; elytra and wings varying with fuscous and white.

Inhabits small woods ubiquitously.

DESCR. Regarding the shape of the body, in any aspect as that of C. *abietis*,[677] but the size of a louse, entirely black. Head extended beyond the narrowish thorax. Elytra of a quasi-scorched colour, white at base, posteriorly fuscous with a pale disc on underlying fuscousness. Alar macula large, fuscous.

954. CIMEX *saltatorius* [*Saldula saltatoria* (Linnaeus, 1758). Eng. Common shorebug, Sw. Allmänt strandstinkfly; Fam. Saldidae, Eng. Shore bugs, Sw. Strandskinnbaggar], oblong, black; elytra striate; wings posteriorly maculate with light yellow. *It. Oel.* 121. *Fn.* 676.

Raj. Ins. p. 57. n. 2. Cimex brevis & fere rotundus nigricans.

Lives on riverbanks and shores of the sea, lakes, and rivers.

DESCR. It differs from most of the other species, since it jumps almost like a leafhopper,[678] although not especially high. It is entirely black, with muted light yellow maculae on the wings above cauda and black wrinkles on the actual wings. Antennae filiform, with 4 segments.

955. CIMEX *arenarius* [*Trapezonotus arenarius* (Linnaeus, 1758). Fam. Rhyparochromidae, Eng. Dirt-coloured seed bugs, Sw. Markskinnbaggar], oblong, black; elytra ash-grey, anteriorly black; wings posteriorly white. *It. Oel.* 121. *Fn.* 678.

Lives in sand.

DESCR. Body entirely black. Elytral cross anteriorly black and posteriorly white; sides ash-grey, with the minutest black spots.

956. CIMEX *pini* [*Rhyparochromus pini* (Linnaeus, 1758). Fam. Rhyparochromidae, Eng. Dirt-coloured seed bugs, Sw. Markskinnbaggar], oblong, black; elytra fuscous, with rhomboid, black macula. *Fn.* 674.

Act. Ups. 1736. p. 36. n. 11. Cimex oblongiusculus ater, alis fuscis macula rhomboidali nigra.

Lives on pine; abundant.

DESCR. Entirely jet-black including legs, antennae, head, thorax, scutellum, abdomen, and wings. Elytra dusky grey, in the middle of which, near the centre of the cross, a jet-black macula in the form of a rhombus, one on each elytron.

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[677] See no. 969.

[678] Linnaeus only refers to *Cicada*, see nos. 879–902.

957. CIMEX *rolandri* [*Aphanus rolandri* (Linnaeus, 1758). Fam. Rhyparochromidae, Eng. Dirt-coloured seed bugs, Sw. Markskinnbaggar], oblong, black; elytra membranous, with a light yellow macula.

Occurs in Uppsala. *Mr Rolander.*

DESCR. Middle-sized. Body entirely jet-black. Alar part of elytra, behind the cross, marked with a light yellow macula tending to rusty brown at inner side, just as a single rusty brown macula can be seen behind the cross on the folded wings.

958. CIMEX *laevigatus* [*Stenodema laevigata* (Linnaeus, 1758). Eng. Grass bug; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, whitish, laterally white. *Fn.* 679.

Act. Ups. 1736. p. 35. n. 9. Cimex oblongus albus.

Inhabits pastures.

DESCR. It is markedly oblong. Entirely whitish or whitish green, just as antennae, elytra, thorax, head, wings, and legs. Elytra are striate and more whitish at sides. Antennae setaceous, with three segments. This bug varies in so far that either a blackish line runs behind eyes on each side through the thorax or that this line is missing.

959. CIMEX *dolabratus* [*Leptopterna dolabrata* (Linnaeus, 1758). Eng. Meadow plant bug, Sw. Axsugare; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, pale fuscous, with black antennae and a white line on thorax. *Fn.* 681.

Act. Ups. 1736. p. 35. n. 8. Cimex oblongus, alis cinereis margine albis, scapulis nigris linea alba.

Occurs in the countryside.

DESCR. Antennae setaceous, black. Head black; a thin, black line in front of eyes, and another white one in the middle of the frons. Thorax black on the back, laterally whitish; a dorsal longitudinal white line. Scutellum black, with a longitudinal, white line. Elytra with an almost burnt or weakly fuscous colour, and with outer whitish margin; elytra are finally longer in this species than in the others.

960. CIMEX *striatus* [*Miris striatus* (Linnaeus, 1758). Eng. Fine streaked bugkin; Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, black; elytra deep yellow, striated with fuscous; tip and legs red. *Fn.* 680.

Lives on the leaves of elm.

DESCR. Appearance as that of the grass bug.[679] Terminal antennal segment white at base. Elytra with black and light yellow striae, red-tipped.

961. CIMEX *erraticus* [*Notostira erratica* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, blackish; elytra white; antennae dark bluish grey, with lowest segment black. *Fn.* 682.

Lives on plants.

[679] See no. 958.

DESCR. Abdomen and body entirely black. Thorax whitish on each side and furthermore with three longitudinal, white lines. Antennae dark bluish grey; 4 setaceous segments, lowest one black. Rostrum whitish. Legs dark bluish grey. Lower wings shining with white and blue; upper ones fuscous, with white margin formed like a sheath wing.

962. CIMEX *ferus* [*Nabis ferus* (Linnaeus, 1758). Eng. Field damsel bug; Fam. Nabidae, Eng. Damsel bugs, Sw. Fältrovskinnbaggar], oblong, grey, without maculae; antennae setaceous. *Fn.* 668.

Inhabits forests.

DESCR. Not excavated on the back with any obvious punctations. Antennae certainly not clavate, but rather setaceous. Legs pale.

963. CIMEX *populi* [*Phytocoris populi* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, cloudy white and fuscous; antennae setaceous. *Fn.* 669.

Inhabits small woods, especially on trunks of aspen.

DESCR. More oblong than the others. Head, thorax, elytra, alae, femora, and antennae are cloudy or irrogated with a mixture of fuscous and whitish. Antennae the length of the body, setaceous. Legs long, cloudy white and black. Wings depressed, but certainly not closed.

964. CIMEX *ulmi* [*Phytocoris ulmi* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], oblong, rust-coloured above; elytra with blood-coloured striae; wings varying posteriorly with white and fuscous. *Fn.* 670.

Lives on field elm.

DESCR. Middle-sized. Body oblong. Head and thorax red-brown above. Wings pale red-brownish, with longitudinal, blood-coloured striae or veins. Behind the cross, the wings are fuscous with white maculae. Antennae setaceous, almost the length of the body. Scutellum not cordate.

965. CIMEX *sylvestris* [*Ligyrocoris sylvestris* Linnaeus, 1758. Fam. Rhyparochromidae, Eng. Dirt-coloured seed bugs, Sw. Markskinnbaggar], oblong, black; wings and elytra varying with white and fuscous; legs red-brown. *Fn.* 671.

Inhabits forests.

DESCR. Head, thorax, and abdomen black. Legs reddish or flesh-coloured. Antennae black distally, weakly attenuated and red-brownish proximally. Elytra have something like a burnt colour or white towards base, fuscous towards tip; in the middle a dark fuscous macula. Wings variegated with fuscous and white.

966. CIMEX *gothicus* [*Capsodes gothicus* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar], antennae apically filamentous; body oblong, black; scutellum and elytral tips scarlet.

Inhabits small woods.

DESCR. Body oblong, middle-sized. Antennae black, setarious, the length of the body. Thorax laterally red. Scutellum scarlet. Elytra black; outer longitudinal margin whitish yellow and elytral tip with a small, saturated blood-coloured macula on the wings.

967. CIMEX *mutabilis* [*Phylus coryli* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar],[680] slightly oblong, black; lower wings blue; antennae and legs light yellow.

Occurs in Uppsala.

DESCR. Body jet-black, the size of a bed bug.[681] The folded membranous wings appear blue, but the hyaline, disjunct parts greyish blue. Antennae slightly longer than abdomen, pale whitish yellow, narrow. Legs long, whitish.

968. CIMEX *calcaratus* [*Alydus calcaratus* (Linnaeus, 1758). Sw. Krumhornskinnbagge; Fam. Alydidae, Eng. Broad-headed bugs, Sw. Krumhornskinnbaggar], oblong, black; hind femora dentate beneath.

Occurs throughout the countryside.

DESCR. Body jet-black, somewhat larger. Antennae filiform, slightly shorter than body. Elytra scabrous, wings striate. Abdomen blood-coloured above, except for the first and last segments, which are black; margins elevated, black, with blood-coloured notches. It is bronze black beneath. Femora oblong, beneath ciliate, with 4 or 5 spines.

969. CIMEX *abietis* [*Eremocoris abietis* (Linnaeus, 1758). Fam. Rhyparochromidae, Eng. Dirt-coloured seed bugs, Sw. Markskinnbaggar], rather oblong, with red-yellow maculae; legs red-brown; anterior femora rather thick, dentate. *Fn.* 672.

Act. Ups. 1736. p. 36. n. 10. Cimex oblongiusculus, alis flavo fulvoque variis.

Lives on firs.

DESCR. Antennae filiform, black, with 4 segments, lowest one shortest. Head black, acuminate. Thorax black, posteriorly red-brown; the blackness separated by a triple tooth. Scutellum black. Elytra pale, with red-yellow sides. Near the cross, an oblong, blackish macula. All legs red-brown. Anterior femora very thick, dentate below. Abdomen rusty brown.

970. CIMEX *lacustris* [*Gerris lacustris* (Linnaeus, 1758). Eng. Common pond skater or Common water strider, Sw. Revärskräddare; Fam. Gerridae, Eng. Water striders, Sw. Skräddare], linear; black above and depressed; forelegs very short. *It. Gotl.* 182. *Fn.* 684.

Bradl. Natur. t. 26. f. 2. D.

Bauh. Ballon. p. 213. f. 1. Insectum Tipula dictum.

List. Mut. t. 5. f. 4.

Raj. Ins. p. 57. n. 1. Cimex aquaticus figurae longioris.

In Småland: Braxen-Mygg.

They live on still water running over the water surface, where the nymphs[682] lacking wings often are seen copulating together.

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[680] See no. 974 *Cimex coryli*.

[681] See no. 909.

[682] Lat. *Propolides*, meaning pupae, which, however, insects of the order Hemiptera do not have. For *Propolis*, see *Linnés Föreläsningar öfver Djurriket*, p. 227, n. 2.

DESCR. Venter appears entirely white beneath, if seen from the front, but black from behind. Elytra and upper wings jet-black; lower ones white, concealed.

971. CIMEX *stagnorum* [*Hydrometra stagnorum* (Linnaeus, 1758). Eng. Common water-measurer, Sw. Stor vattenmätare; Fam. Hydrometridae, Eng. Marsh treaders or Water measurers, Sw. Vattenmätare], linear, blackish, somewhat terete; thorax with two subglobose spots in the middle.

Cimex, linear, blackish, compressed; forelegs very short.[683] *Fn.* 685.

Pet. Gaz. 15. t. 9. f. 12. Tipula londinensis angustissima.

Lives on water bodies around us; rather rare.

DESCR. Resembles the preceding species very closely, but many times smaller and more slender.

972. CIMEX *vagabundus* [*Empicoris vagabundus* (Linnaeus, 1758). Fam. Reduviidae, Eng. Assassin bugs, Sw. Rovskinnbaggar], linear, variegated; forelegs very short, thick, curved.

Cimex, linear; four legs; antennae very long varying with white and fuscous. *Fn.* 683.

Frisch. Germ. 7. p. 11. t. 6. Cimex arborum oblongus alarum signatura alba.

Lives in trees.

DESCR. The size of a common mosquito.[684] Wings, legs, and antennae variegated densely with white and fuscous. Antennae longer than body, setaceous, curved, just as the legs, which they resemble strongly. First legs many times shorter than the others; forelegs thick as are the pincer-like claws, which it does not use for walking except on glass and glabrous objects.

973. CIMEX *tipularius* [*Neides tipularius* (Linnaeus, 1758). Fam. Berytidae, Eng. Stilt bugs, Sw. Styltskinnbaggar], linear, whitish; all legs very long; femora clavate; antennae biclavate. *Fn.* 686.

Act. Ups. 1736. p. 36. n. 15. Cimex linearis teretiusculus albus, genubus crassis.

Frisch. Germ. 7. p. 28. t. 20. Cimex arboreus culiciformis.

Occurs especially at Stenbrohult in Småland, seldom elsewhere.

DESCR. Body ash-grey, linear, depressed. Elytra whitish, markedly striate, with inconspicuous, crenate veins. Elytral margin, where it ends in a membrane, marked with 5 or 6 fuscous spots. All legs long, hindlegs longest. Femora subclavate, club punctate with fuscous. First antennal segment is apically clavate, but outermost part of tip more clavate so that the antennae resemble the legs.

974. CIMEX *coryli* [*Phylus coryli* (Linnaeus, 1758). Fam. Miridae, Eng. Plant bugs, Sw. Ängsskinnbaggar],[685] oblong, black, with setaceous, light yellow legs and antennae. *Fn.* 675.

Lives especially on common hazel, on the leaves of which it runs around.

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[683] Incorrect statement by Linnaeus, mistake probably due to influence from the previous species.

[684] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[685] See no. 967 *Cimex mutabilis*.

DESCR. Body, head, thorax, scutellum, abdomen, elytra, and wings black, without maculae. But in some, the wings are somewhat shining with a blue colour. Whereas appendages pale light yellow including rostrum, antennae, and legs. Antennae are setaceous.

Aphis[686]

975. APHIS *ribis* [*Cryptomyzus ribis* (Linnaeus, 1758). Eng. Red currant aphid or Red currant blister aphid, Sw. Vinbärsbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the red currant. *Fn.* 704.[687]

Leuvenh. Arcan. Epist. 90. p. 545. t. 548. f. 1. 2. 3. Aelbescen-luysen.

Jung. Verm. p. 163. 164. Ventriones ribiani sive Mellomyjae.

Blank. Belg. p. 164. t. 14. f. D. E. Pediculus ribis viridis.

Frisch. Germ. 11. p. 9. t. 14. Pediculus arboreus fusco-viridis in Ribe.

Reaum. Gall. 3. t. 22. f. 4.

Lives under the leaves of red currant, which acquire reddish puckering distortions.

DESCR. The size of a louse. Body incumbent. Knees of the green legs broader dorsally, fuscous. Antennae longer than body, slender, straight, black, near the head backwardly bent at the knee. Body dusky green. Thorax blackish on the back. Three transverse lines above the rump, almost contiguous. Abdominal sides with black spots. Four wings erect, closed, white, with black veins, of which two are very small. Legs prominent. Appendices setaceous, shorter than wings.

976. APHIS *ulmi* [*Tetraneura ulmi* (Linnaeus, 1758). Eng. Elm sack gall aphid, Sw. Almgallus or Almpunglus; Fam. Pemphigidae, Eng. Woolly aphids, Sw. Pungbladlöss], of the field elm. *Fn.* 705. *It. Scan.* 203.

Reaum. Gall. 3. t. 25. f. 4. 5. 6. 7.

Lives on the leaves of field elm; causes vesicles and convolutions of the leaves.

DESCR. The smaller individuals weakly greenish, the larger ones with a cylindrical, rusty brown body, scattered with white fluff. Abdomen with 6 or 7 segments. Indistinct appendicles; vesicles arising from anus.

977. APHIS *pastinacae* [*Cavariella pastinacae* (Linnaeus, 1758). Eng. Willow-umbellifer aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the wild parsnip. *Fn.* 706.

Lives on the wild parsnip.

DESCR. Body green. Head, antennae, thoracic hump, and outermost parts of legs black. Wings white, with mobile appendicles ventro-laterally.

[686] Superfamily Aphidoidea.

[687] See Ch. *A small fauna of Sweden*.

978. APHIS *sambuci* [*Aphis sambuci* Linnaeus, 1758. Eng. Elder aphid, Sw. Fläderbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the black elder. *Fn.* 707.

Frisch. Germ. 11. p. 14. t. 18.

Reaum. Gall. 3. t. 21. f. 6. 15.

List. Loqu. p. 397. n. 40. Cimex exiguus caesius, cui alae ex toto membranaceae praegrandes.

Lives on the petioles of the black elder.

979. APHIS *rumicis* [*Aphis rumicis* Linnaeus, 1758. Eng. Dock aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the dock. *Fn.* 708.

Lives on the sharp-pointed dock.

DESCR. Body bronze black. Antennae black or white, black-tipped. Legs whitish, with black knees. Cauda acuminate and horned. Alar base greenish. Appendicles black, filiform, the length of the cauda.

980. APHIS *lychnidis* [*Brachycaudus lychnidis* (Linnaeus, 1758). Eng. Campion aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the red campion.

Aphis cucubali. Fn. 719.

Lives on the red campion; abundant.

DESCR. Entirely jet-black, smooth, shining. Abdomen posteriorly blunt and surrounded by a plicate margin. Antennae and legs palish.

981. APHIS *padi* [*Rhopalosiphum padi* (Linnaeus, 1758). Eng. Bird cherry-oat aphid, Sw. Havrebladlus or Häggbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the European bird-cherry.

Lives on the European bird cherry.

DESCR. Wings large. Antennae long.

982. APHIS *rosae* [*Macrosiphum rosae* (Linnaeus, 1758). Eng. Rose aphid, Sw. Rosenbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the rose. *Fn.* 710.

Lives on the branches of dog rose.

DESCR. Horns almost the length of the body, black. Body green or flesh-coloured. Antennae black, the length of the abdomen. Knees of legs green-black.

983. APHIS *nymphaeae* [*Rhopalosiphum nymphaeae* (Linnaeus, 1761). Eng. Waterlily aphid, Sw. Näckrosbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the aquatic plants. *Fn.* 711.

Lives on waterlilies and floating leaf pondweed in the month of August. *De Geer.*

984. APHIS *tiliae* [*Eucallipterus tiliae* (Linnaeus, 1758). Eng. Common lime aphid or Linden aphid, Sw. Lindbladlus; Fam. Drepanosiphidae, Sw. Borstbladlöss], of the common lime. *Fn.* 712.

Frisch. Germ. 11. p. 13. t. 17. Pediculus arboreus in Tilia.

Lives on the common lime.

DESCR. Body oblong. Four longitudinal rows of jet-black spots on the abdominal back. Thorax with a bilateral black line. Wings upright, closed; the rather large ones black at lower margin, maculate at upper margin or outer margin with a black line having seven black maculae above. Antennae and legs variegated alternately with white and black.

985. APHIS *brassicae* [*Brevicoryne brassicae* (Linnaeus, 1758). Eng. Mealy cabbage aphid or Cabbage aphid, Sw. Kålbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the cabbage.

Frisch. Germ. 11. p. 10. t. 3. f. 15.

Lives on cabbage on the underside of the leaves, where the leaves become pale.

DESCR. Body greenish starch whitish.

986. APHIS *craccae* [*Aphis craccae* Linnaeus, 1758. Eng. Tufted vetch aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the tufted vetch.

DESCR. Body obovate, marginate, blackish lead-grey, as if scattered with greyish white powder.

987. APHIS *cirsii* [*Uroleucon cirsii* (Linnaeus, 1758). Eng. Large thistle aphid, Sw. Tistelbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the creeping thistle.

Aphis serratulae. Fn. 713.

It. Oel. Jun. 12.

Lives on the creeping thistle.

DESCR. Body fuscous, with six rows of elevated spots on dorsum. Alar rudiments, appendicles, legs, and antennae black. Femora white at base.

988. APHIS *cardui* [*Brachycaudus cardui* (Linnaeus, 1758). Eng. Plum-thistle aphid, Sw. Svart plommonbladlus; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the plumeless thistle. *Fn.* 714.

Lives on the stalks of plumeless thistle.

DESCR. Entirely bronze black, shining, but legs and antennae black, at base whitish. Abdominal appendicles jet-black.

989. APHIS *tanaceti* [*Uroleucon tanaceti* (Linnaeus, 1758). Eng. Crimson tansy aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the common tansy.

Lives on the leaves of common tansy; distinct from the green aphid on the stalks of tansy, which is common on most plants.

DESCR. Body red-brown or saturated rusty brown, with weakly fuscous cornicles. Alar rudiments, antennae, and legs palish.

990. APHIS *absinthii* [*Macrosiphoniella absinthii* (Linnaeus, 1758). Eng. Absinthe aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the wormwood or absinthe. *Fn.* 715.

Lives on various species of wormwood.

DESCR. Appendages, legs, appendicles, and antennae black. Body black with ash-grey back; large, fuscous macula in the middle of the abdominal tergum. Abdominal sides also slightly fuscous. Cauda sharply pointed. Appendicles erect.

991. APHIS *jaceae* [*Uroleucon jaceae* (Linnaeus, 1758). Eng. Large knapweed aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the brownray knapweed or brown knapweed. *Fn.* 716.

Lives on the stalks of brown knapweed.

DESCR. It is entirely black and without any whiteness. Only wings white. Posterior abdominal part more fuscous verging on reddish. Alar margin thicker, furrowed by a thin, white line.

992. APHIS *betulae* [*Glyphina betulae* (Linnaeus, 1758). Eng. Green birch thelaxid; Fam. Hormaphididae, Sw. Gömbenbladlöss], of birch. *Fn.* 717.

Lives on birch; rather rare.

DESCR. Body pale green. 4 marginal, blackish spots on both sides of each segment. It is tiny and lacks wings and appendicles.

993. APHIS *roboris* [*Lachnus roboris* (Linnaeus, 1758). Eng. Variegated oak aphid; Fam. Lachnidae, Eng. Lachnids, Sw. Barkbladlöss], of the English oak; jet-black, reduced cornicles in the middle of abdomen. Lives on the branches of English oak.

DESCR. Body black, somewhat larger, subglobose, ovate. Rudiments of the cornicles jet-black. Femora purplish. Antennae dark bluish grey, half the length of the body, apically black.

994. APHIS *pini* [*Cinara pini* (Linnaeus, 1758). Eng. Scots pine aphid, Sw. Vanlig tallbarklus; Fam. Lachnidae, Eng. Lachnids, Sw. Barkbladlöss], of pine. *Fn.* 718.

Lives on Scots pine.

OBS. Appendicles very short.

995. APHIS *salicis* [*Pterocomma salicis* (Linnaeus, 1758). Eng. Black willow bark aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the willow.

Lives on the branches of goat willow, basket willow, and bay-leaf willow.

DESCR. Body somewhat larger, black. 4 dorsal white spots, larger than the other white spots. Scattered with linear, transverse, white spots on its sides. Verging on white beneath. Cornicles brightly red-yellow. Antennae half the length of the body.

996. APHIS *populi* [*Pachypappa populi* (Linnaeus, 1758). Fam. Pemphigidae, Eng. Woolly aphids, Sw. Pungbladlöss], of the leaves of aspen.

Lives on aspen.

DESCR. Body ovate, dark bluish grey, very large, with 5 slightly prominent, white spots at margin on each side. No cornicles. Alar rudiments pointed.

997. APHIS *tremulae* [*Pachypappa tremulae* (Linnaeus, 1761). Eng. Aspen-spruce aphid; Fam. Pemphigidae, Eng. Woolly aphids, Sw. Pungbladlöss], of the branches of aspen.

Lives on the trunk and branches of aspen.

DESCR. Body oblong, very large, dusky dark bluish grey, marginate. Antennae whitish yellow. Changes colours with age.

998. APHIS *bursaria* [*Pemphigus bursarius* (Linnaeus, 1758). Eng. Lettuce root aphid, Sw. Poppelpunglus; Fam. Pemphigidae, Eng. Woolly aphids, Sw. Pungbladlöss], of the black poplar. *Fn.* 1355. *It. Scan.* 311.

Act. Holmens. 1742. p. 232.

Jung. Verm. 161. 162. Populi nigrae vermes sive Muscae.

Ambros. Hort. 97. t. 96. Folliculi in pediculis foliorum Populi nigrae.

Hoffm. Alt. Hort. 5. Culices in Populo nigra.

Rupp. Jen. 3. p. 333. Culices in Populo nigra.

Lives on the petioles in the naturally occurring ovate utricles, with permeable openings or in the coloured sacs, which are dehiscent[688] above or closed beneath the disc of the leaves of the black poplar at Runnaby, Gothenburg, Stockholm, and nowadays also in Uppsala.

999. APHIS *aceris* [*Periphyllus aceris* (Linnaeus, 1761). Eng. Maple periphyllus aphid; Fam. Drepanosiphidae, Sw. Borstbladlöss], of the Norway maple. *Fn.* 709.

Reaum. Gall. 3. t. 22. f. 6–10.

Lives on the leaves of Norway maple.

DESCR. Body rather broad. Head and thorax medially black. Abdomen scattered above with warts; posteriorly with a cordate, fuscous macula, anteriorly bifid, with hardly visible, markedly blunt cornicles. Antennae setaceous.

1000. APHIS *atriplicis* [*Hayhurstia atriplicis* (Linnaeus, 1761). Eng. Chenopodium aphid; Fam. Aphididae, Eng. Aphids, Sw. Långrörsbladlöss], of the grassleaf orache.

Lives on the leaves of grassleaf orache, which are rolled backwards longitudinally into a cylinder, inside which it is protected and can wander around.

DESCR. Body green, with minute cornicles. Eyes black.

[688] See the com. to no. 554.

Chermes[689]

1001. CHERMES *graminis* [*Nomen dubium*], of the wavy hair-grass. *Fn.* 693.[690]
Lives on the wavy hair-grass.
DESCR. The size of a leafhopper,[691] and with the same appearance so that at first sight it could be taken for a species of this family. Antennae are whitish, with black tips. Four wings not folded into a cross, but curved downwards, as in a moth.[692] Abdomen blackish, with segments apically black. Legs white, not for jumping. Head markedly blunt, grey, just as thorax, decorated with thin, white lines. Wings watery; veins fuscous, with various anastomoses.

1002. CHERMES *ulmi* [*Eriosoma ulmi* (Linnaeus, 1758). Eng. Elm-currant aphid, Sw. Almbladlus; Fam. Pemphigidae, Eng. Woolly aphids, Sw. Pungbladlöss],[693] of the field elm. *Fn.* 694.
Lives inside the revolute leaves of field elm along with the aphids of this tree.
DESCR. Larva roundish, with ash-grey, elevated, black spots; covered with a lot of white wool.

1003. CHERMES *cerastii* [*Trioza cerastii* (Linnaeus, 1758). Sw. Arvbladloppa; Fam. Triozidae], of the sticky chickweed. *Fn.* 695.
Lives on the sticky chickweed's leaves monstrously turned into ventricosely incurved heads.

1004. CHERMES *pyri* [*Cacopsylla pyri* (Linnaeus, 1758). Eng. Pear psylla or Pear psyllid, Sw. Mindre päronbladloppa; Fam. Psyllidae], of the common pear.[694]
Lives on the common pear.[695]
DESCR. Body grey. Abdomen short, with transverse, whitish striae. Wings with a dark spot at dorsal margin.

1005. CHERMES *calthae* [*Aphalara calthae* (Linnaeus, 1761). Fam. Aphalaridae], of the yellow marsh-marigold.
Lives on the flowers of yellow marsh-marigold.
DESCR. Antennae clavate, the length of the thorax, black-tipped. Thorax inclining to deep yellow, with two arcuate lines, bent from the base towards sides, and a third posterior transverse arch dividing the first two. Wings white, upper ones with whitish yellow veins and a common, fuscous spot.

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689 Superfamily Psylloidea.

690 See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

691 Linnaeus only refers to *Cicada*, see nos. 879–902.

692 Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

693 Linnaeus has erroneously placed this woolly aphid in this section on jumping plant lice, Superfam. Psylloidea.

694 Lat. *Pyrus communis*.

695 Lat. *Pyrus vulgaris*.

1006. CHERMES *urticae* [*Trioza urticae* (Linnaeus, 1758). Sw. Nässelbladloppa; Fam. Triozidae], of the stinging nettle. *Fn.* 702.

Lives on the stinging nettle.

DESCR. Fuscous, with sides and legs whitish. Cauda curved backwards. Antennae black, towards base white. Eyes whitish yellow.

Larva is monstrous; same appearance as that of a louse, depressed; venter ciliate.

1007. CHERMES *betulae* [*Psylla betulae* (Linnaeus, 1758). Fam. Psyllidae], of the birch. *Fn.* 697.

Lives on birch and is full of its green tinctorial sap.

DESCR. Abdomen flesh-coloured, with a solitary, transverse, broad, black line on each segment, i.e. 5 on the back and 3 on the venter. Pectus pale, as also head. Antennae setaceous. Cauda pointed. 4 wings, pellucid, shining. Green tinctorial sap inside the body.

1008. CHERMES *alni* [*Psylla alni* (Linnaeus, 1758). Eng. Alder sucker, Sw. Albladloppa. Fam. Psyllidae], of the grey alder. *Fn.* 698.

Act. Ups. 1736. p. 36. n. 27. Cimex cauda plumosa corpus tegente.

Frisch. Germ. 8. p. 28. t. 13. Vermis suctorius alni.

Lives on alder, the branches of which the nymphs really cover in spring and appear to dress with wool.

DESCR. Insect white, acuminate. Eyes lateral, rather prominent. Six legs, of which the two posterior pairs are closer than the others. Cauda acuminate, bifurcate, above which there is something resembling a rather prominent stylus. Antennae variegated. Mouth black-tipped, placed on the very venter between the first and second pairs of legs. 4 wings, white, with fuscous veins. Jumps.

Larva the size of a louse. Body rather flat, maculate with green and having a blunt venter, posteriorly elevated, black towards cauda. Antennae white, black above, slender, erect. Elytral rudiments. Cauda with many fine hairs that are curved, diaphanous, bent backwards, white and covering the body. Inside the wool, a vesicle or droplet emerging from the cauda is often observed. Eyes red. Many insects sit closely together on the branches of alder with their heads looking downwards so that the cauda of the one partially protects the nearest one.

1009. CHERMES *quercus* [*Nomen dubium*], of the English oak.

Lives on the leaves of the English oak.

DESCR. Body light yellow-whitish. Elytra with four fuscous blotches at outer margin and a single one at inner margin.

1010. CHERMES *fagi* [*Phyllaphis fagi* (Linnaeus, 1767).[696] Eng. Woolly beech aphid, Sw. Bokbladlus; Fam. Drepanosiphidae, Sw. Borstbladlöss], of the common beech. *It. Scan.* 65.

Reaum. Ins. 3. t. 26. f. 1–6.

Lives on the leaves of common beech.

[696] Although an aphid it was erroneously placed among *Chermes*, psyllids (jumping plant lice), by Linnaaeus 1761, however corrected by him in 1767 to *Aphis fagi*.

1011. CHERMES *abietis* [*Adelges abietis* (Linnaeus, 1758).[697] Eng. Pineapple gall woolly aphid, Pineapple gall adelgid or Eastern spruce gall aphid (or adelgid), Sw. Större granbarrlus; Fam. Adelgidae, Eng. Adelgids, Sw. Barrlöss], of the European spruce. *It. Gotl.* 180. *Fn.* 700.[698]

Frisch. Germ. 12. p. 10. t. 2. f. 3. Insectum tuberculi muricati arboris Taxi.

Flor. Lapp. p. 218. n. 347. E.

C*lus. Pannon.* p. 20. 21. Picea pumila.

Hoffman. Fl. Altd. 1. Picea pumila.

Lives on the shoots of spruce, which are formed at the tops of the monstrously intertwined branches, where the needles have been dilated at the base and also shortened; abundant around us. Resembles a green strawberry. The lump, which is strawberry-shaped and at the very ends of the spruce branches, has on the outside above and between the leaflike imbricate scales, in the cavity of its scales, many small individuals, from the anuses of which a wool-like substance protrudes. Near the base of this small lump or strawberry plentiful wool can be observed, in which the mother of the smaller individuals is found causing the strawberry. In the autumn, all insects become winged and leave their strobiles.

DESCR. Body pale whitish yellow. Eyes fuscous and with a very small, blackish spot between eyes. Antennae setaceous. It bears its wings like the alder sucker.[699] Mouth beneath thorax or from thorax. Does not jump.

1012. CHERMES *salicis* [*Nomen dubium*], of the willow. *Fn.* 701.

Lives on various species of willow.

DESCR. It is white. Abdomen with indistinct maculae above. Thorax with a transverse, black line. Antennae white below the middle, black beyond the middle.

1013. CHERMES *fraxini* [*Psyllopsis fraxini* (Linnaeus, 1758). Sw. Askbladloppa; Fam. Liviidae], of the European ash. *Fn.* 703.

Lives on the European ash.

DESCR. Wings and thorax with black maculae.

1014. CHERMES *aceris* [*Rhinocola aceris* (Linnaeus, 1758). Eng. Maple psyllid; Fam. Aphalaridae], of the Norway maple. *Fn.* 696.

Lives on the branches and stalks of Norway maple.

DESCR. It falls among the smaller members of this genus; it does not exceed the size of a rather large louse. Entirely whitish yellow tending to green on the back, watery greenish beneath. Anus, awl-shaped, darkish watery green. Eyes also watery whitish yellow.

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[697] Although an aphid it was erroneously placed among *Chermes*, psyllids (jumping plant lice), by Linnaeus.

[698] See *Fn. Su.* (1761), *Addenda*, p. 559.

[699] See no. 1008.

Coccus[700]

1015. COCCUS *hesperidum* [*Coccus hesperidum* Linnaeus, 1758. Eng. Brown soft scale, Sw. Orangefärgad vaxsköldlus; Fam. Coccidae, Eng. Soft scale insects, Sw. Skålsköldlöss], of the hibernacles. *Fn.* 722.

Hire. Act. Gall. 1692. p. 14. t. 14.

Frisch. Germ. 12. p. 12.

Reaum. Gall. 4. t. 1. *f. omnes.*

Act. Ups. 136. p. 37. n. 9. Pediculus clypeatus.

Occurs around us, especially on citrus; very common in hothouses or hibernacles. Disfigures stalks and branches like leprosy. Abundant on soapberry and others.

DESCR. Crust oval, depressed, boat-shaped like a kneecap, posteriorly emarginate; brings out and retracts the legs as it pleases.

1016. COCCUS *quercus* [*Kermes quercus* (Linnaeus, 1758). Eng. Striped kermes or Kermes scale, Sw. Eksköldlus; Fam. Kermesidae, Eng. Kermes scales or Gall-like coccids, Sw. Eksköldlöss], of the English oak.

Lives on the English oak.

1017. COCCUS *betulae* [*Pulvinaria vitis* (Linnaeus, 1758). Eng. Cottony grape scale or Cottony vine scale; Fam. Coccidae, Eng. Soft scale insects, Sw. Skålsköldlöss],[701] of the birch. *Fn.* 723.

Lives in the divarications of birch branches; solitary.

1018. COCCUS *carpini* [*Pulvinaria vitis* (Linnaeus, 1758). Eng. Cottony grape scale or Cottony vine scale; Fam. Coccidae, Eng. Soft scale insects, Sw. Skålsköldlöss],[702] of the European hornbeam. *It. Scan.* 47.

Lives on the European hornbeam.

1019. COCCUS *ulmi* [*Lepidosaphes ulmi* (Linnaeus, 1758). Eng. European elm scale, Sw. Kommasköldlus; Fam. Diaspididae, Eng. Armored scale insects, Sw. Pansarsköldlöss], of the field elm.

Lives on the field elm.

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[700] Superfamily Coccoidea.

[701] See no. 1018.

[702] See no. 1017.

1020. COCCUS *coryli* [*Eulecanium tiliae* (Linnaeus, 1758).[703] Eng. Brown gooseberry scale, Nut scale or Thorn scale, Sw. Hasselsköldlus; Fam. Coccidae, Eng. Soft scale insects, Sw. Skålsköldlöss], of the common hazel.
Lives on the common hazel.

1021. COCCUS *tiliae* [*Eulecanium tiliae* (Linnaeus, 1758). Eng. Brown gooseberry scale, Nut scale or Thorn scale, Sw. Hasselsköldlus; Fam. Coccidae, Eng. Soft scale insects, Sw. Skålsköldlöss],[704] of the common lime.
Lives on the common lime.

1022. COCCUS *salicis* [*Chionaspis salicis* (Linnaeus, 1758). Eng. Willow scale, Cottonwood scale or Black willow bark louse, Sw. Pilsköldlus; Fam. Diaspididae, Eng. Armored scale insects, Sw. Pansarsköldlöss], of the bay willow.
Lives on the branches of bay willow, which it often covers all over.
DESCR. Body tiny, hardly visible to the naked eye, red, in the older individuals rather flat and ash-grey.

1023. COCCUS *polonicus* [*Porphyrophora polonica* (Linnaeus, 1758). Eng. Polish cochineal or Polish carmine scale; Fam. Margarodidae, Eng. Ground pearls, Sw. Pärlsköldlöss],[705] of the roots of perennial knawel. *Act. Ups.* 1742. p. 54. t. 1.
Coccus radicum purpureus. Fn. 720.
Cornar. Discolor. l. 4. c. 39. Granum zschinbitz.
Scalig. Exerc. 325. n. 13.
Camer. Epit. 691. Polygonum cocciferum.
Bauh. Pin. 281. Polygonum cocciferum.
Bauh. Hist. 3. p. 378. Polygonum polonicum cocciferum.
Chabr. Sciagr. 454. Polygonum polonicum cocciferum.
Paulli. Quadrip. 113. Ova insecti incogniti.
Raj. Hist. 186. Polygonum Polonicum cocciferum.
Tylkofsch. Phys. 3. f. 10.
Rzaczynsch. Polon. 95.
Berniz. Misc. N. C. dec. 1. *ann.* 1. *obs.* 8.
Rupp. Jen. 86. Knawel folio & flore albicante.
Dal. Pharm. 84. Polygonum cocciferum.

[703] See no. 1021.
[704] See no. 1020.
[705] See no. 1024.

Breyn. Comm. Physico-Technic. 1731. p. 413.
Act. Lips. 1731. p. 406.
Act. Angl. 421.
Act. Physico-Med. N. C. vol. 3. app. 5. t. 1. Coccus tinctorius radicum.
Prodr. 3. app. 1.
Frisch. Germ. 5. p. 6. t. 2. Cochinella germanica.
Reaum. Gall. 4. *Mem.* 2. p. 1. n. 143. Progall, insectum grani scarlatini Polonici.
Occurs among us around midsummer; rather rare (as many people have informed me). But I have not yet seen it myself. It develops on the perennial knawel; a similar one can be found on *Pimpinella saxifraga. Loes. Pruss.* 194, and another on *Gerber's Potentilla fruticosa.* Those who have seen it themselves may judge, whether they are different species. Always clings to roots underground.

1024. COCCUS *pilosellae* [*Porphyrophora polonica* (Linnaeus, 1758). Eng. Polish cochineal or Polish carmine scale; Fam. Margarodidae, Eng. Ground pearls, Sw. Pärlsköldlöss],[706] of the root of mouse-ear hawkweed. *Act. Ups.* 1742. p. 54. t. 2. *Paull. Quadr.* 113. ova insecti incogniti.
Lives near the roots of mouse-ear hawkweed.

1025. COCCUS *uvae ursi* [*Acanthococcus uvaeursi* (Linnaeus, 1761). Eng. Linnaeus's felt scale; Fam. Eriococcidae, Eng. Felt scales, Sw. Filtsköldlöss], of the root of bearberry. *Act. Holmens.*
Lives on the stems of bearberry, which have taken root at less dry places.
DESCR. Body red-brown, sap blood-coloured, nevertheless covered by a wide, white, ovate sac.

1026. COCCUS *phalaridis* [*Nomen dubium*], of the roots of the canarygrass. *Fn.* 721.
Lives close to the roots of the common canarygrass in fruitful soil, and abundantly, where the common red ants[707] are diligently digging the soil and emerging.
DESCR. Animal the size of a hemp seed, whitish; only the legs are somewhat flesh-coloured. Antennae barely ¼ length of the body. Rostrum curved. Anus apically notched, hardly villous. I have not seen it flying. Therefore, I do not know whether it is a scale,[708] an aphid or a leaf hopper.[709]

[706] See no. 1023.
[707] See no. 1725.
[708] Linnaeus only refers to *Coccus*, see nos. 1015–1027.
[709] Linnaeus only refers to *Chermes*, see nos. 1001–1014.

Thrips[710]

1027. THRIPS *physapus* [*Thrips physapus* Linnaeus, 1758. Fam. Thripidae, Sw. Smaltripsar], elytra greyish blue; body jet-black. *Fn.* 726.[711]

De Geer. Act. Stockh. 1744. p. 3. t. 4. f. 4. Physapus ater, alis albis.

Lives on flowers, especially deep yellow composites, such as hawkbit, daisy, chamomile, oxeye, etc.; very common in autumn. This is probably why the closed, corniculate flowers of lotus become swollen and the rye spikes are often abortive.

DESCR. Body is linear, jet-black. Antennae straight, filiform, jet-black, short, with six segments. Wings very slender, straight. Elytra very narrow, whitish grey, very slender, flexuous, almost the length of the abdomen, hirsute marginally, especially at tip, but paler at base. These wings, covered by the elytra, form a very narrow line on the back; the others are naked and black on abdominal sides. Runs most rapidly, jumps. Bends and vibrates its abdomen in various ways; does not fly with ease. Larva scarlet; head, legs, and antennae blackish; very common on flowers of chamomile. Walks around between the flowerets, as if it were a perfect tiny creature.

1028. THRIPS *minutissima* [*Thrips minutissimus* Linnaeus, 1758. Fam. Thripidae, Sw. Smaltripsar], elytra and body greyish blue; eyes fuscous.

Lives on flowers.

DESCR. Among its congeners it is the smallest of all.

1029. THRIPS *juniperina* [*Thrips juniperinus* Linnaeus, 1758. Fam. Thripidae, Sw. Smaltripsar], elytra snow-white; body fuscous. *Fn.* 728.[712]

De Geer, Act. Stockh. 1744. p. 6. t. 1. f. 2. Physapus fuscus, alis albicantibus.

Lives on juniper. *De Geer.*

1030. THRIPS *fasciata* [*Aeolothrips fasciatus* (Linnaeus, 1758). Fam. Aeolothripidae, Sw. Rovtripsar], elytra fasciated with white and black; body fuscous. *Fn.* 727.

Lives on flowers, as the preceding species, but rarer than the others.

DESCR. Everything as in the preceding species, but the transverse, white and black fasciae characterize the wings. Animal entirely jet-black, larger than the preceding species. Three snow-white fasciae divide the black elytra, of which the first is at the tip, the second in the middle, and the third at the elytral base.

[710] Order Thysanoptera.

[711] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

[712] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

III. LEPIDOPTERA

Papilio

§ *EQUITES*

1031. PAPILIO *machaon* [*Papilio machaon* Linnaeus, 1758. Eng. Artemisia swallowtail, Common yellow swallowtail or Oldworld swallowtail, Sw. Makaonfjäril; Fam. Papilionidae, Eng. Swallowtail butterflies, Sw. Riddarfjärilar], wings caudate, concolorous, light yellow, with fuscous fasciae; anal angle red-yellow.

Papilio, six-legged; wings variegated with light yellow and black; hindwings with awl-shaped angle and red-yellow macula. *Fn.* 791.

Mouff. Angl. p. 968.

Lat. p. 99.

Hoff. Ins. 1. t. 12. *edit. alt.* t. 9. f. 10.

Hollar. Musc. t. 5. f. 2.

Aldr. Ins. p. 96. n. 5. 6. f. 1.

Jonst. Ins. p. 40. n. 2. t. 5. 7.

Jung. Verm. 134. Eruca rutacea.

Merian. Europ. 1. p. 13. t. 38. Basse la Reine.

Merret. Pin. 198. Papilio diurna maxima 2:da.

Misc. Nat. Curios. ann. 2. *dec.* 2. p. 49. f. 9.

Column. Ecphr. 2. p. 85. t. 86. Papilio erucae rutaceae.

Rob. Ic. 18. *male.*

Reaum. Gall. 1. t. 30. f. 1.

Frisch. Germ. 2. p. 41. t. 10. Eruca anethi.

Pet. Mus. p. 35. n. 328. Papilio major caudatus ex nigro & luteo variegatus.

Raj. Ins. 110. n. 1. Papilio alis amplissimis, flavicante & nigro coloribus pulchre variegatis; interioribus caudatis.

Lives on rue, dill, *Seseli* (*Foeniculum tortuosum*),[713] burnet saxifrage, and *Selinum*.

DESCR. Wings, legs, and tongue black. Antennae clavate. Forewings ovate, blunt, absolutely entire, variegated with black and light yellow or they could be perceived as black, on which there are three moon-like, light yellow maculae near the thicker margin. However, close to the posterior margin, there are 8 small maculae, and medially between the two described rows, from inner margin towards alar angle, there are 7 maculae, placed closely together, of which the inner ones are larger. Posterior wings denticulate, of which the posterior linear angle is extended and much longer than the others. The margin of this wing is decorated with 6 light yellow maculae resembling small crescents except for the seventh macula, which is closest to the anus and distinctive because the eyespot is surrounded by a red-yellow colour tending to blue; disc of this wing is light yellow. Larva glabrous, fragrant, with 16 legs. When touched it extends two red-yellow tentacles.

[713] Linnaeus's own parenthesis.

§§ HELICONII

1032. PAPILIO *apollo* [*Parnassius apollo* (Linnaeus, 1758). Eng. Apollo butterfly, Sw. Apollofjäril; Fam. Papilionidae, Eng. Swallowtail butterflies, Sw. Riddarfjärilar], wings oblong, absolutely entire, white; posterior wings with four eyespots above; six beneath and red at base.

Papilio, six-legged; wings rounded, absolutely entire, white; hindwings with four eyespots above, seven beneath. *It. Gotl.* 230. *Fn.* 802.[714]

Mouff. Lat. p. 94. f. 3. Phalaena media 1.

Pet. Mus. 49. n. 502. Papilio alpinus ex albo nigroque variegatus, iride rubente oculatus.

Pet. Gaz. 37. t. 23. f. 8. Papilio alpinus.

Raj. Ins. 139. n. Papilio alpina major, alis albicantibus: exterioribus maculis nigris notatis, interioribus ophthalmoidibus: iride rubra.

De Geer. Ins. t. 18. f. 8–13.

Lives on orpine; abundant.[715]

DESCR. In body size it competes with our largest species. Body blackish with ash-grey wool. Wings erect, rounded, white, with pale veins, and strewed with a cloudy ash-grey powder at tip and posterior membranous margin. Forewings with 3 black maculae near the thicker margin and a single black macula close to the inner margin, which all appear on both surfaces. The eyespots of the hindwings consist of white (in the middle), red, black, and blue colours; these hindwings have two conspicuous eyespots one on each side, and near the base there are 4 small, blind ones without white pupils, and near anus, a single black eyespot with a red pupil; these posterior eyespots are visible beneath. 6 legs. Antennae clavate, black beneath at tip. Thick, concave, carinate membrane beneath anus.

1033. PAPILIO *mnemosyne* [*Parnassius mnemosyne* (Linnaeus, 1758). Eng. Clouded apollo, Sw. Mnemosynefjäril or Svart apollo; Fam. Papilionidae, Eng. Swallowtail butterflies, Sw. Riddarfjärilar], wings oblong, absolutely entire, white, with black veins; forewings with two marginal, black maculae.

Udd. Diss. 55. Papilio hexapus, aliis rotundatis albis: primariis maculis quatuor venisque nigris.

Occurs in Finland.

DESCR. Resembles the preceding species very closely, but smaller and without eyespots. Wings white, with black veins. Forewings naked or membranous at posterior margin. Two black maculae medially at costa. Posterior wings also with two black maculae: first macula smaller at anterior margin, posterior larger medially on disc. Anus with a rather large singular cartilaginous organ structure in female.

[714] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[715] Today this species has declined strikingly and is only found in a few areas along the east coast and in Gotland.

1034. PAPILIO *crataegi* [*Aporia crataegi* (Linnaeus, 1758). Eng. Black-veined white, Sw. Hagtornsfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, white, with black veins. *It. Gotl.* 182. *Fn.* 796.
Aldr. Ins. 245. t. 246. f. 6. *mala*.
Hoffn. Ins. t. 10. f. 14.
Merr. Europ. 2. p. 38. t. 35. *f. superiores*.
Gall. t. 157 (*edit. alt.*) 85.
Alb. Ins. t. 2. f. 2.
Pet. Mus. p. 33. n. 301. Papilio alba, venis nigris.
Frisch. Germ. 5. p. 16. t. 5. Eruca hyemalis luteo alboque striata.
Raj. Ins. 115. n. 5. Papilio alba, nervis alarum nigris, brassicae majoris figura & magnitudine.
Reaum. Gall. 2. t. 2. f. 9. 8.
De Geer. Ins. t. 14. f. 13–19.
Lives on blackthorn, hawthorn, and rowan.
DESCR. Wings rounded, white, with black veins, naked at margin, concolorous. Forewings with a small black crescent near costa.
The butterfly that hatches from rocket in large masses is sordid whitish with blackish veins,[716] *Raj. Hist.*, 17, and the larva forming a labyrinth,[717] *It. Oeland.* 62, might also belong to this species.

1035. PAPILIO *brassicae* [*Pieris brassicae* (Linnaeus, 1758). Eng. Large white or Cabbage white butterfly, Sw. Kålfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], rather large; wings absolutely entire, rounded, white; forewings bimaculate with black tips. *Fn.* 799.
Mouff. Lat. p. 189. f. 1. Eruca in Brassica.
Goed. Belg. 1. p. 59. f. 11.
List. Goed. p. 16. f. 7.
Mer. Europ. 1. p. 16. t. 45.
Blank. Belg. p. 24. t. 4. f. A. B. C. D.
Germ. p. 19. t. 4. f. A. B. C. D.
Alb. Ins. p. 1. t. 1.
Swam. Quart. p. 202. t. 13. f. 6.
fol. t. 37. n. 6.
Reaum. Gall. 1. t. 29. f. 1. & t. 10. f. 7.
Pet. Mus. p. 85. n. 825. Papilio albus vulgaris major.
Gaz. t. 62. f. 3. Papilio alba major, apicibus nigris.
Raj. Cantab. p. 134.
Ins. p 113. n. 1. Papilio brassicaria alba major vulgatissima.

[716] Cf. no. 1037.
[717] Presumably referring to the communal web formed by the young larvae.

Raj. Ins. p. 348. n. 19. Eruca brassicaria maxime vulgaris, nigro luteo & caeruleo coloribus variegata.

Lives on cabbage.

DESCR. Forewings white above, black-tipped, beneath ash-greyish; on hindwings, outer margin light yellow at base.

Male[718] has three black maculae on the prone forewing,[719] but on the prone hindwing only a single macula. Female[720] has no black macula in the prone part except for the alar tip.

1036. PAPILIO *rapae* [*Pieris rapae* (Linnaeus, 1758). Eng. Cabbage white or Small white, Sw. Rovfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], rather small; wings absolutely entire, rounded, white, with bimaculate, black-tipped forewings. *Fn.* 798.

Mouff. Angl. p. 971. f. 9. 10.

Lat. p. 103. *f. ultim.* Papilio diurnus medius.

Goed. Belg. 1. p. 97. f. 27.

List. Goed. p. 22. f. 8.

Mer. Europ. 2. p. 40. t. 39. *edit. Gall.* t. 89.

Blank. Belg. p. 29. t. 5. f. A. B. C. D.

Germ. p. 23. t. 5.

Rob. Icon. t. 6.

Alb. Ins. t. 51. f. C. D. (*Mas*) & E. F. (*Faemina*).

Reaum. Gall. 1. t. 29. f. 7. 8. & t. 2. f. 3.

Merr. Pin. 198. n. 5. Papilio corpore & antennis livescentibus, capite alisque pallidis.

Pet. Mus. p. 85. n. 826. Papilio vulgaris albus minor.

Gaz. p. 10. t. 64. f. 4. Papilio alba vulgaris striata, maculis duplicibus (*faemina*).

p. 10. t. 49. f. 11. Papilio albus minor, apicibus nigris (*Mas*).

Raj. Ins. 114. n. 2. Papilio alba media, alis exterioribus albis, duabus maculis nigris infra mediam longitudinem versus interiorem marginem notatis, interioribus subtus nigricantibus.

p. 349. n. 20. Eruca Brassicam depascens viridis mediocris, linea in utroque latere e luteo albente.

p. 114. n. 3. Papilio alba media, alis omnibus albis cum macula (seu punctum mavis dicere,) leviter nigricante in exterioribus (*Mas*).

Lives on cabbage and nasturtium.

DESCR. Resembles the preceding species closely, but only half as large. Forewings ash-grey above at tip and on female two black maculae.

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[718] In these descriptions Linnaeus has mixed up males and females.

[719] Linnaeus looks at the butterfly wings in their upright position. When folded out/down he considers that a pronation, and thus the inner/upper side of the wing is "prone".

[720] See note above.

Larva green, very different from the previous butterfly. All the same the two butterflies are so similar to each other that apart from size they are almost indistinguishable.

1037. PAPILIO *napi* [*Pieris napi* (Linnaeus, 1758). Eng. Green-veined white or Mustard white, Sw. Rapsfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, white, with watery greenish veins beneath. *Fn.* 797.

Mer. Europ. (*edit.* 1.) v. 2. p. 77. t. 39.

Alb. Ins. t. 52. f. F. G.

Pet. Mus. p. 33. n. 302. Papilio albus medius: venis latis, subtus nigricantibus. *Gaz.* t. 62. f. 4. nomen idem.

Raj. Ins. 114. n. 4. Papilio brassicaria media, alis albis secundum nervos lineis e viridi nigricantibus subtus striatis.

Lives on cabbage.

DESCR. Resembles the preceding species very closely, but with dilated, darker veins beneath. Female bimaculate on anterior wings.

1038. PAPILIO *sinapis* [*Leptidea sinapis* (Linnaeus, 1758). Eng. Wood white butterfly, Sw. Skogsvitvinge; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, white, without maculae, with darkish tips. *Fn.* 800.

Pet. Mus. 33. n. 303. Papilio albus minor.

Inhabits forests.

DESCR. Very similar to the preceding butterflies. Forewings with a somewhat rounded, fuscous macula at tip.

1039. PAPILIO *cardamines* [*Anthocharis cardamines* (Linnaeus, 1758). Eng. Orange tip butterfly, Sw. Aurorafjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, white; forewings red-yellow in the middle; posterior wings cloudy green beneath.

Papilio, six-legged; wings rounded, absolutely entire; hindwings cloudy; forewings with a small black crescent. *Fn.* 801.

Mouff. Lat. p. 106. n. 5. f. 2. 3. 4.

Hoffn. Ins. 2. t. 9. f. 1.

Jonst. Ins. t. 5.

Bry. Renov. t. 22.

Rob. Ic. t. 21.

Valent. Herb. t. 183.

Merian. Europ. t. 181.

Petiv. Mus. p. 33. n. 306. Papilio albus subtus viridi colore marmoreatus sive maculis croceis ornatus.

Raj. Ins. 115. n. 6. Papilio minor alba, alis exterioribus albis macula insigni crocea splendentibus, inferioribus superne albis, subtus viridi colore variegatis.

α *Raj. Ins.* p. 115. n. 7. Papilio minor alba, alis exterioribus ad imum marginem nigris aut fuscis, macula in medio nigra.

Pet. Mus. p. 33. n. 305. Papilio alba subtus viridi colore marmoreata; faemina.

Occurs in Uppsala, numerous.

DESCR. Antennae clavate, whitish. Wings white, but forewings outwardly fuscous-tipped, beneath light yellow tending to ash-grey with a macula or fuscous crescent-shaped spot in the middle of the wing on both its surfaces. Hindwings cloudy green beneath, white above, fuscous towards base. Eyes greenish, maculate. Male distinct by a broad, saffron-coloured macula on the middle of the outer surface of the upper wing.

1040. PAPILIO *hyale* [*Colias hyale* Linnaeus, 1758. Eng. Pale clouded yellow, Sw. Ljusgul höfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, light yellow; posterior wings with a set of red-yellow maculae: the macula beneath is silvery and one and a half times as large as the upper one.

Pet. Gaz. t. 14. f. 11.

Raj. Ins. 112. n. 6.

Edw. Av. t. 304. f. 1. 2.

Occurs in Skåne; very rare.

DESCR. Very similar to the moorland clouded yellow,[721] but wings more light yellow. Forewings light yellow, black-tipped; the rather deep yellow fascia is divided in two parts by the blackness. Hindwings with a rusty brown spot or macula above in the middle, which is opposite to the macula beneath. There are two silvery spots close together, surrounded by a rusty brown ring; the second spot is very small. Antennae and the ciliated alar margin red, as in the following species.

1041. PAPILIO *palaeno* [*Colias palaeno* (Linnaeus, 1758). Eng. Moorland clouded yellow, Sw. Svavelgul höfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, rounded, light yellow, black-tipped, and red-yellow marginally; posterior wings with a silvery spot beneath.

Uddm. Diss. 56. Papilio hexapus, alis rotundatis albis ocello parvo fusco oblongo; apicibus fuscis.

Lives on brake,[722] but very rare in Uppsala, more abundant in Finland.

DESCR. Antennae and legs red. Wings whitish yellow or white, at outer margins red. Forewings broadly black above at tip; disc with a black spot on each side. Posterior wings ash-greyish beneath; in the middle a silvery, crescent-shaped spot, especially on upper wings; base of lower wings red beneath.

[721] See no. 1041.

[722] Linnaeus writes *Pteridium*, but the larva lives only on bog bilberry, *Vaccinium uliginosum*.

1042. PAPILIO *rhamni* [*Gonepteryx rhamni* (Linnaeus, 1758). Eng. Brimstone, Sw. Citronfjäril; Fam. Pieridae, Eng. Whites and Sulphurs, Sw. Vitfjärilar], wings absolutely entire, angular, light yellow, each with a light yellow spot and another rusty brown spot beneath.

Papilio, six-legged; wings angular, light yellow, with a rusty brown spot. *Fn*. 795.
Mouff. Angl. p. 198.
Lat. p. 103. p. 1. Papilio diurnus medius 1.
Jonst. Ins. 42. n. 1. t. 5. 6.
Hoffn. Ins. 1. t. *aut* 12. f. 8. t. 2.
Rob. Ic. t. 13.
Alb. Ins. t. 2. f. 3.
Pet. Mus. p. 1. n. 1. Papilio sulphureus (*Mas*).
Raj. Ins. 112. n. 4. Papilio praecox sulphurea sive flavo-viridis, singulis maculis ferrugineis notatis.
De Geer. Ins. t. 15. f. 1–10.

β *Pet. Mus.* p. 1. n. 2. Papilio sulphureus pallidus. (*faemina*).

Commonly known as the "canicular[723] butterfly".

Lives on buckthorn; abundant.

DESCR. Antennae rusty brown. Wings light yellow on both sides with a rusty brown spot in the middle of each wing and the minutest rusty brown spots close to the anterior margin of forewings. Hindwings each with pointed tip and disc with a rusty brown spot. Legs whitish.

1043. PAPILIO *hyperantus* [*Aphantopus hyperantus* (Linnaeus, 1758). Eng. Ringlet, Sw. Luktgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings absolutely entire, fuscous; forewings with three eyespots beneath, posterior wings with five on each side. *Fn*. 788.[724]

Pet. Mus. p. 34. t. 313. Papilio medius, omnino fuscus, plurimis ocellis nigris in circulis luteis subtus ornatus.
Raj. Ins. 129. n. 7. Papilio medius totus pullus, prona alarum parte ocellis aliquot e puncto albo duplici circulo nigro & sordide luteo cincto compositis illustrata.

Inhabits forests.

DESCR. Wings concolorous, fuscous, with a whitish margin. Forewings with 2 black spots above, barely ocellated; 3 eyespots beneath, posterior one smaller. Hindwings with 2 spots above; 2 anterior eyespots placed close together beneath and 3 separated posterior ones.

[723] It refers to the Dog Star, Sirius, which in turn relates to the part of the summer that is the hottest time of the year, i.e. early July to early September, *dies caniculares*, "the dog days."

[724] See Ch. *A small fauna of Sweden*.

1044. PAPILIO *pamphilus* [*Coenonympha pamphilus* (Linnaeus, 1758). Eng. Small heath, Sw. Kamgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings absolutely entire, red-yellow; forewings with a single eyespot beneath, posterior wings with a white fascia. *Fn.* 789.

Pet. Mus. p. 34. n. 311. Papiliunculus aureus oculatus in ericetis frequens.

Raj. Ins. 125. n. 19. Papilio parva e fulvo & fusco bicolor, fulvo mediam alam, fusco oras extremas occupante, cum ocello ad extimum angulum alarum exteriorum.

Inhabits heathy regions.

DESCR. *Ray's* description is fine. Wings red-yellow above with a weakly fuscous margin, ash-greyish beneath. The single eyespot on the underside of the forewing is black with white spot and black ring. Hindwings ash-grey beneath, darker anteriorly and marked in the middle with a pale fascia and four indistinct eyespots.

1045. PAPILIO *arcania* [*Coenonympha arcania* (Linnaeus, 1761). Eng. Pearly heath, Sw. Pärlgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings absolutely entire, rusty brown; beneath on forewings a single eyespot, on posterior wings five each.

Inhabits meadows and woods.

DESCR. Small. Forewings anteriorly above rusty brown, posteriorly blackish with a whitish margin. Rusty brown beneath, a most minute eyespot at tip. Hindwings fuscous above with whitish margin, grey beneath; posteriorly a silvery line; a broad, white fascia in the middle. In front of the fascia, a black eyespot at outer margin. Four eyespots close to the posterior part of the white fascia, with a silvery pupil; of these eyespots the two closer to anus are larger. In appearance this insect resembles the preceding species.

1046. PAPILIO *hippothoë* [*Lycaena hippothoe* (Linnaeus, 1761). Eng. Purple-edged copper, Sw. Violettkantad guldvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings absolutely entire, without maculae and red-yellow above; numerous ash-greyish spots resembling eyespots beneath.

Occurs around us; very rare.

DESCR. Stature as that of the scarce copper.[725] Wings entirely without maculae and red-yellow above, deep yellow tending to ash-greyish beneath. Forewings beneath having black spots with a white iris. 3 rather large spots inside outer margin, 7 rather small almost transversely placed, and 6 of the minutest at posterior margin. Hindwings ash-greyish beneath with around 17 spots resembling eyespots, except for the red-yellow fascia at posterior margin, which is anteriorly punctate with black.

[725] See no. 1079.

1047. PAPILIO *hero* [*Coenonympha hero* (Linnaeus, 1758). Eng. Scarce heath, Sw. Brun gräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings absolutely entire, fuscous; forewings with two eyespots beneath, posterior wings with six each.

Papilio, four-legged; wings rounded, red-yellow, beneath ash-greyish, with a white fascia and five eyespots each. *Fn.* 790.

Occurs in Dalarna, fairly abundant. C. *Blom.* Rather rare in Uppsala.

DESCR. Body somewhat larger than the preceding species. Forewings fuscous above, with a rusty brown, blind eyespot at tip. Fuscous beneath at tip; whitish fasciole with a deep yellow margin outside the silvery line; two eyespots between the margin and a whitish fasciole, of which the outer eyespot has a black iris and a snow-white pupil, the inner one is blind with deep yellow iris and black spot. Posterior wings fuscous above, at posterior part six blind eyespots; iris deep yellow and pupil black. Beneath fuscous, towards posterior part a white fascia with a deep yellow margin outside the silvery line. Six eyespots between the white fascia and margin; all with a deep yellow iris, in the middle jet-black with a snow-white iris. Antennae black, with white rings.

§. §. §. §. *NYMPHALES*

1048. PAPILIO *io* [*Aglais io* (Linnaeus, 1758). Eng. Peacock, Sw. Påfågelöga; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], four-legged; wings angular and dentate, red-yellow, with black maculae; each with a blue eyespot above. *Fn.* 776.

Mouff. Angl. p. 968.

Lat. p. 99. *f. infim.* Regina omnium.

Hofn. Ins. t. 12. f. 9.

Jonst. Ins. p. 40. n. 4. t. 5.

Bry. Renov. t. 27.

Mer. Europ. 1. p. 10. f. 26.

Goed. Lat. 1. p. 23. f. Oculus pavonis.

List. Goed. p. 1. f. 1.

Pet. Mus. p. 34. n. 314. Papilio oculus Pavonis dictus.

Alb. Ins. t. 3. f. 4.

Valent. Herb. t. 57.

Anon. Angl. p. 2. 1. f. 1.

Reaum. Gall. 1. t. 25. f. 2. 1.

Raj. Ins. 122. n. 13. Papilio elegantissima ad urticariam accedens, singulis alis maculis oculos imitantibus.

Lives on hops and the stinging nettle.

DESCR. Wings purplish above. Forewings anteriorly black with a light yellow blotch and a rather large bluish light yellow eyespot with 2 white spots. Hindwings with a somewhat larger bluish black eyespot. All are cloudy jet-black beneath. Forewings with 6 indistinct whitish spots towards outer margin. Hindwings with a pale spot medially.

1049. PAPILIO *maera* [*Lasiommata maera* (Linnaeus, 1758). Eng. Large wall, Sw. Vitgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings subdentate, cloudy fuscous, with one large ocellate spot on each side of forewings one and a half times as large as the smaller one which it includes, posterior wings with 3 eyespots above.

Papilio, four-legged; wings rounded, cloudy fuscous; forewings with one large ocellate spot, one and a half times as large as the smaller one which it encompasses; hindwings with five eyespots each. *Fn.* 785.

Mouff. Angl. 972.

Lat. p. 104. n. 9. f. 10.

Jonst. Ins. p. 58. n. 9. t. 6.

Merret. Pin. 198. n. 10. Papilio ultima parte alae exterioris clypeolo nigro, quem medium punctum eburneum ornat, decorata.

Merian. Europ. 2. p. 10. t. 4. (*edit. ult.*) t. 54.

Robert. Ic. 15. f. 2.

Aldr. Ins. p. 245. t. 244. f. 12.

Raj. Ins. 123. n. 15. Papilio media, alis fulvo sive rufo & nigricante colore variis cum ocello prope extimum angulum alarum exteriorum.

Petiv. Mus. p. 34. n. 312. Papilio oculatus ex aureo & fusco marmoratus.

Lives on bluegrass; often resting on cliffs and rocks.

DESCR. Wings rounded, absolutely entire, entirely fuscous above, marked with black eyespots, white pupil, and red-brown outer margin; of these eyespots a solitary one is placed on top of wings, on the forewings, but three smaller ones above on the hindwings; forewings also marked with three dark striae.[726] But as for wings beneath, although they are fuscous, the forewings are nevertheless undulating with rather dark lines with each one marked with a greyish blue eyespot, which is medially black, with a white pupil. Beside this eyespot, at alar angle, there is a very small greyish blue one with a white pupil. Hindwings fuscous, with grey-white undulations; each marked with seven eyespots, of which the black pupil, medially white, is surrounded by a double greyish blue circle; two of these eyespots, close to abdomen, merge into one.

1050. PAPILIO *ligea* [*Erebia ligea* (Linnaeus, 1758). Eng. Arran brown, Sw. Skogsgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings subdentate, fuscous, with a red-brown fascia; four eyespots on each side of forewings; posterior wings with three eyespots.

Papilio, four-legged; wings rounded, fuscous, with a transverse, red-brown fascia and seven lateral eyespots. *Fn.* 787.

Alb. Ins. t. V. f. 1. Papilio fusca pratensis.

Inhabits forests.

[726] This character is valid for the very similar species *Lasiommata petropolitana* and not for *L. maera*. Obviously, Linnaeus has not been able to separate these two species.

DESCR. Wings fuscous above, rather watery fuscous beneath. Forewings with a red-brown, transverse fascia beneath and with 4 black eyespots above; 5 marginal, white maculae. Hindwings with 3 black eyespots, above and beneath, surrounded by red-brown; smaller eyespots beneath and in addition two white ones. Antennae black, beneath white.

1051. PAPILIO *semele* [*Hipparchia semele* (Linnaeus, 1758). Eng. Grayling, Sw. Sandgräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, cloudy red-yellow and black; forewings with two lateral eyespots, posterior wings with a single eyespot above. *Fn.* 784.

Hoffn. Ins. 2. t. 8.

Pet. Mus. p. 34. n. 307. Papilio oculis nigris subtus marmoreus.
Gaz. p. 22. t. 14. f. 9. idem nomen.

Raj. Ins. 128. n. 6. Papilio majuscula, alis pullis cum duplici in exterioribus macula lutea, & duplici oculo nigro.

Lives in rocky forests; not uncommon.

DESCR. Wings are fuscous above with indistinctly light yellow fasciae. Forewings light yellow beneath, cloudy at margins. Hindwings are cloudy white and black beneath. Two black eyespots with a white spot on each of the larger wings; blind eyespot on hindwings above, at anal angle.

1052. PAPILIO *jurtina* [*Maniola jurtina* (Linnaeus, 1758). Eng. Meadow brown, Sw. Slåttergräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar],[727] wings subdentate, fuscous; forewings with a light yellow blotch above and a single eyespot on each side.

Papilio, four-legged; wings rounded, smooth, fuscous; forewings red-yellow beneath with a single eyespot. *Fn.* 786.

Aldr. Ins. 245. t. 246. f. 13.

Hoffn. Ins. 1. t. 1. f. 1. & *edit. alt.* 4. t. 10.

Pet. Mus. 34. n. 309. Papilio pratensis oculatus fuscus.

Raj. Ins. 124. n. 16. Papilio media, alis supina facie pullis, prona ex rufo sive fulvo & fusco variis cum ocello ad extimum alarum exteriorum angulum.

Reaum. Gall. 1. t. 11. f. 1.

Inhabits forests.

DESCR. Resembles the grayling.[728] Forewings weakly fuscous above, with a whitish yellow area, in which there is a black eyespot with a white pupil. Wings concolorous beneath, but paler and almost whitish yellow. Hindwings weakly fuscous above, greyish white beneath with a fuscous spot.

[727] See no. 1053.

[728] See no. 1051.

1053. PAPILIO *janira* [*Maniola jurtina* (Linnaeus, 1758). Eng. Meadow brown, Sw. Slåttergräsfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar],[729] wings dentate, fuscous; forewings deep yellow beneath with a single eyespot on each side; posterior wings with 3 spots beneath.

Inhabits forests; rather rare.

DESCR. Resembles the preceding species very closely. All wings fuscous above. Forewings with a black eyespot at tip. Forewings with a rusty brown eyespot tending to deep yellow beneath, as above. Posterior wings grey with 3 blackish rusty brown spots, of which 1 anterior, 2 posterior.

1054. PAPILIO *cardui* [*Vanessa cardui* (Linnaeus, 1758). Eng. Painted lady, Sw. Tistelfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, red-yellow, variegated with white and black; posterior wings each with four eyespots.

Papilio, four-legged; wings dentate, red-yellow, variegated with white and black; hindwings with five eyespots on each side. *Fn.* 778.

Mouff. Angl. p. 169.

Lat. p. 101. n. 8. 9. f. 1. 2.

Hoffn. Ins. t. 7. f. 3. *edit. alt.* 4. t. 5.

Goed. Lat. 3. p. 1. f. 1.

List. Goed. p. 14. f. 6.

Blank. Belg. p. 21. t. 3. A. B. C. D.

Germ. p. 17. t. 3. C. D.

Mer. Europ. 3. p. 52. t. 15. *edit. ult.* 88.

Albin. Ins. LVI.

Reaum. Gall. 1. t. 26. f. 11. 12.

Pet. Mus. p. 35. t. 326. Papilio eleganter variegatus agilis, Bella donna dictus.

Raj. Ins. 122. n. 13. Papilio major pulchra, nigro rufo albo coloribus varia.

Lives on thistles.

DESCR. Forewings almost concolorous, paler beneath, red-brown, variegated with black at base, black variegated with white at tip. Hindwings red-brown above, variegated with black, posteriorly with 5 black spots. Cloudy whitish yellow beneath, with 4 eyespots at posterior margin, of which those in the middle smaller.

1055. PAPILIO *populi* [*Limenitis populi* (Linnaeus, 1758). Eng. Poplar admiral, Sw. Aspfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, fuscous, fasciated and maculated with white; deep yellow beneath, fasciated with white and having bluish maculae.

Uddm. Diss. 54. t. 15. Papilio, hexapus supra niger, alis omnibus ordine macularum transversali albo; inferioribus dentatis.

Clerck. Act. Holmens. 1753. p. 278. t. 7.

[729] Synonym of no. 1052. Linnaeus made a mistake when he considered the male of *jurtina* being a separate species, which he named *janira*.

Lives in the canopies of aspen; rather rare.

DESCR. Easily our largest species. Wings almost concolorous, blackish only above, brick-red beneath. Forewings scattered with some white maculae. Hindwings with a white fascia, broken into 7 maculae; followed above by a double row of dimidiate eyespots with rusty brown iris and double innermost jet-black pupil. Beneath, 7 lunate black spots in a row. Posterior margin bluish beneath, divided into two halves by a black line.

1056. PAPILIO *antiopa* [*Nymphalis antiopa* (Linnaeus, 1758). Eng. Camberwell beauty or Mourning cloak, Sw. Sorgmantel; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings angular, black; border whitish. *Fn.* 772.

Hoffn. Ins. t. 3. f. 2. & t. 6. f. 3.

Jonst. Ins. t. 9. & 11.

Raj. Ins. 135. Papilio maxima nigra, alis utrinque, tam exterioribus, quam interioribus, limbo lato albo cinctis.

136. Papilio maxima nigra, alis utrisque limbo albo lato cinctis.

De Geer. Ins. t. 21. f. 8. 9.

Lives on birch; very common. Larva feeds on birch leaves.

DESCR. This species falls among the largest of our butterflies. Wings angular-dentate, black on each side, but lateral and posterior margins respectively white, whereas the thicker margin of upper wings is marked anteriorly with a double white macula. Above, inside the white border, a row of bluish spots. Beneath, on the disc of posterior wings, there is a white spot. Antennae and body black.

1057. PAPILIO *polychloros* [*Nymphalis polychloros* (Linnaeus, 1758). Eng. Large tortoiseshell, Sw. Körsbärsfuks; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings angular, red-yellow, with black maculae; forewings with four black spots above. *Fn.* 773.

Aldr. Ins. 245. t. 246. f. 7. Polychloros.

Merr. Europ. 2. p. 1. t. 52.

Goed. Lat. 1. p. 175. t. 77.

List. Goed. 5. f. 3.

Raj. Ins. 118. n. 2. Papilio urticariam referens major, alis amplioribus, quam Ulmariam vocitare soliti sumus.

306. n. 14. Eruca mediae magnitudinis, corpore e cinereo nigricante, spinulis raris in quolibet annulo ramosis fulvis.

Pet. Mus. 34. n. 315. Papilio testudinarius major.

Alb. Ins. 56.

Reaum. Ins. 1. t. 23. f. 2.

Frisch. Germ. 6. p. 7. f. 3. Eruca caerulescens, spinis luteis.

Lives on willow, sour cherry, and rather seldom on pear.

DESCR. It is very similar to the following and most common species, but somewhat larger. Wings angular-dentate, red-yellow. Upper wing with four black fasciae at anterior margin and four somewhat larger spots on the disc. Outer margin of upper, including also outer margin of lower wings, surrounded by a black fascia. Base of lower wing is black.

1058. PAPILIO *urticae* [*Aglais urticae* (Linnaeus, 1758). Eng. Small tortoiseshell, Sw. Nässelfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings angular, red-yellow, with black maculae; forewings with three black spots above. *Fn.* 774.

Mouff. Angl. p. 188. c. 3.
Lat. p. 101. n. 11. f. 5. 6.
Hoffn. Ins. 1. t. 4.
Goed. Ins. 1. p. 90. f. 21.
List Goed. 3. f. 2.
Blank. Belg. 13. t. 1. L. M. N. O. P. Q.
Germ. 11. t. 1. N. O. P. Q.
Merian. Europ. 1. p. 15. t. 44.
Rob. Ic. t. 5.
Bry. Renov. t. 15.
Bradl. Natur. t. 2. 7. f. 2.
Anon. Angl. p. 34. n. 316. Papilio testudinarius major.
Raj. Ins. 117. n. 1. Papilio urticaria vulgatissima, rufo nigro caeruleo & albo coloribus varia.
p. 117. Eruca nigra sive pulla setigera urticaria.
p. 348. n. 18. idem.
Alb. Ins. 4. f. 6.
Reaum. Gall. 1. t. 26. f. 6. 7.
Lives on the burning nettle. The most common of all.
Larva spinose, with prickly spines.
The pupa is commonly a gilded chrysalis.
DESCR. Very similar to the preceding species, but disc of upper wing is marked with two smaller black spots and one larger spot, and this wing is also black at the base.

1059. PAPILIO *c album* [*Polygonia c-album* (Linnaeus, 1758). Eng. Comma or Comma butterfly, Sw. Vinbärsfuks; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings angular, red-yellow, with black maculae; posterior wings marked with a white C beneath. *Fn.* 775.

Adr. Ins. 245. t. 244. f. 3. 4. *mala.*
Mouff. Lat. 103. n. 2. f. 2. Papilio diurna media 2:da.
Hoffn. Ins. 2. t. 7.
Mer. Ins. 1. p. 6. t. 14. & 159.
Pet. Mus. Papilio testudinarius, alis laceris.
Alb. Ins. t. 4. f. 5. Papilio alis laciniatis.

Raj. Ins. 118. n. 3. Papilio ulmariae similis, sed minor; alis laciniatis: interioribus linea alba incurva notatis.

p. 349. n. 21 & p. 119. Eruca lupulacea hirsuta e rufo nigricans, macula sive areola alba longa in medio dorso notata.

Frisch. Germ. 4. p. 6. t. 4. Eruca spinosa semialba, semique lutea, papilione ypsilo graeco in ala.

Reaum. Gall. 1. t. 27. f. 9. 10.

Rob. Icon. t. 23.

De Geer. Ins. 1. t. 20. f. 1–10.

Lives on nettle, hops, and currant.

DESCR. Wings sinuate, outwardly red-yellow, with black maculae, with at least four distinct black spots; lower wings almost similar to outer ones. All wings grey tending to ash-grey beneath, undulating, with the white letter C inscribed in the middle of the lower wings. Tibiae white.

1060. PAPILIO *atalanta* [*Vanessa atalanta* (Linnaeus, 1758). Eng. Red admiral, Sw. Amiral; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, black, with white maculae; common purple fascia on each forewing, on posterior wings along margin.

Papilio, four-legged; wings denticulate, black, with white maculae; all wings with an arcuate, scarlet fascia. *Fn.* 777.

Aldr. Ins. p. 239. t. 240. f. 4. 5.

Hoffn. Ins. 1. t. 2. & *edit. alt.* t. 2. f. 15.

Mouff. Lat. p. 100. f. 3. 4. Papilio diurna VI.

Gaed. Lat. 1. p. 96. f. 26.

List. Goed. p. 10. f. 4.

Mer. Europ. 2. p. 41. t. 91.

Anon. Angl. p. 203. f. 4.

Reaum. Gall. 1. t. 10. f. 9. 8.

Petiv. Mus. p. 35. n. 327. Papilio major nigrescens, alis maculis rubris & albis pulchre illustratis.

Blanck. Belg. p. 18. t. 2. f. A. B. C. D.

Germ. p. 15. t. 2. f. C. D.

Jonst. Inst. t. 7. f. 6. 7. Phalaena diurna maxima.

De Geer. Ins. t. 22. f. 1–5.

Lives on nettles.

DESCR. All wings black above. Forewings with a red fascia in the middle; white maculae between fascia and tip. Hindwings with a terminal red fascia with four black spots and blue, didymous macula at anal angle. Forewings blackish beneath, with a red fascia in the middle; a blue blotch and white maculae between fascia and tip. Hindwings cloudy fuscous, beneath, with a pale macula at anterior margin and two weakly ocellate, cordate fasciae at posterior parts.

1061. PAPILIO *lucina* [*Hamearis lucina* (Linnaeus, 1758). Eng. Duke of Burgundy fritillary, Sw. Gullvivefjäril; Fam. Riodinidae, Eng. Metalmarks, Sw. Metallmärken], wings dentate, fuscous, maculate with brick-red, beneath with two fasciae consisting of whitish maculae.

Occurs around us; less abundant.

DESCR. The size of the silver-studded-blue.[730] Wings fuscous above with many scattered small, whitish yellow maculae, of which those adjacent to posterior margin marked with a black, pointed spot, posteriorly white. Beneath all wings whitish yellow, maculate. Hindwings with two fasciae consisting of white maculae and posteriorly at margin with black, pointed maculae, white at base.

1062. PAPILIO *maturna* [*Euphydryas maturna* (Linnaeus, 1758). Eng. Scarce fritillary, Sw. Asknätfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings subdentate, purplish, maculate with black and white; beneath three light yellow fasciae, first one interrupted.

Occurs around us; very rare.

DESCR. The size of the following species. Wings reddish above, maculate with black and white, and almost reticulate. Saffron yellow tending to brown-red beneath with three light yellow fasciae: the first one broken into 4 or 5 maculae unequal in position and shape; second one as if posteriorly augmented with greenish maculae or a broadish line; last one consisting of 7 or 8 crescents adjacent to the margin.

1063. PAPILIO *cinxia* [*Melitaea cinxia* (Linnaeus, 1758). Eng. Glanville fritillary, Sw. Ängsnätfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, red-yellow, maculate with black, beneath with three whitish light yellow fasciae. *Fn.* 783.[731]

Act. Ups. p. 22. n. 24. Papilio alis erectis subrotundis testaceis: punctis pallidis: lineolis undulatis fuscis, subtus albo-variegatis.

Pet. Gaz. 28. t. 18. f. 10. Papilio frittilarius lincolniensis, fasciis subtus pallidis.

Raj. Ins. 121. n. 9. nomine Petiveri.

Lives in the Academical Garden;[732] fairly abundant.

DESCR. The same appearance as the previous butterflies; same size as the last one. All wings deep yellow, black, undulating above or rather reticulate. Forewings light yellow beneath, slightly undulating with black; tips light yellow. Hindwings light yellow beneath with black undulations having two red-yellow, undulating fasciae. This species lacks all silvery maculae.

1064. PAPILIO *paphia* [*Argynnis paphia* (Linnaeus, 1758). Eng. Silver-washed fritillary, Sw. Silverstreckad pärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, red-yellow, with black maculae; beneath with green, silvery, transverse lines. *Fn.* 779.

Pet. Mus. 35. n. 321. Papilio fritillarius major, lineis subtus argenteis.

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[730] See no. 1074.

[731] See Ch. *A small fauna of Sweden.*

[732] See the com. to no. 484.

Raj. Ins. p. 119. n. 4. Papilio major, alis fulvis: maculis nigris in supina parte, prona transversis: areis argenteis depictis.

Inhabits gardens.

DESCR. This butterfly falls among the larger species. Wings deep yellow above; forewings with black striae and spots; hindwings with lines and behind them a double row of black, rather large spots. Forewings deep yellow, with black blotches and spots. Hindwings greenish towards base, with undulating, silvery fasciae, posteriorly inclining to deep yellow with a double row of rather large blackish spots.

1065. PAPILIO *aglaja* [*Speyeria aglaja* (Linnaeus, 1758). Eng. Dark green fritillary, Sw. Ängspärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, red-yellow, with black maculae; 21 silvery maculae beneath. *Fn.* 780.

Mouff. Angl. p. 969.

Lat. p. 101. f. 3. 4. n. 10.

Aldr. Ins. p. 245. t. 246. f. 8. 9.

Pet. Mus. p. 35. n. 320. Papilio frittilarius, major maculis subtus argenteis.

Raj. Ins. p. 119. n. 5. Papilio major, alis fulvis, supina parte maculis crebris, prona etiam argenteis eleganter pictis.

Inhabits gardens.

DESCR. Posterior wings anteriorly greenish beneath and posteriorly with a greenish margin. 27 silvery maculae on each wing, of which the first one is falcate.

1066. PAPILIO *cydippe* [*Fabriciana adippe* (Denis & Schiffermüller, 1775). Eng. High brown fritillary, Sw. Skogspärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, deep yellow, with black maculae; beneath 23 silvery maculae.

Inhabits meadows.

DESCR. Very closely resembles the dark green fritillary[733] mentioned above, in all aspects, but posterior wings are scattered with about 6 silvery maculae beneath; then there is a quasi-fascia consisting of 7 silvery maculae; finally, a quasi-fascia formed by 6 or 7 round, reddish rusty brown maculae, of which 2, 4, 5 have a silvery spot as a pupil; lastly 7 silvery maculae at posterior margin.

1067. PAPILIO *niobe* [*Fabriciana niobe* (Linnaeus, 1758). Eng. Niobe fritillary, Sw. Hedpärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, deep yellow, with black maculae, beneath with pale maculae and three silvery, ocellate spots.

Inhabits meadows.

DESCR. Very similar to the preceding species regarding the upper surface of the wing. Hindwings beneath dusky deep yellow, transversely full of veins, with many maculae. Behind these maculae, a transverse row of maculae consisting of 6 or 7 red-brown maculae tending to rusty brown, of which 2, 4, 5 have a pupil or silvery spot. Is it only different from the previous species in terms of sex?

[733] See no. 1065.

1068. PAPILIO *lathonia* [*Issoria lathonia* (Linnaeus, 1758). Eng. Queen of Spain fritillary, Sw. Storfläckig pärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings dentate, red-yellow, maculate with black having 37 silvery maculae beneath. *Fn.* 781.

Hoffm. t. 12. f. 11.

Merian. Europ. 2. t. 157. *f. superior.*

Rob. Icon. t. 12.

Pet. Mus. p. 51. n. 520. Papilio rigensis aureus minor, maculis argenteis subtus perbelle notatus.

Raj. Ins. p. 120. n. 6. nomine Petiveri.

Occurs in Uppsala; abundant.

DESCR. All wings red-yellow above, with many punctiform, distinct, black maculae. The larger wings are deep yellow beneath, with many black maculae or spots, near tips marked with 7 silvery spots, of which three are larger. The hindwings have many silvery maculae beneath, of which 19 are rather large, but 11 rather small or more like dots. Actually, close to posterior margin there are seven silvery, subovate maculae, inside these seven silvery spots at alar inner margin there are two silvery lines, in addition to these there are seven larger silvery maculae on the disc, excepting other smaller ones.

1069. PAPILIO *euphrosyne* [*Boloria euphrosyne* (Linnaeus, 1758). Eng. Pearl-bordered fritillary, Sw. Prydlig pärlemorfjäril; Fam. Nymphalidae, Eng. Brush-footed butterflies, Sw. Praktfjärilar], wings rounded, dentate, red-yellow, with black maculae; 9 silvery maculae beneath. *Fn.* 782.

Pet. Mus. p. 35. n. 322. Papilio fritillarius maculatus praecox.

Raj. Ins. 120. n. 7. Papilio fritillarius major (rectius minor) alis fulvis superne maculis nigris tesselatis.

Inhabits meadows; less abundant.

DESCR. This species is certainly the smallest among those that enjoy silvery spots. Wings deep yellow, beneath undulating with black, above reticulate with black. Posterior wings have 7 somewhat rounded, equal, white maculae at margin; in the middle of the disc, there is a single silvery macula beneath, larger than the others; it is oblong, blunt at both ends, and placed in the palish fascia; finally, the ninth silvery macula is found on the same side at alar base.

§ § § § § PLEBEJI

1070. PAPILIO *betulae* [*Thecla betulae* (Linnaeus, 1758). Eng. Brown hairstreak, Sw. Eldsnabbvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings subcaudate, fuscous; forewings with a reniform, red-yellow macula, beneath deep yellow with a red-yellow fascia.

Papilio, six-legged; hindwings angular-dentate, beneath flame-coloured with light yellow and white. *Fn.* 792.

Hoffn. Ins. t. 12. f. 1.

Pet. Gaz. p. 18. t. 11. f. 10. Papilio minor fuscus, duplici linea inferne praeditus (*Mas*).

f. 11. Papilio minor fuscus: campo aureo, linea gemina subtus ornatus. (*Faemina*).

Raj. Ins. p. 120. n. 10. Papilio minor, alis exterioribus nigricantibus, macula in medio lata arcuata fulva.

Lives on birch; occurring especially in Småland.

DESCR. Wings marked beneath with a posteriorly attenuated fascia bordered by a white line.

1071. PAPILIO *pruni* [*Satyrium pruni* (Linnaeus, 1758). Eng. Black hairstreak, Sw. Busksnabbvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings subcaudate, fuscous above; a marginal red-yellow fascia beneath, punctate with black on each side.

Pet. Gaz. t. 11. f. 10.

Raj. Ins. 130. n. 9?

Lives on *Prunus*.

DESCR. All wings fuscous above. Posterior wings caudate and in front of cauda 2 or 3 crescent-shaped, rusty brown maculae. All dark ash-grey beneath with a transverse line. Hindwings with a red-yellow fascia inside posterior margin; both margins of the fascia with black spots.

1072. PAPILIO *quercus* [*Favonius quercus* (Linnaeus, 1758). Eng. Purple hairstreak, Sw. Eksnabbvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings subcaudate, blue above, ash-grey beneath with white line and double anal, red-yellow spot.

Pet. Gaz. t. 11. f. 9.

Raj. Ins. 129. n. 8.

Lives on English oak.

DESCR. All wings fuscous above with a bluish disc. All greyish white beneath, with a transverse, repand white line; posteriorly caudate and in front of the cauda a red-yellow twin eyespot, with a black pupil.

1073. PAPILIO *arion* [*Phengaris arion* (Linnaeus, 1758). Eng. Large blue, Sw. Svartfläckig blåvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings without cauda, fuscous above with blue disc and jet-black maculae, beneath with grey-white, ocellate spots.

Occurs around us; very rare.

DESCR. Appearance as that of the silver-studded-blue,[734] but twice the size. Wings fuscous above with a blue disc. Forewings covered with seven black spots, which are crowded together on the disc. All ash-greyish beneath, greenish at base, and posteriorly a double row of black spots; furthermore black, ocellate spots with white irises, 7 spots on forewings and 10 on hindwings, except for the small black crescent.

[734] See no. 1074.

1074. PAPILIO *argus* [*Plebejus argus* (Linnaeus, 1758). Eng. Silver-studded-blue, Sw. Ljungblåvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings caudate,[735] blue; posterior wings with a rusty brown border beneath; eyespots silvery blue.

Papilio, six-legged; wings rounded, absolutely entire, blue; numerous eyespots beneath. *Fn.* 803.

Hofn. Ins. 1. t. 4.

Mouff. Lat. p. 105. *f. ult. duae* & p. 106. f. 1. Papilio diurnarum minima quarta.

Jonst. Ins. t. 6. *f. penult.*

Merr. Pin. 144. Papilio alis oculatis cyaneum coelestem spirantibus.

Mer. Europ. 153.

Rob. Ic. t. 17.

Pet. Mus. p. 34. n. 318. Papiliunculus caeruleus, ocellis plurimis subtus eleganter adspersus.

Gaz. p. 55. t. 35. f. 1. Papiliunculus caeruleus vulgatissimus.

Raj. Ins. p. 31. n. 11. Papilio parva, alis superne purpuro-caeruleis, subtus cinereis: maculis nigris circulo purpurascente cinctis, punctisque nigris pulchre depictis.

De Geer. Ins. t. 4. f. 14. 15.

Lives on buckthorn.

DESCR. Wings blue above; numerous black eyespots beneath, and beneath on hindwings marginal, red-yellow maculae crowded together as a fascia with silvery blue pupils.

1075. PAPILIO *idas* [*Plebejus idas* (Linnaeus, 1761). Eng. Idas blue, Sw. Hedblåvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings without cauda, blue; posterior wings with a terminal, red-brown, ocellate fascia, with silvery blue pupils beneath.

Papilio, six-legged; wings rounded, absolutely entire, dusky black, with numerous eyespots beneath. *Fn.* 804, 805.

Raj. Ins. 131. n. 12. Papilio parva, alis supinis pullis cum linea sive ordine macularum lutearum ad imum marginem.

Inhabits heathy regions.

DESCR. Appearance, size, and colour as those of the previous species, from which it differs by the colour of the upper lateral part of the wings, which is not blue as in that one, but entirely dusky black. Hindwings posteriorly above with an indistinct fascia, consisting of rusty brown eyespots with a black pupil. All wings beneath similar to the preceding species, but paler and with a whitish fascia, in front of the posterior red-brown one, consisting of silvery blue eyespots. Is it only different from the previous species in terms of sex?

[735] Obviously incorrect, but written as such in *Fn. Su.* (1761) but not in *Fn. Su.* (1746), no. 803. Probably a misprint.

1076. PAPILIO *argiolus* [*Celastrina argiolus* (Linnaeus, 1758). Eng. Holly blue, Sw. Tosteblåvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings without cauda, blue above, black-margined, bluish beneath with scattered black spots.

Inhabits heathy regions.

DESCR. Same stature as the two previous species. All wings blue above with a black border; all bluish grey-white beneath and without eyespots. Forewings posteriorly with a row of 5 spots that are rather oblong, black, minute. Hindwings with 10 small, black, scattered spots.

1077. PAPILIO *rubi* [*Callophrys rubi* (Linnaeus, 1758). Eng. Green hairstreak, Sw. Grönsnabbvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings dentate, subcaudate, fuscous above, green beneath.

Papilio, six-legged; wings rounded, absolutely entire, beneath green, without maculae. *Fn.* 806.

It. Oel. 7. Papilio argo similis, alis immaculatis supra cyaneis.

Pet. Gaz. p. 6. t. 2. f. 11. Papilio minor: superne fuscus, inferne viridis.

Lives on spiny *Rubus*.

DESCR. Body ash-grey. Antennae and legs black with several white rings. Wings dusky blackish above, green beneath. On hindwings, near upper margin, a white spot. Eyes, anteriorly and posteriorly, marked with a thin, white line. Same size as the silver-studded-blue.[736]

1078. PAPILIO *phlaeas* [*Lycaena phlaeas* (Linnaeus, 1761). Eng. Small copper or American copper, Sw. Mindre guldvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings weakly angular, red-yellow, punctate with black, beneath marginated with white; hindwings greyish white.

Papilio, six-legged; wings rounded, red-yellow, with black spots on each side. *Fn.* 807.

Merian. Gall. t. 164.

Pet. Mus. p. 34. n. 317. Papilio minor aureus ex nigro permaculatus.

Raj. Ins. 125. n. 20. Papilio parva, alis exterioribus circa margines nigricantibus, media parte rufis, serici instar splendentibus, maculis longis nigris pictis.

Inhabits the meadows of Västmanland.

DESCR. Body smaller than that of the following species. Forewings red-yellow above, with a black margin. Black confluent spots everywhere on the disc. Deep yellow beneath on the disc, with black spots surrounded by a white ring. Hindwings fuscous above; at the rear a red-yellow fascia posteriorly dentate; beneath greyish white with small fuscous spots; posteriorly a linear, red fascia. At anal angle, the posterior wings are emarginate, just as in the following species.

[736] See no. 1074.

1079. PAPILIO *virgaureae* [*Lycaena virgaureae* (Linnaeus, 1758). Eng. Scarce copper, Sw. Vitfläckig guldvinge; Fam. Lycaenidae, Eng. Gossamer-wing butterflies, Sw. Juvelvingar], wings weakly angular, red-yellow, fuscous-margined, with black spots beneath, and hindwings with some white spots.

Papilio, six-legged; wings rounded, red-yellow, beneath punctate with white. *Fn.* 808.

Pet. Gaz. 22. t. 14. f. 3. Phalaena minor nostras fulva, alis limbo nigro insignitis?

Occurs with the preceding species in the meadows of Västmanland.

DESCR. The illustration by *Petiver* would be accurate, if the antennae had been different. Appearance and size entirely as those of the preceding species, but wings are red-yellow above or of a fiery colour, shining, without maculae,[737] and only black at margin. Forewings marked beneath with some black spots, of which the middle two are merged. Hindwings greyer beneath with black spots, and some larger, white ones. At posterior margin near anus, the wings are denticulate and marked with semi-circular, red-yellow maculae. Male lacks black maculae above. Female, however, is scattered with the most abundant maculae.

1080. PAPILIO *comma* [*Hesperia comma* (Linnaeus, 1758). Eng. Silver-spotted skipper or Common branded skipper, Sw. Silversmygare; Fam. Hesperiidae, Eng. Skippers, Sw. Tjockhuvuden], wings absolutely entire, divaricate, red-yellow, with white spots and a black line. *Fn.* 793.

Act. Ups. 1736. p. 23. n. 33. Papilio alis erectis ovatis integerrimis testaceo-griseis, tesserulis albis linea nigra sub superioribus.

Inhabits meadows.

DESCR. Forewings concolorous, light yellow, apically darkening with pale maculae. In the middle of the upper surface of the wing, there is a black, linear blotch, naked at margin, slightly silvery. Hindwings light yellow above, with paler maculae, darkening at margin. Grey beneath with whitish, quadrate maculae.

1081. PAPILIO *malvae* [*Pyrgus malvae* (Linnaeus, 1758). Eng. Grizzled skipper, Sw. Smultronvisslare; Fam. Hesperiidae, Eng. Skippers, Sw. Tjockhuvuden], wings denticulate, divaricate, black punctate with white. *Fn.* 794.

Hoffn. Ins. 4. t. 2. *f. ult.*

Pet. Mus. 35. n. 325. Papiliunculus fuscus punctis plurimis albicantibus.
Gaz. 56. t. 36. f. 6. Papilio fuscus &c.

Act. Ups. 1736. p. 23. n. 34. Papilio alis erectis obtusis dentatis nigris: punctis albis tesselatis.

It. Oeland. 3. Papilio hexapus, alis divaricatis denticulatis nigris albo-punctatis.

Inhabits meadows at the beginning of spring.

DESCR. Same size as the silver-studded-blue.[738] Whole body and wings dusky black above. Wings with countless small white maculae or quadrate spots, scattered at the outer part, and with a quasi-dentate margin, with white interjacent maculae. Body and wings grey tending to ash-grey beneath;

[737] Male only. Another, correct description is given below.

[738] See no. 1074.

the wings themselves beneath with white irregular maculae of different size. Antennae clavate, fuscous above, whitish beneath, with tiny white rings. Wings are not erect but divaricate, almost as those of the lappet.[739]

1082. PAPILIO *tages* [*Erynnis tages* (Linnaeus, 1758). Eng. Dingy skipper, Sw. Skogsvisslare; Fam. Hesperiidae, Eng. Skippers, Sw. Tjockhuvuden], wings subdenticulate, divaricate, fuscous, weakly punctate with white.

Inhabits meadows; rather rare.

DESCR. Small, same size as the preceding species. Head pilose. Wings laterally fuscous, scattered with whitish, indistinct spots.

Sphinx

1083. SPHINX *ocellata* [*Smerinthus ocellata* (Linnaeus, 1758). Eng. Eyed hawkmoth, Sw. Videsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings angular; hindwings ocellate.

Raj. Ins. 148. n. 2. Phalaena major, corpore crasso, alis amplis: interioribus macula ophthalmoide.

Raj. Ins. 149. n. 3. Phalaena magna cinereo dilute rubente & nigro coloribus varia, cum maculis oculos referentibus in interioribus alis.

Uddm. Diss. 58. f. 11. Phalaena subulicornis elinguis, alis planiusculis cinereis, maculis fuscis, inferioribus ocello nigro iride caecia, pupilla nigro-caerulea.

Lives on meadowsweet and willow.

DESCR. Thorax ash-grey, with a dorsal dusky red-brown macula. Upper wings cloudy, weakly fuscous at posterior margin, red beneath at base. Lower wings red above having a blue eyespot with a black iris near anal angle. Antennae white.

1084. SPHINX *populi* [*Laothoe populi* (Linnaeus, 1758). Eng. Poplar hawkmoth, Sw. Poppelsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings dentate, swept back; posterior wings rusty brown at base; anterior ones with a white spot.

Phalaena, antennae prismatic, tongue coiled; wings rather flat, erose, grey; antennae white. *Fn.* 810.

De Geer. Ins. 1. t. 8. f. 5.

Lives on aspen and green-leaved willow.

DESCR. All wings ash-grey, posteriorly dentate. Upper wings with rather dark fasciae and a white spot in the middle. Lower wings rusty brown above at base.

[739] See no. 1110.

1085. SPHINX *tiliae* [*Mimas tiliae* (Linnaeus, 1758). Eng. Lime hawkmoth, Sw. Lindsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings angular, cloudy greenish, rather saturated, almost fasciate; posterior wings deep yellow tending to brick-red above.

Frisch. Ins. 7. t. 2.

Lives on lime.

DESCR. Body and upper wings greenish above, in the middle a fascia or two rather dark maculae; these wings are posteriorly repand or trilobed. Posterior wings deep yellow tending to brick-red above, with a rather dark anal angle. Posterior margin of all wings, both above and beneath, rusty brown.

1086. SPHINX *euphorbiae* [*Hyles euphorbiae* (Linnaeus, 1758). Eng. Spurge hawkmoth, Sw. Vitsprötad skymningssvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings entire, fuscous, with a light yellow band on upper wings, a red one on lower wings.

Phalaena larvae Sphingis, with scabrous, caudal cornicle. *Fn.* 1356.

De Geer. Ins. 1. t. 8. f. 6–11.

Udd. Diss. 57. Phalaena, prismicornis spirilinguis, alis planiusculis fuscis: fascia longitudinali albida.

Frisch. Ins. 2. t. 11.

Lives on spurge and bedstraw.

DESCR. Upper wings palish grey, with a longitudinal, rough, pale or whitish yellow area, and red-brownish at posterior margin. Posterior wings blood-coloured, at base jet-black, and a linear jet-black fascia in front of posterior margin. All wings blood-coloured, with a black macula on the disc of forewings. Antennae white.

1087. SPHINX *ligustri* [*Sphinx ligustri* Linnaeus, 1758. Eng. Privet hawkmoth, Sw. Ligustersvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], posterior wings flesh-coloured, with black fasciae; abdomen red, black-belted.

Phalaena, antennae prismatic; tongue coiled, fuscous; lower wings and abdomen with transverse red fasciae. *Fn.* 809.

Mouff. Lat. p. 91. f. 2. & p. 182. f. 1. Eruca glabra viridium nobilissima.

Jonst. Inst. t. 19. n. 1. 2. Eruca viridis Ligustrina.

Jacob. Mus. Dan. 1. f. 5. n. 24. t. 1. f. 24. *exterior.* Eruca glabra & cornuta prima.

Jung. Verm. 108. Eruca virgata sive calcarisata.

Swam. Bibl. t. 29. f. 1. 2. 3.

Merian. Europ. 3. p. 54. t. 23. *gallic.* t. 124.

Alb. Ins. t. VII.

Goed. Belg. 1. p. 93. f. 24 (*Papilio. non larva*).

List. Goed. p. 71. t. (*Papilio. non larva*).

Reaum. Gall. 2. t. 20 f. 1. 2. 3. 4. Sphinx.

Raj. Ins. 144. n. 1. Phalaena maxima cauda, alis angustis longis acutis, abdomine roseo: sex septemve areolis transversis nigris.
p. 362. n. 62. Eruca glabra maxima, viridium nobilissima mouffeto.
De Geer. Ins. 1. t. f. 6.
Lives on privet, lilac, ash, honeysuckle, and willow.
Larva, with 16 legs, glabrous; cauda horned.
DESCR. Thorax black above. Upper wings sooty. White coloured stripe from rostrum through the whitish thoracic sides and the outer alar margin. Many black striae. Alar tip with a white blotch; posterior margin with white undulations. Lower wings weakly flesh-coloured, with two black fasciae. Abdominal sides red, with black fasciae except for the dorsal line, and three ventral, black ones. Antennae white.

1088. SPHINX *pinastri* [*Sphinx pinastri* Linnaeus, 1758. Eng. Pine hawkmoth, Sw. Tallsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings entire, grey-white. Upper wings with three or four thin scattered black lines; abdomen greyish white, belted.
De Geer. Ins. 1. t. 10. f. 1. 2. 3.
Gadd. Diss. 28. Phalaena fusco-cinerea subulicornis, thorace hirsuto griseo: lineis duabus nigris longitudinalibus.
Lives on pine.
DESCR. Body grey-white. Sides of thorax with a black line. Abdomen grey-white with sides banded with alternating white and black belts. Upper wings grey-white, marked medially with three thin black lines crowded together, in addition a black blotch close to base and tip. Lower wings above and entirely beneath ash-grey; posterior alar margin white, interrupted with fuscous.

1089. SPHINX *elpenor* [*Deilephila elpenor* (Linnaeus, 1758). Eng. Elephant hawk or Elephant hawkmoth, Sw. Större snabelsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings entire, varying with greenish and purple. Posterior wings jet-black at base.
Phalaena, antennae prismatic; tongue coiled; wings varying with green, red-yellow, and purple. *Fn.* 811.
De Geer. Ins. 1. t. 9. f. 8. 9.
Frisch. Ins. 12. t. 1.
Lives on rosebay willowherb and touch-me-not balsam.
DESCR. Very similar to the following species, but body twize the size. 4 red thoracic, longitudinal, arcuate lines. Abdominal dorsum with a longitudinal, red line. Snow-white spot medially on upper wing, which also has an inner white margin.

1090. SPHINX *porcellus* [*Deilephila porcellus* (Linnaeus, 1758). Eng. Small elephant hawkmoth, Sw. Mindre snabelsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], wings entire, varying with yellowish and purple; posterior wings fuscous at base.

Roes. Ins. 1. *Phal.* 1. t. 5.

Lives on rosebay willowherb and touch-me-not balsam, as the previous species, but this larva lacks an anal cornicle.

DESCR. The difference is stated in the preceding species. This one has an outer margin, decorated with red.

1091. SPHINX *stellatarum* [*Macroglossum stellatarum* (Linnaeus, 1758). Hummingbird hawkmoth, Sw. Större dagsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], abdomen tufted; sides varying with white and black; posterior wings rusty brown.

Raj. Ins. 133. Papilio velocissima, alis brevibus, corpore crasso, inter volandum stridorem edens.

Reaum. Ins. 1. t. 12. f. 5. 6.

Lives on bedstraw. When hovering it extracts very swiftly the nectar from the flowers with its tongue.

DESCR. Same size as a bumble bee.[740] Body black. Abdominal sides tufted; beard jet-black, white-tipped. Anus with a black, fastigiate beard. Upper wings dusky ash-grey, with one or two black streaks. Lower wings rusty brown. Antennae white.

1092. SPHINX *fuciformis* [*Hemaris fuciformis* (Linnaeus, 1758). Eng. Broad-bordered hawkmoth, Sw. Humledagsvärmare; Fam. Sphingidae, Eng. Sphinx moths or Hawkmoths, Sw. Svärmare], abdomen tufted, black, with a whitish yellow fascia; wings hyaline, black-margined.

Roes. Ins. 3. t. 38. & 4. t. 34. f. 1–4.

Lives on honeysuckle.

DESCR. Same size as a bumble bee.[741] Body grey. Abdomen black-belted, with a lateral whitish beard behind the belt. Anus with a black beard. Antennae black.

1093. SPHINX *apiformis* [*Sesia apiformis* (Clerck, 1759). Eng. Hornet moth, Sw. Större poppelglasvinge; Fam. Sesiidae, Eng. Clearwing moths, Sw. Glasvingar], abdomen light yellow; segments with jet-black margins; thorax black, with two light yellow maculae.

Papilio, antennae awl-shaped; tongueless; wings lanceolate, white, with black veins. *Fn.* 813.

Papilio apiformis, abdomine aureo. *Act. Ups.* 1736. p. 26 n. 85.

Inhabits groves; ubiquitous.

[740] See the com. to no. 839.

[741] See the com. to no. 839.

DESCR. The same size and appearance as a bee[742] or hornet.[743] Wings hyaline, with veins inclining to deep yellow or fuscous, black at posterior margin. Antennae black, beneath white. Abdomen with deep yellow segments, except for the first and fourth, which are entirely black and black-margined. Thorax black, with lateral, light yellow maculae. Legs spinose.

1094. SPHINX *culiciformis* [*Synanthedon culiciformis* (Linnaeus, 1758). Eng. Large red-belted clearwing, Sw. Mygglasvinge; Fam. Sesiidae, Eng. Clearwing moths, Sw. Glasvingar], abdomen tufted, with a red-yellow belt; wings hyaline with black margin and fascia.

Phalaena, antennae pectinate; wings slightly linear, fuscous. *Fn.* 817.

Occurs around us; rather rare.

DESCR. Same appearance and size as a bee.[744] Antennae black, short, pectinate. Body fuscous. The 4th abdominal segment red-yellow; 2 sides with a red-yellow blotch. Alar base and palps red-yellow. Frontal blotch is snow-white behind the eyes.

1095. SPHINX *vespiformis* [*Synanthedon vespiformis* (Linnaeus, 1761). Eng. Yellow-legged clearwing, Sw. Ekglasvinge; Fam. Sesiidae, Eng. Clearwing moths, Sw. Glasvingar], abdomen tufted, black, with three posterior light yellow-margined segments; head with a light yellow ring.

Inhabits groves.

DESCR. Size as that of the following species, but up to twice the size. Body entirely black, but three abdominal posterior segments with a light yellow margin. Wings the same size as the following species, but with a whitish yellow macula. Head surrounded by a deep yellow ring.

1096. SPHINX *tipuliformis* [*Synanthedon tipuliformis* (Clerck, 1759). Eng. Currant clearwing, Sw. Vinbärsglasvinge; Fam. Sesiidae, Eng. Clearwing moths, Sw. Glasvingar], abdomen tufted, black, with every other segment light yellow marginally.

Inhabits groves and gardens.

DESCR. Same size as the common house mosquito.[745] Thorax deep yellow beneath, and above with a deep yellow line in front of wings. Wings hyaline with black veins, tip, and fascia. Body black, but every other abdominal segment light yellow marginally, with the last ring, often double, light yellow.

[742] Linnaeus only refers to *Apis*, see nos. 1684–1719.

[743] Linnaeus only refers to *Vespa*, see nos. 1670–1683.

[744] Linnaeus only refers to *Apis*, see nos. 1684–1719.

[745] See no. 1890.

1097. SPHINX *filipendulae* [*Zygaena filipendulae* (Linnaeus, 1758). Eng. Six-spot burnet, Sw. Sexfläckig bastardsvärmare; Fam. Zygaenidae, Eng. Burnet moths or Forester moths, Sw. Bastardsvärmare], upper wings cyaneous, with six red spots; lower wings red, without maculae. [*Fn.* 814.]

Phalaena, antennae awl-shaped; tongue coiled; upper wings almost blue, with six red spots; lower wings entirely red.

Mouff. Angl. p. 966.

Lat. p. 97. *f. infim.* Phalaena pratensis 1.

Jonst. Inst. t. 7. ord. 3. Phalaena minima pratensis 1.

t. 6. Papil. tab. 9. Aldr. n. 7.

Goed. Belg. 2. p. 126. t. 31. f. 1. 3. 4. Rara.

List. Goed. p. 100. f. 37.

Mer. Eur. 2. p. 27. t. 17. *gallic.* t. 67.

Alb. Inst. t. 82. f. C. D. Leopardus sylvestris.

Reaum. Gall. 1. t. 12. f. 14. 15. 16. 17.

2. t. 2. f. 2.

Petiv. Mus. p. 36. n. 330. Papilionoides virescens, maculis quinque miniatis ornatus.

Raj. Ins. 134. n. 2. Papilio pratensis, alis pendulis, minor, corpore crasso nigro, alis externis ex caeruleo nigricantibus cum maculis sanguineis.

Merr. Pin. 198. Papilio minor cum alis externis nigris quinque maculis, internis rubris.

Commonly called "leopard".

Lives on *Filipendula*; flies during the day, but slowly.

DESCR. Pupa lurks within a membranous, light yellow sac. Male sphinx enjoys six red maculae on the outer wing. Female, however, has five maculae, two namely merged at base.

DESCR. Body and legs black, dressed with black wool. Antennae anteriorly ascending towards tip and gradually broader (but not clavate), attenuated and flattened at tip. Upper wings shining, green-blue, with three pairs of ovate, scarlet spots. Lower wings scarlet with shining blue margin.

1098. SPHINX *statices* [*Adscita statices* (Linnaeus, 1758). Eng. Forester or Green forester, Sw. Ängsmetallvinge; Fam. Zygaenidae, Eng. Burnet moths or Forester moths, Sw. Bastardsvärmare], green-blue, shining; lower wings fuscous.

Phalaena, antennae pectinate; tongue coiled; green-blue shining; lower wings fuscous. *Fn.* 838. *It. W:goth.* 27.

Raj. Ins. 134. n. 3. Papilio parva, alis pendulis.

Inhabits fields where sea thrift is abundant, as at Liljeholmen near Uppsala.

DESCR. Body the size of a rather large horsefly,[746] green-blue, shining. Upper wings beneath and lower wings on each side fuscous. Antennae of male pectinate.

[746] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

PHALAENA

1099. PHALAENA BOMBYX *pavonia* [*Saturnia pavonia* (Linnaeus, 1758). Eng. Emperor or Emperor moth, Sw. Mindre påfågelsspinnare; Fam. Saturniidae, Eng. Wild silk moths, Sw. Påfågelspinnare], tongueless; wings outspread, rounded, cloudy grey, with a nictitating somewhat fenestrate eyespot.

Phalaena, antennae pectinate; tongueless; wings rather flat, ash-grey, each with eyespot and fuscous fascia. *Fn.* 835.

Jonst. Ins. t. 8. f. 7.

Reaum. Gall. 1. t. 49. f. 7.

Mouff. Lat. 20. Phalaena tertia.

Raj. Ins. 146. Phalaena major pulchra, maculis ophthalmoidibus in singulis alis singulis.

147. Eruca viridis, rarius pilosa, fulvis sive rubentibus in medio annulis, geranicola. Mouffet. 180.

Pet. Gaz. 53. t. 33. f. 12. Phalaena nigrescens, maculis majoribus, subtus flavescent.

De Geer. Ins. 1. t. 19. f. 7. 8.

Lives on rose, raspberry, and apple.

DESCR. Body fairly stout. Antennae pectinate, lanceolate, ash-grey, broad, and with double rays. All wings varying with deep yellow and rusty brown; each wing, in the middle on each side, with a large, black eyespot having a grey ring, in which a thin white line is inserted. Inside the eyespots, there is a linear, undulating dusky grey fascia near posterior margin.

1100. PH. BOMBYX *tau* [*Aglia tau* (Linnaeus, 1758). Eng. Tau emperor, Sw. Nagelspinnare; Fam. Saturniidae, Eng. Wild silk moths, Sw. Påfågelspinnare], tongueless; wings outspread, brick-red, having a weakly violet eyespot with a spear-shaped, white pupil.

Uddm. Diss. 61. Phalaena alis supra flavis: ocellis caeruleis, pupilla alba angulata.

Act. Stockh. 1749. p. 130. t. 4. f. 8.

Lives on birch.

DESCR. It should be numbered among our largest species. Thorax stout, hirsute. Antennae rusty brown, short, somewhat pectinate. Wings grey or brick-red and in the middle a rather dense, black eyespot with a pupil resembling a white T. Lower wings cloudy beneath, with a rusty brown fascia, and posteriorly a transverse, curved, whitish line.

1101. PH. BOMBYX *populi* [*Poecilocampa populi* (Linnaeus, 1758). Eng. December moth, Sw. Poppelspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless, fuscous; frons pale; wings swept back, without maculae, darkish, with one repand, whitish streak and another that is one and a half times as long.

Roes. Ins. 2. *Phal.* 2. t. 60.

Lives on aspen, hazel, and pomiferous species.

DESCR. Hardly larger than a horsefly,[747] strongly hirsute, entirely fuscous. Thorax anteriorly whitish; hence frons is almost whitish. Upper wings concolorous, with a whitish, repand, markedly flexuous streak near hind parts and another tiny and transverse one at the actual alar base. Lower wings concolorous, also fuscous with a whitish fascia. Alar margins posteriorly ciliate, all punctate with white.

1102. PH. BOMBYX *neustria* [*Malacosoma neustrium* (Linnaeus, 1758). Eng. Lackey or Lackey moth, Sw. Buskringspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], wings swept back, inclining to deep yellow, with two rather whitish fasciae, a single one beneath. *Fn.* 825. *Syst. nat.* 10. p. 500. n. 19.

Goed. Belg. 1. p. 36. t. 10.

List. Goed. 204. t. 89. Bibax.

Mouff. Lat. 188. Neustria major.

Blank. Belg. 48. t. 8. f. J. M.

Reaum. Gall. 2. t. 4. f. 1–11.

β *Bombyx*, tongueless; grey wings swept back; two pale streaks, a single one beneath. *Fn.* 824. & 831. *Syst. nat.* 10. p. 500. n. 20.

De Geer. Ins. 1. t. 13. f. 4–6.

Frisch. Ins. 10. t. 8.

Lives in trees and fields; polyphagous, feeds on willow, hawkweed, knapweed, common lady's mantle, and spurge, gregarious under their tent. It lays copious eggs, crowded together around tree branches forming rings; very well known to us. *It. Oel.* 62.

DESCR. There are two varieties, both of the same species, as is stated by those that examine the metamorphosis, i.e. *De Geer, Schreber, and my son.*[748] The first one has grey wings and two oblique, light yellow fasciae. The other has light yellow wings with a broad, palish grey fascia in the middle and another narrow one at the base and in front of the posterior margin.

1103. PH. BOMBYX *rubi* [*Macrothylacia rubi* (Linnaeus, 1758). Eng. Fox moth, Sw. Gräsulv; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, of a cervine colour, without maculae, with two whitish streaks, none beneath.

Phalaena, antennae pectinate; tongueless; wings ash-grey, each with two outer oblique, transverse, and whitish lines. *Fn.* 830.

Roes. Ins. app. t. 49.

Lives on raspberry.

DESCR. It should be numbered among the rather large species. Body entirely of a cervine colour, in some it is a paler grey; two whitish lines divide the wings obliquely, and posteriorly on the upper wings there is a thin, indistinct, rather dark, very repand, and flexuous line.

[747] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

[748] I.e. Carl Linnaeus the Younger.

1104. PH. BOMBYX *pini* [*Dendrolimus pini* (Linnaeus, 1758). Eng. Pine-tree lappet, Sw. Tallspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, grey, with two ash-grey streaks and a triangular, white spot.

Udd. Diss. 60. Phalaena *Pithyocampus* pecticornis elinguis ferrugineo-cinerea, alis depressis puncto cordato albo.

Frisch. Germ. 10. t. 10.

Lives on the needles of Scots pine.

DESCR. This species falls among the largest species of this group. Body grey. Upper wings with two fasciae a little more ash-greyish, of which the foremost is situated medially on the wing and the other at the posterior end of the wing; both distinct by means of a dark, very sinuous margin. In front of the anterior area on the upper wing, a snow-white, cordate or triangular spot.

1105. PH. BOMBYX *lanestris* [*Eriogaster lanestris* (Linnaeus, 1758). Eng. Small eggar, Sw. Björkspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, rusty brown, with a white streak; upper wings with a white spot and base.

Roes. Ins. 1. *Phal.* 2. t. 62.

Lives on lime, blackthorn, and willow.

DESCR. Body grey or of a cervine colour. Forewings with a white streak posteriorly subdentate. In the middle of the wing, a white spot near lower margin, and a white macula at alar base. Lower wings with a whitish streak and the opposite margin snow-white. Anus woolly, whitish. The other sex enjoys another basal macula and alar light yellow fasciae.

1106. PH. BOMBYX *quercus* [*Lasiocampa quercus* (Linnaeus, 1758). Eng. Oak eggar, Sw. Ekspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, rusty brown, with light yellow streak and white spot.

Udd. Diss. 59. Phalaena pectinicornis elinguis, alis fulvis: fascia flava punctoque albo.

Goed. Belg. 1. t. 7.

Raj. Ins. 142. n. 2. Phalaena maxima fulva, alarum exteriorum superiore medietate intensius colorata.

Lives on oak.

DESCR. In size it falls among the rather large species. Regarding colour some are pale rusty brown, others dark rusty brown. All wings with an arcuate, light yellow fascia on each side. White spot in the middle of the wing; light yellow blotch at base of upper wings. Body pale light yellow beneath.

1107. PH. BOMBYX *dumi* [*Lemonia dumi* (Linnaeus, 1761). Eng. Patrician's shrub moth, Sw. Mjölkörtsspinnare; Fam. Brahmaeidae, Eng. Brahmin moths, Sw. Mjölkörtsspinnare], tongueless, wings swept back, darkish; upper wings with deep yellow spot, fascia, and posterior margin.

Inhabits forests; rather rare. *Dan. Theel.*

DESCR. Same size as the preceding species. Body deep yellow. All wings fuscous above, with a flexuous, deep yellow fascia, anteriorly repand. Upper wings with an almost trigonal, deep yellow spot in front of the fascia. Posterior margin deep yellow on all wings. All wings deep yellow beneath.

1108. PH. BOMBYX *catax* [*Eriogaster catax* (Linnaeus, 1758). Eng. Eastern eggar; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, unicolourous, with a white spot. *Syst. nat.* 10. p. 822.

Occurs in Blekinge.[749]

DESCR. Same size as a horsefly[750] or a rather small lackey.[751] Entirely light yellow, but alar margin not distinctly red-brown. White spot in middle of upper wing. Opposite margin of lower wing is white.

1109. PH. BOMBYX *ilicifolia* [*Phyllodesma ilicifolium* (Linnaeus, 1758). Eng. Small lappet, Sw. Rödbrun bladspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, partially covered,[752] serrate, grey, with posterior margin variegated with white.

De Geer. Ins. 1. t. 14. f. 7–9.

Lives on willow.

DESCR. Same size as the preceding species; stature of the following one, but a quarter of its size. Colour variously grey. The entire wing margin between the teeth is white.

1110. PH. BOMBYX *quercifolia* [*Gastropacha quercifolia* (Linnaeus, 1758). Eng. Lappet or Lappet moth, Sw. Rostfärgad bladspinnare; Fam. Lasiocampidae, Eng. Eggars or Lappet moths, Sw. Ädelspinnare], tongueless; wings swept back, partially covered,[753] dentate, rusty brown, with a black dentate margin.

Reaum. Gall. 2. t. 23.

Frisch. Germ. 3. t. 1. f. 3.

Lives on willow, blackthorn, and grass.

DESCR. Same structure as the preceding species. Antennae blackish, shorter than thorax. Wings rusty brown, with 3 or 4 undulating black streaks. Lower wings dark rusty brown beneath, with a transverse, black streak.

1111. PH. BOMBYX *versicolor* [*Endromis versicolora* (Linnaeus, 1758). Eng. Kentish glory, Sw. Skäckspinnare; Fam. Endromidae, Eng. Glory moths, Sw. Skäckspinnare], tongueless; wings swept back, grey, with black-white streaks; frons white.

Gadd. Satag. 82. Phalaena alis lineis albis & nigris undulatis.

Roes. Ins. app. 39. f. 3.

Occurs around us; rather rare. *Dr Wahlbom.*

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[749] Nowadays not occurring in Sweden, only south of the Baltic Sea.

[750] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

[751] See no. 1102.

[752] I.e. lower wings partially covered by the upper.

[753] See the com. to no. 1109.

DESCR. It falls among the rather large species, very beautiful. Body grey, villous. Antennae black. Thorax rusty brown, anteriorly white; the whiteness ends in a black line. All wings rusty brown, but greyer above. Upper wings with a linear, black fascia, anteriorly white and transverse near base; another posterior fascia, flexuous, white, anteriorly black; three white maculae at posterior angle and at the angular margin near anus. Lower wings deep yellow beneath, with two black streaks and a middle black spot. White, diaphanous macula at outer alar angle.

1112. PH. BOMBYX *vinula* [C*erura vinula* (Linnaeus, 1758). Eng. Puss moth, Sw. Större gaffelsvans; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless; whitish with black spots; wings slightly swept back, full of fuscous veins and striae.

Phalaena, antennae pectinate; tongueless; wings deflexed, whitish, diaphanous, with dark vessels. *Fn.* 819.

Mouff. Lat. p. 18. f. 10. Vinula.

Aldr. Ins. p. 208. f. 1. 3. 6. 7. 8.

Merr. Europ. 3. p. 59. t. 39. *gallice* t. 140.

Goed. Belg. 3. p. 4. t. C.
1. p. 121. t. 65.
2. p. 158. t. 37.

List. Goed. p. 59. t. 20. n. 6. c.

Alb. Ins. t. 11. f. 15.

Frisch. Germ. 6. p. 18. t. 8. Eruca cauda furcata.

Reaum. Gall. 2. t. 21.

Raj. Ins. 153. n. 5. Phalaena major pulcherrima, alis amplis: exterioribus cinereis maculis & lineis nigris eleganter depictis.
n. 3. Eruca bicauda elegantissima, Vinula dicta.

Lives on willow, oak, and aspen, especially the black poplar.

Larva ejects a fluid widely from its special vesicle; it can retract the head within the quadrangular thorax.

DESCR. Thorax white, with numerous black spots. Abdominal dorsum with a line of white quadrate maculae surrounded by black. Wings whitish ash-grey, with rather dark veins and indistinct, undulating streaks; base, however, scattered with black and light yellow spots.

1113. PH. BOMBYX? *fagi* [*Stauropus fagi* (Linnaeus, 1758). Eng. Lobster moth or Lobster prominent, Sw. Ekorrspinnare; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless; wings swept back, red-brown tending to ash-grey, with two linear, deep yellow, flexuous fasciae.

Uddm. Diss. 61.

Act. Holm. 1749. p. 132. t. 4. f. 10–14.

Mouff. Ins. 198.

Occurs on beech; rather rare in southern Sweden.

[DESCR.] Antennae, which resemble those of noctuid moths, can be seen in the collected specimens, but perhaps these are only females. Nevertheless, I have referred this insect to the silkmoths[754] because of its habitus, until I become more confident about it. I have only glimpsed it.

1114. PH. BOMBYX *cossus* [*Cossus cossus* (Linnaeus, 1758). Eng. Goat moth, Sw. Större träfjäril; Fam. Cossidae, Eng. Cossid moths, Carpenter moths, Sw. Träfjärilar], tongueless; wings deflexed, cloudy; thorax posteriorly with a jet-black fascia.

Phalaena, antennae awl-shaped; tongueless; wings depressed, cloudy; abdomen with white rings. *Fn.* 812.

Plin. Hist. 1. 17. c. 24. Cossus.

Mouff. Lat. p. 196. f. 1. Sphondyla rubra.

Mer. Eur. 3. p. 58. t. 36. *gallice* t. 137 & 171.

Goed. Belg. 2. p. 112. f. 33.

List. Goed. p. 105. f. 39.

Alb. Ins. t. XXXV. f. 56.

Reaum. Gall. 1. t. 17. f. 1. 3. 4. 5.

Frisch. Germ. 7. p. 1. t. 1. Eruca terrestris magna.

Raj. Ins. 150. n. 2. Phalaena grandis, alis cinerascentibus: lineolis creberrimis, nigricantibus variis, abdomine annulis transversis nigris & albis versicolore.

p. 351. n. 25. Eruca maxima subterranea raris pilis obsita supina parte tota, excepto capite, rubra, prona flava.

Commonly called "the woodworm".[755]

Lives in old wood tissue.

Larva with 16 legs; hairs scarce.

Pupa inside a sac underground, with dentate pupal segments.

DESCR. Body large. Thorax anteriorly whitish, posteriorly with a jet-black crescent. Wings ash-grey, with most delicately undulating black on each side.

1115. PH. BOMBYX? *bucephala* [*Phalera bucephala* (Linnaeus, 1758). Eng. Buff-tip, Sw. Oxhuvudspinnare; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], almost tongueless; wings deflexed, ash-grey, with an almost ocellate, light yellow macula at tip.

Raj. Ins. 162. n. 14.

Frisch. Ins. 11. t. 4.

De Geer. Ins. 1. t. 13. f. 14–19.

Lives on alder and lime.

DESCR. Size and stature as those of the goat moth.[756] Thorax stout, deep yellow tending to rusty brown. Upper wings ash-grey, anteriorly with a rusty brown streak, posteriorly a blackish rusty brown streak, which is flexuous except terminally. Large, light yellow macula at alar tip. Wings

[754] Lat. *Bombyces.*

[755] Lat. *Cossus.*

[756] See no. 1114.

whitish yellow beneath; upper wings with an interrupted, dark brown margin; lower wings with a rusty brown fascia. Antennae slender.

1116. PH. BOMBYX *ziczac* [*Notodonta ziczac* (Linnaeus, 1758). Eng. Pebble prominent, Sw. Piltandvinge; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], almost tongueless; wings deflexed, dentate on dorsum, and tips with a grey, almost ocellate macula.

De Geer. Ins. 2. t. 22. f. 9–16.

Frisch. Germ. 3. t. 2.

Lives on willow.

DESCR. Stature as that of the preceding species. Thorax posteriorly on each side with an extended lobe. Upper wings of a quasi-scorched colour, with a transverse, dark brown streak, and posteriorly a large, weakly violet macula with a dark brown margin. Inner margin extending as a straight denticle in the middle of the dorsum.

1117. PH. BOMBYX *caerulocephala* [*Diloba caeruleocephala* (Linnaeus, 1758). Eng. Figure of eight, Sw. Blåhuva; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongueless; wings deflexed, grey, with a duplicated, didymous, whitish macula.

Phalaena, tongueless; antennae pectinate; wings deflexed, grey, with a whitish light yellow doubled twin macula. *Fn.* 836.

Merrian Eur. t. 9.

Goed. Belg. 1. p. 116. t. 61. Caeruleo-cephalus.

List. Goed. p. 121. f. 47.

Frisch. Germ. 10. p. 5. t. 3. f. 4. Eruca caeruleo viridis: striis luteis.

Reaum. Gall. 1. t. 18. f. 7. 8. 9.

Raj. Ins. 163. n. 17. Phalaena media habitior, alis exterioribus pullis, duabus tribusque maculis albis, e duobus circellis compositis contiguis notatis.

Lives on pear, hawthorn, and cherry; a plague for gardens, since it destroys the flowers.

DESCR. Body middle-sized. Thorax strongly villous, anteriorly short, with dorsal brushes of hairs. Antennae rusty brown. Upper wings palish grey with two fuscous, repand fasciae, and they are shining more intensely between the fasciae; two pairs of whitish maculae near the thicker margin. Lower wings rather whitish above, ash-greyish beneath with a central black spot. Related to the goat moth[757] because of the antennae, as also to the pebble prominent,[758] both of which bear serrate, lamellose antennae.

[757] See no. 1114.

[758] See no. 1116.

1118. PH. BOMBYX *pudibunda* [*Calliteara pudibunda* (Linnaeus, 1758). Eng. Pale tussock, Sw. Bokspinnare; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], tongueless, cristate; wings whitish ash-greyish, with three linear, undulating, fuscous fasciae.

Phalaena, tongueless; antennae pectinate; wings deflexed, undulating with ash-grey, transverse, rather dark fasciae; head between extended legs. *Fn.* 828.

Merian. Eur. 47.

Reaum. Gall. 1. t. 33. f. 4. 5. 10. 11. 12.

Goed. Belg. 3. p. 33. t. 5.

List. Goed. p. 191. f. 81.

Raj. Ins. 135. n. 7. Phalaena media cinerea, alis oblongis, exterioribus quatuor lineis nigricantibus transversis distinctis.

344. n. 9. Eruca major pulcherrima pilosa e viridi flavicans, quatuor in medio dorso scopulis e flavo albicantibus, cum purpureo penicillo longiore supra caudam.

De Geer. Ins. 1. t. 16. f. 11. 12.

Lives on apricot, apple, chestnut, and pear.

DESCR. Larva with 4 small whitish light yellow brooms medially on dorsum and a caudal purple brush of hairs.

DESCR. Body whitish. Wings whitish; upper wings whitish ash-greyish above, with three blackish, repand streaks, of which the posterior one is strongly undulating.

1119. PH. BOMBYX *fascelina* [*Dicallomera fascelina* (Linnaeus, 1758). Eng. Dark tussock, Sw. Askgrå harfotsspinnare; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], cristate; ash-grey; tongueless; upper wings with two narrow, dusky red-yellow fasciae; scutellum bipunctate, red-yellow.

Phalaena, tongueless, most villous, ash-grey; antennae pectinate; outer wings with thin, indistinct, black lines and a double pale macula. *Fn.* 829.[759]

Mouff. Lat. 189. Antennulata.

Merian. Eur. t. 18. Taraxacum.

List. Goed. p. 192. f. 80.

Goed. Belg. 1. p. 84. t. 36. Eruca fasciculata.

Raj. Ins. 186. n. 8. Phalaena obsolete cinerea, alas corpori velut circumvolvens, pedes primores longa & densa lanugine hirsutos antrorsum longissime porrigens.

334. Phalaena e cinereo albicans, corpore habitiore, antennis plumosis rubentibus, primores pedes cum sedet protendens & alas corpori velut circumvolvens.

344. Eruca nigra media, longis pilis hirsuta, quinque medio dorso innascentibus pilorum longiorum scopulis nigro albo & ex luteo viridi coloribus variis.

[759] See Ch. *A small fauna of Sweden. Fn. Su.* (1761), *Errata*, p. 560, no. 1119: 733 *lege* 783, is a misprint.

Lives on hawkbit, clover, raspberry, and aspen.

Larva pilose, with five dorsal fascicles, single at ears and cauda.

DESCR. Body ash-grey, with three dorsal fascicles: one blackish at thoracic tip, laterally red-yellow, two black above abdominal base. Wings slightly deflexed, ash-grey, with two transverse lines (even a third one at base), undulating, blackish, scattered with deep yellow; a blackish crescent between lines. Legs, especially anterior ones, strongly villous. Tarsi black with white undulations.

1120. [PH] BOMBYX *antiqua* [*Orgyia antiqua* (Linnaeus, 1758). Eng. Vapourer or Rusty tussock moth, Sw. Aprikostofsspinnare; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], tongueless; wings rather flat; upper wings with a white crescent at caudal angle; female apterous. *Fn.* 827.

Goed. Belg. 1. p. 113. t. 59. Antuk peregrinum.

List. Goed. p. 191. f. 79. *faemina*.

Swam. Quart. 183. t. 10. *mas & faemina*.

Act. Ups. 1736. p. 25. n. 74. Papilio alis depressis cinereo-fuscis, antennis pectinatis.

Mer. Eur. 84.

Raj. Ins. 173. n. 24. Phalaena cinerea ventricosa, corpore brevi, alarum expers. 344. Eruca sublutea pilosa, quatuor in medio dorso agminulis seu penicillis pilorum longiorum luteorum, & longo pilorum nigrorum penicillo in cauda.

Reaum. Gall. 1. t. 19. f. 12. 13. 17.

De Geer. Ins. 1. t. 17. f. 13–15.

Lives on plum and lime.

When the male is mating, he carries the apterous female from one tree to another.

DESCR. Male enjoys his ample, cloudy ash-grey wings.

Male: Antennae fuscous, plumose. Upper wings whitish yellow and cloudy fuscous above. On each wing, a white, crescent-shaped macula at caudal angle. These wings turn deep yellow or rusty brown beneath, including lower wings on each side.

Female: Antennae pectinate, ash-grey; wings barely visible, pale.

Larva hirsute, with 16 legs, 4 dorsal whitish fastigiate fascicles, with opposite, single brushes on the sides, and with a single one on cauda; the tip of the brushes at the position of the antennae, legs, and cauda consist of longish pencil-shaped hairs.

1121. PH. BOMBYX *tremula* [*Pheosia tremula* (Clerck 1759). Eng. Swallow prominent, Sw. Pilporslinsvinge; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless, weakly cristate; upper wings of a burnt colour, marked with a denticle at inner margin; antennae rusty brown.

Clerck. Phal. Phalaena tremula.

Lives on aspen. C. *Clerck*.

DESCR. Middle-sized. Antennae slightly pectinate, rusty brown, twice the length of the thorax. Hardly any tongue. Thorax ash-grey, posteriorly almost trilobed, not distinctly fasciculate. Upper wings deflexed and of a burnt colour, blackish at margin on each side. At thinner margin, near thorax, an awl-shaped denticle, with fasciculate hairs. Lower wings whitish. Tibiae most hirsute anteriorly.

1122. PH. BOMBYX *furcula* [*Furcula furcula* (Clerck, 1759). Eng. Sallow kitten, Sw. Grå gaffelsvans; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless; thorax variegated; wings grey, at base and tip white, punctate with black.

Lives here; rather rare.

DESCR. Of a rather small size. Thorax anteriorly pale, moreover punctate with fuscous. Upper wings pale at base, with some black spots; then a broad, ash-grey fascia, which is posteriorly paler, undulating with fuscous and at tip purplish, and after that an alar posterior margin broadly whitish with a marginal row of black spots. Lower wings whitish with a blackish spot beneath.

1123. PH. BOMBYX *coryli* [*Colocasia coryli* (Linnaeus, 1758). Eng. Nut-tree tussock, Sw. Hasselfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongueless; wings anteriorly cloudy grey, posteriorly bluish tending to greyish blue; thorax variegated; antennae light yellow.

De Geer. Ins. t. 18. f. 4. 5.

Roes. Ins. 1. *Phal.* 2. t. 58.

Lives on hazel.

DESCR. Of a rather small size. Antennae brick-red. Body villous, ash-grey. Upper wings anteriorly ash-grey with an ocellate, blackish spot that is white in the middle; wing posteriorly grey-white tending to ash-grey and indistinctly undulating with fuscous; posterior margin with ciliate white spots.

1124. PH. BOMBYX *curtula* [*Clostera curtula* (Linnaeus, 1758). Eng. Chocolate-tip, Sw. Rödgrå högstjärt; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless; wings deflexed, greyish blue, with a white streak and tips with a brick-red macula.

Frisch. Ins. 5. t. 6.

Lives on oak and aspen.

DESCR. Very similar to the poplar tip moth,[760] with retracted head and dark brown frons. Of a rather small size. Upper wings pale, barely red-brownish or greyish blue and with a large red-brown macula at alar tip. Three streaks, of which the one that touches the red-brown macula anteriorly is snow-white. Thoracic back rusty brown.

1125. PH. BOMBYX *anastomosis* [*Clostera anastomosis* (Linnaeus, 1758). Eng. Poplar tip moth, Greater chocolate-tip or Black-backed prominent moth, Sw. Brungrå högstjärt; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], tongueless; wings grey tending to ash-greyish, with three pale streaks, connected weakly by the anastomoses.

Roes. Ins. 1. *Phal.* 2. t. 26.

Lives on willow.

[760] See no. 1125.

DESCR. Related to the chocolate-tip.[761] Thorax anteriorly with a dark brown macula exactly as in the latter. Upper wings dark grey, with three white streaks and a darker fascia running from the base of the second to the tip of the third.

1126. PH. BOMBYX *crataegi* [*Trichiura crataegi* (Linnaeus, 1758). Eng. Pale eggar, Sw. Hagtornsspinnare; Fam. Lasiocampidae, Eng. Eggars, Lappet moths, Sw. Ädelspinnare], tongueless; wings deflexed, ash-grey, rounded, with a darker, very indistinct fascia; anus barbate.

Reaum. Ins. 1. t. 11. f. 10.

De Geer. Ins. 1. t. 44. f. 20. 21.

Clerck. Phal. t. 5. f. 1.

Lives on hawthorn.

DESCR. Stature as that of the muslin moth,[762] small, entirely ash-grey except for the broad alar fascia that is palish ash-grey and more saturated.

1127. PH. BOMBYX *mendica* [*Diaphora mendica* (Clerck, 1759). Eng. Muslin moth, Sw. Grå tigerspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongueless, entirely ash-grey; femora deep yellow.

Clerck. Phal. t. 3. f. 5. Phalaena mendica.

Inhabits forests.

DESCR. Of a rather small size. Antennae more fuscous with a white rachis.

1128. PH. BOMBYX *chrysorrhaea* [*Euproctis chrysorrhoea* (Linnaeus, 1758). Eng. Brown-tail, Sw. Äpplerödgump; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], tongueless; wings deflexed, whitish; anus barbate, deep yellow.

Raj. Ins. 156. n. 1. 15.

343. n. 5.

Frisch. Ins. 3. p. 28. t. 8.

Lives on fruit trees.

DESCR. Middle-sized. Entirely snow-white, except for the very barbate, deep yellow or rusty brown anus. Antennae also snow-white.

1129. PH. BOMBYX *salicis* [*Leucoma salicis* (Linnaeus, 1758). Eng. White satin moth, Sw. Videspinnare; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], tongueless; wings deflexed, white; legs black, annulated with white.

Phalaena, tongueless; antennae pectinate; wings deflexed, white; legs and antennae white. *Fn.* 822.

Goed. Belg. 1. p. 25. t. 3. Procul spectabilis.

[761] See no. 1124.

[762] See no. 1127.

List. Goed. p. 202. t. 87.
Merian. Eur. 1. p. 11. t. 30. Salix caprea latifolia.
Blank. Belg. p. 44. t. 8. f. A. B. C. D.
Frisch. Germ. 1. p. 22. t. 4. *f. bona.*
Reaum. Gall. 1. t. 31. f. 4. 5. 6.
Act. Ups. 1736. p. 124. n. 58. Papilio alis depressis niveis, antennis pennatis, pedibus annulis nigris.
De Geer. Ins. 1. t. 11. f. 13. 14.
Lives on crack willow, which it devastates every year, and also on white poplar and aspen. *It. Scan.* 166. 307.
DESCR. Larva with 16 black legs and with pilose, fuscous warts; 9 doubled longitudinal, yellowish maculae. The description was changed in 1740; VI: 21-VII-4.
This moth is tongueless, snow-white; antennae black; legs black, with white rings. Antennae of male pectinate on each side; hence this can only be a female specimen.

1130. PH. BOMBYX *monacha* [*Lymantria monacha* (Linnaeus, 1758). Eng. Black arches, Sw. Barrskogsnunna; Fam. Erebidae, Subfam. Lymantriinae, Eng. Tussock moths, Sw. Tofsspinnare], tongueless; white wings deflexed, undulating with jet-black; abdominal segments blood-coloured.
Wilk. Pap. 19. t. 3. a. 4.
Occurs in Sweden; rather rare. *T. Bergman.*
DESCR. Middle-sized. Antennae black. Thorax whitish, anteriorly a black crescent, posteriorly a fuscous macula. Upper wings white, with jet-black undulations and with some black spots. Lower wings on each side, and upper wings beneath, whitish ash-grey and with margin whitish with black spots. Head whitish yellow. Abdomen blackish, with all segments scarlet at margin. Legs black.

1131. PH. BOMBYX *caja* [*Arctia caja* (Linnaeus, 1758). Eng. Garden tiger moth or Great tiger moth, Sw. Brun björnspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongueless; wings deflexed, fuscous, with white rivulets; lower wings purple, with black spots.
Phalaena, tongueless; antennae pectinate; wings depressed; upper wings fuscous, with white rivulets; lower wings purple, with six black spots. *Fn.* 820.
Aldr. Ins. 245. t. 246. f. 11. 12.
Mouff. Lat. p. 93. n. 18. *f. suprema.*
p. 186. f. 2. Ambulo secundus.
Hoffn. Ins. t. 14. f. 11. *edit. alt.* 3. 4. 9.
Goed. Belg. 1. p. 74. f. 17.
List. Goed. p. 219. f. 99.
Blank. Belg. p. 57. t. 9. f. A. B. C. Eruca ursina.
Germ. p. 44. t. 9. f. C.
Merian. Eur. 1. p. 2. t. 5. & 160.
Alb. Ins. t. 20. f. C. D.

Frisch. Germ. 2. p. 38. t. 9. Eruca ursina.
Reaum. Gall. 1. t. 36. f. 7. 8.
Mus. Petrop. 1. p. 711. n. 5. Phalaena alis superioribus fuscis: lituris flavis, inferioribus rubris: maculis nigris ornata.
Raj. Ins. p. 151. n. 3. Phalaena major: alis amplis oblongis albicante & fusco coloribus pulchre variegatis, interioribus rutilis cum maculis nigris.
p. 152. n. 7. Eruca densius pilosa magna, pilis longis incanis fulvis & nigris varia, cum punctorum albentium lineis annularibus.
Blank. Herb. t. 87. f. 10. & t. 76. f. 3.
Commonly called "the bear".[763]
Lives on lettuce and related species.
Larva with 16 legs, strongly hirsute; dorsum black; abdomen and sides brick-red, with a longitudinal row of lateral spots or a white spot on the side of each segment.
DESCR. Body and thorax fuscous, posteriorly blood-coloured. Abdomen blood-coloured, with 4 dorsal, transverse, black maculae. Antennae snow-white above. Upper wings concolorous, fuscous, with various white rivulets; hence there are 4 distinct fuscous spots at base and 6 rather large fuscous areas on the disc. Lower wings concolorous, blood-coloured, rather often with 7 fuscous, rounded maculae.

1132. PH. BOMBYX *plantaginis* [*Parasemia plantaginis* (Linnaeus, 1758). Eng. Wood tiger, Sw. Mindre igelkottspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongueless; wings deflexed, jet-black, with light yellow rivulets; lower wings deep yellow, with black maculae.
Phalaena, tongueless; antennae pectinate; wings deflexed, jet-black; upper wings with light yellow rivulets; lower wings red, with black maculae. *Fn.* 821. *It. Gotl.* 273.
Alb. Ins. t. XXI.
Reaum. Gall. 1. t. 31.
Lives on elm.
DESCR. In a way similar to the former species but smaller. Antennae setaceous. Wings jet-black; upper wings with light yellow rivulets, comparably deep yellow at the lower margin; lower wings deep yellow with black maculae. Abdomen black on the back; sides deep yellow with a longitudinal row of jet-black spots. Cervical belt red-yellow. Black longitudinal line on thorax and also on sides.

1133. PH. BOMBYX *aulica* [*Hyphoraia aulica* (Linnaeus, 1758). Eng. Brown tiger moth, Sw. Gulfläckig igelkottspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongue coiled; wings deflexed; upper wings grey, punctate with light yellow, lower wings red-yellow, with black maculae.
Clerck. Phal. t. 4. f. 3. Ph. aulica.
Lives in grass. Larva hirsute, similar to the garden tiger moth.[764] *Dr Haartman.*

[763] Lat. *Ursus.*
[764] See no. 1131.

DESCR. Small. Upper wings grey, with 5 light yellow maculae, of which the anterior one is longer and composed of two, except for some rather small spots at alar tip. Lower wings black, with red-yellow rivulets so that it is not easy to say which colour prevails. Abdomen with fuscous dorsum and fuscous spots on the sides.

1134. PH. BOMBYX *grammica* [*Spiris striata* (Linnaeus, 1758). Eng. Feathered footman or Striped grass bear, Sw. Streckhedspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongue coiled; wings deflexed, deep yellow; upper wings light yellow, striated with black; lower wings with a terminal black fascia. *Syst. nat.* 10. p. 502. n. 31.

Raj. Ins. 169. n. 28.
280. n. 13.

Roes. Ins. 4. t. 21. f. A. D.

Lives on southernwood.[765]

DESCR. Same stature as that of the cinnabar.[766] Upper wings slender, deep yellow, rather pale, with longitudinal, black, somewhat branched striae, beneath darkish at tip. Lower wings saturated deep yellow, posteriorly above there is a broadish, black fascia, beneath a somewhat larger black spot and a black fascia. Abdomen deep yellow, with five rows of black spots. Antennae black, not conspicuously pinnate.

1135. PH. BOMBYX *sannio* [*Diacrisia sannio* (Linnaeus, 1758). Eng. Clouded buff, Sw. Rödfransad björnspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare],[767] tongue coiled; wings deflexed, deep yellow, with blood-coloured margin and fuscous crescent; lower wings without maculae beneath.

Phalaena, antennae pectinate; tongue coiled; wings slightly deflexed with a red margin. Lower wings red-yellow with a fuscous crescent. *Fn.* 837.

Rob. Ic. t. 30. f. 1.

Act. Ups. 1736. p. 23. n. 41. Papilio alis planis fulvis: macula rubente.

Raj. Ins. 228. n. 75. Phalaena minor, corpore crasso e fusco & rubro diversicolore, alis exterioribus obscure rufis sive pullis: duabus maculis nigris notatis, interioribus e pullo & rubris variis.

Lives in grass.

DESCR. Antennae pectinate with a scarlet rachis and fuscous rays. Body pilose with light yellow hair. Venter red between legs. Upper wings outwardly light yellow, beneath cloudy fuscous; in the middle of the wing outwardly a rusty brown crescent or a red-yellow one within the fuscous macula. Lower wings outwardly ash-grey with a fuscous, oblong macula in the middle, and a fuscous arch inside the margin; hence lower wings are outwardly very similar to the upper wings on the inner side. Lower wings pale beneath with a dark macula in the middle. Scarlet hairs surround the margin of all wings.

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[765] I.e. *Artemisia abrotanum*.

[766] See no. 1155.

[767] See no. 1156.

1136. PH. BOMBYX *cribrum* [*Coscinia cribraria* (Linnaeus, 1758). Eng. Speckled footman, Sw. Punkthedspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongue coiled; wings incumbent; upper wings whitish, transversely punctate with black.

Occurs in southern Sweden; rather rare.

DESCR. Same stature and size as those of the cinnabar.[768] Upper wings whitish above; often almost transversely speckled with black. Upper wings beneath and lower wings on each side fuscous. Abdomen posteriorly inclining to deep yellow.

1137. PH. BOMBYX *lota* [*Agrochola lota* (Clerck, 1759). Eng. Red-line quaker, Sw. Rödstreckat backfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongue coiled; wings ash-grey, with a jet-black spot on the disc and posteriorly a purplish, broken streak.

Clerck. Phal. t. 8. f. 1. Ph. lota.

Occurs ubiquitously.

DESCR. Middle-sized. Antennae not conspicuously pectinate. Upper wings ash-grey with some black speckles and two indistinct maculae, only visible at margin; anterior macula orbicular, posterior cordate as in the rustic moths;[769] a large jet-black spot within posterior macula, on inner side. Streak red-yellow or purplish, on posterior side whitish. This streak is fractured once posteriorly. Wings pale ash-grey beneath, with a jet-black spot and a fuscous, indistinct, arcuate streak.

1138. PH. BOMBYX *lubricipeda* [*Spilosoma lubricipedum* (Linnaeus, 1758). Eng. White ermine, Sw. Prickig tigerspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongue coiled; wings deflexed, whitish, punctate with black; abdomen with five rows of black spots.

Phalaena, tongueless; antennae pectinate; wings deflexed, whitish, with black spots; abdomen with five rows of spots. *Fn.* 823.

Goed. Belg. 1. p. 63. t. 23. Lubricipeda.

List. Goed. 210. t. 93.

Frisch. Germ. 3. p. 22. t. 8.

Merian. Eur. 1. p. 16. t. 46. & 65.

Alb. Ins. t. 24. f. 30.

Reaum. Gall. 2. t. 1. f. 7–9.

Act. Ups. 1736. p. 124. n. 59. Papilio alis depressis albis: punctis nigris, ventre quinque punctorum.

De Geer. Ins. 1. t. 11. f. 7. 8.

Lives on pomiferous trees, nettle, orache, and oak.

DESCR. Femora, especially the anterior, dressed with rusty brown wool. Body otherwise white or whitish. Wings scattered with black spots, more numerous on dorsal surface of upper wings.

[768] See no. 1155.

[769] See the com. to no. 1152.

Abdomen deep yellow, with five rows of black maculae, of which one is dorsal, and two each on the sides. Male with whitish yellow wings with an obliquely transverse row of black spots.

1139. PH. BOMBYX *oo* [*Dicycla oo* (Linnaeus, 1758). Eng. Heart moth, Sw. Kretsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings depressed, ash-greyish, marked with "oo".

Roes. Ins. 1. p. 2. t. 63.

Lives on oak; rather rare around us.

1140. PH. BOMBYX *graminis* [*Cerapteryx graminis* (Linnaeus, 1758). Eng. Antler moth, Sw. Gaffelgräsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongue coiled; wings depressed, grey, with branched greyish blue line and crescent.

Phalaena, tongueless; antennae pectinate; wings dusky ash-grey, with greyish blue lines and crescents. *Fn.* 826. 886.

Act. Stockh. 1742. p. 40. t. 2.

Raj. Ins. 228. n. 104.

Lives in grass, i.e foxtail grass, very noxious to us; some years, you never know which, it devastates the fields, and consumes all the hay; hence the price of hay increases and the cattle are endangered. But the meadows have flourished in recent years with flowering plants; previously the ground was covered with grass only. The moth is driven away with the help of crows, pigs, and trenches.

DESCR. It falls among the middle-sized moths. Altogether rather short, hirsute. Upper wings dusky ash-grey, furrowed by some longitudinal greyish blue lines. A grey crescent facing posterior parts of the antennae may be observed, where these ramose striae appear. Above this crescent, there is a grey spot. These wings are dusky ash-grey beneath, with a black spot in the middle. Lower wings pale grey with a fuscous tinge towards margin and a black spot beneath.

1141. PH. BOMBYX *celsia* [*Staurophora celsia* (Linnaeus, 1758). Eng. Malachite moth, Sw. Grönt rotfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings incumbent, green above, with a grey, dentate fascia.

Phalaena, antennae pectinate; wings green above, with a transverse, sinuate-dentate, greyish blue fascia. *Fn.* 816.

Inhabits hop yards in Uppsala; this moth was collected by O. *Celsius*, *Professor primarius of Theology*.

DESCR. It falls among the middle-sized species. Head green. Upper wings green, with a linear, transverse, grey fascia in the middle of the wing; on each wing a single denticle projecting forwards and another opposed, which is directed backwards; apart from another denticle antrorsely projecting at outer alar margin, there is a lunate, grey spot medially on the wing behind the denticle. Posterior margin of wings ends in a similar, greyish blue line, which extends into two denticles antrorsely on each wing. Inner and outer margins of upper wings of a barely visible grey. Thorax and abdomen

are covered with fine greyish blue hairs tending to rusty brown. Lower wings fuscous; beneath a rather dark, transverse, repand fascia, with a darker spot in front of fascia. Antennae rusty brown.

1142. PH. BOMBYX *helvola* [*Agrochola helvola* (Linnaeus, 1758). Eng. Flounced chestnut, Sw. Gulrött backfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], wings red-brown, with weakly fuscous fasciae; posterior part rather broad, red-brownish beneath.

Clerck Phal. t. 4. f. 8. Phalaena helvola.

Occurs in Stockholm.

1143. PH. BOMBYX *libatrix* [*Scoliopteryx libatrix* (Linnaeus, 1758). Eng. Herald, Sw. Flikfly; Fam. Erebidae, Subfam. Scoliopteryginae], cristate; tongue coiled; wings incumbent, dentate-erose, red-brown tending to grey, with two white spots.

Phalaena, tongueless; antennae pectinate; wings ash-grey and light yellow tending to red-brown, lacerated marginally. *Fn.* 833.

Goed. Belg. 1. p. 155. t. 67. Libatrix.

List. Goed. 81. t. 30.

Act. Ups. 1736. p. 25. n. 63. Papilio alis depressis erosis croceo-rufis.

Pet. Gaz. 29. t. 19. f. 4. Phalaena fasciata perelegans extremitate spiralis?

Commonly called "the sipper".[770]

Lives on various plants, especially ground-ivy and willow.

DESCR. Upper wings incumbent, posteriorly erose, grey above, with a linear, arcuate, ash-grey fascia; the posterior fasciole facing backwards consists of a double thin white line; the anterior fasciole is white towards base, arcuate to the fore, narrowish. A white spot at antennal base; another spot at alar base, another medially on the wing at the light yellow area, finally another on each femur. Legs tufted.

1144. PH. BOMBYX *capucina* [*Ptilodon capucina* (Linnaeus, 1758). Eng. Coxcomb prominent, Sw. Ekflikvinge; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare],[771] cristate; tongue coiled; wings deflexed, denticulate, rusty brown, with a dorsal denticle turned backwards and an ash-grey fascia.

Occurs ubiquitously.

DESCR. Middle-sized. Wings deflexed, posterior margin dentate, with a red-brown colour tending to rusty brown and an oblique, fuscous fascia. All wings red-brown above. Moreover, in structure this moth is very similar to the following species.

[770] Lat. *Libatrix*.

[771] See no. 1145.

1145. PH. BOMBYX *camelina* [*Ptilodon capucina* (Linnaeus, 1758). Eng. Coxcomb prominent, Sw. Ekflikvinge; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare],[772] cristate; tongue coiled; wings deflexed, erose, dark brown, all with a dorsal denticle.

Roes. Ins. 1. *Phal.* 2. t. 28.

Lives on lime, apple, birch, and alder. *T. Bergman.*

DESCR. Wings deflexed, erose, dark brown, with three transverse, fuscous lines. Upper wings with an erect tooth medially at the thinner margin; lower wings equipped with a tooth at the end of the thinner margin. There is a fascicle between each pair of alar teeth.

1146. PH. BOMBYX *palpina* [*Pterostoma palpinum* (Clerck, 1759). Eng. Pale prominent, Sw. Näbbspinnare; Fam. Notodontidae, Eng. Prominents, Sw. Tandspinnare], cristate, tongueless; wings deflexed, erose, striate, whitish, with black veins and extended pennate palps.

De Geer. Inst. 1. t. 4. f. 7.

Lives on willow.

DESCR. Middle-sized. Thorax palish, cristate. Palps sword-shaped, extended, markedly blunt, as if broken. Antennae slender. Upper wings pale whitish yellow, striate with blackish undulating veins; at the thinner margin they are falcate, with a ciliated, fuscous lobe; posterior margin denticulate. Lower wings whitish, with a most indistinct fascia. Forewings beneath with a fuscous spot at outer margin. Lower wings white beneath, with fuscous spot and arch.

1147. PH. NOCTUA *humuli* [*Hepialus humuli* (Linnaeus, 1758). Eng. Ghost moth, Sw. Humlerotfjäril; Fam. Hepialidae, Eng. Swift moths or Ghost moths, Sw. Rotfjärilar], tongueless, red-yellow; antennae shorter than thorax. Wings of male snow-white.

Phalaena, antennae setaceous, tongueless; antennae very short, red-brown; thorax light yellow; wings deflexed. *Fn.* 917.

Act. Ups. 1736. p. 124. n. 57. Papilio alis depressis: supra argenteis, subtus obscuris.

De Geer. Ins. 1. t. 7. f. 5. 6.

Raj. Ins. 157. n. 3. Papilio media alis longis, in faemina flavis cum lineis rubentibus, in mare albis.

Lives on the roots of common hops, which it damages badly, not without much damage to the owner. When all roots have been contaminated, the honey dew anoints the whole plant and makes it fruitless. Under the ground and on the actual ground it forms perpendicular cylinders that are a span-long[773] and very similar to an osteocolla.[774]

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[772] See no. 1144.

[773] See the com. to no. 285.

[774] A cellular calcareous tufa which forms as an incrustation on the roots and stems of plants in sandy ground resembling a mass of small bones (*OED*).

DESCR. This moth falls among the largest of our nocturnal species. Eyes blackish. Antennae setaceous, much shorter than thorax; hence very short. Thorax itself light yellow. Abdomen light yellow, reddening. Wings blackish beneath or sooty. Colour of wings above differs very much as to sex.

Wings of male are strongly snow-white above, so that I cannot remember that I have seen anything more whitish. Hindlegs strongly tufted with grey wool.

But wings of female are light yellow above, sometimes without maculae, sometimes with a double oblique line, and sometimes again they are marked with a simple oblique, red-yellow line. I would have said therefore that it was the same as those described by *Goed. Belg.* 1. p. 47. t. 12. and *List. Goed.* 195. t. 82, if the antennae of our specimen, both male and female, had not lacked any kind of beard.

1148. PH. NOCTUA *hecta* [*Phymatopus hecta* (Linnaeus, 1758). Eng. Gold swift, Sw. Dvärgrotfjäril; Fam. Hepialidae, Eng. Swift moths or Ghost moths, Sw. Rotfjärilar], tongueless, deep yellow; antennae shorter than thorax; wings with two whitish, oblique fasciae interrupted into spots.

De Geer. Ins. 1. t. 7. f. 11.

Occurs around us; rather rare. C. *Clerck.*

DESCR. The size of a horsefly.[775] Body light yellow. Wings saturated deep yellow with a short fascia at base; a rather large black, oblique fascia towards hind parts, connected by whitish light yellow spots; antennae very short, deep yellow.

1149. PH. NOCTUA *lupulina* [*Korscheltellus lupulinus* (Linnaeus, 1758). Eng. Common swift, Sw. Lerfärgad rotfjäril; Fam. Hepialidae, Eng. Swift moths or Ghost moths, Sw. Rotfjärilar], tongueless, deep yellow; antennae shorter than thorax; wings with an ash-greyish spot and arch.

Occurs in Sweden; rather rare.

DESCR. Antennae very short, deep yellow. Body deep yellow, twice the size of the preceding species. Upper wings with a fuscous arch outwardly white; medially on the arch, an oblong, fuscous macula, outwardly white.

1150. PH. NOCTUA *pyrina* [*Zeuzera pyrina* (Linnaeus, 1761). Eng. Leopard moth, Sw. Blåfläckig träfjäril; Fam. Cossidae, Eng. Cossid moths or Carpenter moths, Sw. Träfjärilar], smooth, snow-white; antennae shorter than thorax; wings with numerous blue-black spots, thorax with six.

Reaum. Ins. 2. t. 38. f. 1–4.

Roes. Ins. 3. t. 48. f. 5–6.

Lives in branches of pear and alder.

DESCR. The size of the ghost moth.[776] Thorax tomentose-lanate with six blue-black spots. Wings deflexed, white, with numerous, bluish black spots, anteriorly and also at outer margin rounded, the others oblong. Lower wings short, indistinctly punctate, but at lower margin with 7 or 8 more blackish spots.

[775] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

[776] See no. 1147.

1151. PH. NOCTUA *sylvina* [*Triodia sylvina* (Linnaeus, 1761). Eng. Orange swift, Sw. Kamsprötad rotfjäril; Fam. Hepialidae, Eng. Swift moths or Ghost moths, Sw. Rotfjärilar], almost tongueless; antennae short, serrate; wings red-brown inclining to deep yellow, with three variable, whitish fasciae.

Occurs in Stockholm. *Mr. Martewille.*

DESCR. Related to the ghost moth[777] and also of the same size. Antennae barely longer than thorax, serrate. Upper wings red-brown tending to brick-red above, with three whitish deep yellow fasciae: first one at alar base, fractured, and almost falcate on the outer side, at the thinner margin, semi-ovate; second one transverse, bifid in the middle at outer margin, with a branch facing forwards; third fascia indistinct at posterior margin. All wings darkish red-brown beneath, and lower wings also above.

1152. PH. NOCTUA *lucernea* [*Standfussiana lucernea* (Linnaeus, 1758). Eng. Northern rustic, Sw. Skiffergrått jordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongue coiled; smooth; wings depressed, ash-grey, without maculae, with three repand, whitish streaks; collar bifid.

Clerck. Phal. t. 1. f. 7. Phalaena lucernea.

Occurs around us; abundant. Flies towards lighted candles at night.

DESCR. The size of a rustic moth,[778] entirely greyish white. Collar erect, rounded, bifid. Upper wings ash-grey, with three undulating, whitish streaks. Lower wings whitish beneath, with spot and arcuate fascia, both fuscous.

1153. PH. NOCTUA *complana* [*Eilema complanum*[779] (Linnaeus, 1758). Eng. Scarce footman, Sw. Mörkgrå lavspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], tongue coiled; smooth; wings depressed; upper wings greyish white, at outer margin white; lower wings light yellow.

Phalaena, antennae setaceous; wings incumbent; upper wings light yellow at outer margin and lower wings entirely light yellow. *Fn.* 918.

Act. Ups. 1736. p. 25. n. 76.

Lives on oak.

DESCR. It falls among the rather small species, oblong. Upper wings watery ash-grey, but at outer margin light yellow along the whole length. Lower wings also entirely light yellow.

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[777] See no. 1147.

[778] *Phalaena rusticorum* is not a species name mentioned elsewhere in *Fn. Su.* or *Syst. nat.* The expression obviously refers to the concept "rustic moth" used by Linnaeus for different noctuid moths. See nos. 1183, 1188, 1189, 1190, 1191, 1195, 1196, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1211, 1215, 1217, 1219, and 1220.

[779] The correct adjective ending is here *-um*. *Eilema* is a Greek word in the neuter gender and should consequently be treated as a neuter noun also in Latin.

1154. PH. NOCTUA *rubicollis*[780] [*Atolmis rubricollis* (Linnaeus, 1758). Eng. Red-necked footman, Sw. Rödhalsad lavspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], smooth, black; tongue coiled; collar purple; abdomen light yellow.

Phalaena, antennae setaceous; tongue coiled; wings deflexed, blackish; collar and abdomen red-yellow. *Fn.* 881.[781]

Clerck. Phal. t. 2. f. 3. Phalaena rubicollis.

Occurs around us; rather rare.

DESCR. The size of a scarce footman,[782] but entirely jet-black, except for the blood-coloured collar and light yellow venter.

1155. PH. NOCTUA *jacobaeae* [*Tyria jacobaeae* (Linnaeus, 1758). Eng. Cinnabar or Cinnabar moth, Sw. Karminspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], smooth; tongue coiled; wings depressed, fuscous, with a line[783] and two spots; lower wings entirely red.

Phalaena, antennae setaceous; tongue coiled; upper wings fuscous, with a line and two red spots; lower wings red. *It. Oel.* 120. *Fn.* 869.

Mouff. Lat. p. 98. n. 3. t. 97. *f. inter tres infimas suprema* & p. 183. flavescens superior.

Jonst. Ins. t. 7. ord. 3. Phalaena minima pratensis 2.

Charl. Onom. p. 53. Eruca Jacobaea.

Rob. Icon. t. 20.

Alb. Ins. t. XXXIV. f. H. G.

Mer. Europ. 3. p. 56. f. 28.

Goed. Belg. 1. p. 56. t. 9.

List. Goed. p. 134. f. 54.

Blank. Belg. 11. t. 1. f. G. H. I. K. Eruca arenaria.

Germ. 9. t. 1. f. 1. K.

Reaum. Gall. 1. t. 17. f. 4. 5. 6. 7.

Pet. Gaz. p. 52. t. 33. f. 6. Phalaena umbrica, linea maculisque sanguineis.

Raj. Ins. 168. n. 26. Phalaena media, alis exterioribus colore nigro & sanguineo variis, extimo duntaxat margine nigro.

Derrham. Physico-theol. l. 8. c. 6. n. 6. Papilio Jacobaeae.

Lives on ragwort, less abundant around us than in the Dutch dunes.

DESCR. Body black. Antennae setaceous. Wings black; upper wings with a longitudinal, red line at margin, red macula near tip, and another macula close to inner margin; lower wings red, black-margined.

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[780] Linnaeus named this species *rubricollis* in *Syst. nat.* (1758), but in *Fn. Su.* (1761) by mistake wrote *rubicollis*, which spelling, however, had been used by Clerck.

[781] *Fn. Su.* (1761), *Errata*, p. 560, no. 1154: *Fn.* 919 *lege* 916, is a misprint.

[782] See no. 1153.

[783] Lat. *lineis* should be written as *linea*, see *Fn. Su.* (1746), no. 869.

1156. PH. NOCTUA *russula*[784] [*Diacrisia sannio* (Linnaeus, 1758). Eng. Clouded buff, Sw. Rödfransad björnspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], smooth; tongue coiled; wings red-yellow, with red veins and a rusty brown macula; lower wings variegated with black.

Clerck. Phal. t. 4. f. 1. Phalaena russula.

Occurs ubiquitously; abundant.

DESCR. It resembles the clouded buff[785] so closely that it only seems to differ as to sex, but it has not shown this through its metamorphosis. Body red-yellow. Antennae red-yellow. Upper wings red-yellow above, with an indistinct red crescent in the middle, beneath light yellow, varied with black. Lower wings light yellow above, varied with black, beneath light yellow with black maculae.

1157. PH. NOCTUA *trapetzina*[786] [*Cosmia trapezina* (Linnaeus, 1758). Eng. Dun-bar, Sw. Ockragult rovfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], smooth; tongue coiled; wings depressed, yellowish with a very broad, saturated fascia having a black spot and punctate margin.

Occurs ubiquitously.

DESCR. Middle-sized. Entirely pale yellowish. Wings plain, incumbent; upper wings with a very broad, indistinct, rhomboid-shaped, rather saturated fascia, in the middle of which there is a black, minute spot; posterior margin with 7 hardly visible black spots. Wings beneath indistinctly red-brownish posteriorly.

1158. PH. NOCTUA *batis* [*Thyatira batis* (Linnaeus, 1758). Eng. Peach blossom, Sw. Fläckig hallonspinnare; Fam. Drepanidae, Eng. Hooktip moths and False owlet moths, Sw. Sikelvingar], smooth; tongue coiled; wings depressed; upper wings fuscous, with five similar sized whitish spots; lower wings white.

Roes. Ins. 4. t. 26.

Lives on raspberry.

DESCR. Middle-sized. Upper wings fuscous above with rounded maculae: one whitish macula at the alar base with fuscous middle, another orbicular macula at anal angle, and half a macula at the thinner margin. Two maculae towards alar tip. Lower wings pale on each side.

1159. PH. NOCTUA *fuliginosa* [*Phragmatobia fuliginosa* (Linnaeus, 1758). Eng. Ruby tiger or Ruby tiger moth, Sw. Rostvinge; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], smooth; tongue coiled; wings depressed, sooty red-brown, with two black spots; abdomen blood-coloured.

Udd. Diss. 76.

Raj. Ins. 228. n. 13.

Roes. Ins. 1. *Phal.* 2. t. 43.

Lives on grass and dock.

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[784] Junior synonym of no. 1135.

[785] See no. 1135.

[786] Misspelled by Linnaeus.

DESCR. The size of a horsefly.[787] Upper wings darkish red-brown, medially with two black spots at the thicker margin. Lower wings similar, but of a more darkish colour with a black crescent and a posterior blood-coloured margin. Thorax dark brown. Abdomen blood-coloured, with three rows of black spots. Antennae white above.

1160. PH. NOCTUA *parthenias* [*Archiearis parthenias* (Linnaeus, 1761). Eng. Orange underwing, Sw. Brun flickfjäril; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], tongue coiled; wings deflexed, varying with fuscous and white; lower wings deep yellow with two black spots.

It. W:goth. 141. n. 1.

Inhabits oak groves at the beginning of spring. *T. Bergman.*

DESCR. Middle-sized. Upper wings fuscous and cloudy white above. Lower wings deep yellow with two large, black spots, of which the middle one is fused with the blackness of the base, the other placed at the anal angle. All wings deep yellow beneath, with a black fascia in the middle.

1161. PH. NOCTUA *glyphica* [*Euclidia glyphica* (Linnaeus, 1758). Eng. Burnet companion, Sw. Gulbrokigt slåtterfly; Fam. Erebidae, Subfam. Erebinae, Eng. Erebine moths], smooth; tongue coiled; wings deflexed, darkish with hieroglypic, black maculae, and beneath deep yellow, fasciated with fuscous.

Phalaena, antennae setaceous; tongue coiled; wings outspread, fuscous above, whitish yellow posteriorly and beneath. *Fn.* 847.

Hoffn. Ins. 4. t. 11. f. 3.

Inhabits the meadows of Östuna in Uppland. *Mr. Leche.*

DESCR. Body blackish. Upper wings fuscous and of a dull colour, posteriorly, at margin, as if faded dusky whitish yellow; one or two darker maculae medially at the thicker margin. All wings deep yellow beneath with merging fasciae and a large lunate, jet-black spot almost medially on the upper wings. The size and stature as those of the antler moth.[788]

1162. PH. NOCTUA *mi* [*Euclidia mi* (Clerck, 1759). Eng. Mother shipton, Sw. Vitbrokigt slåtterfly; Fam. Erebidae, Subfam. Erebinae, Eng. Erebine moths], smooth; tongue coiled; wings deflexed, ash-grey above, with a pale-margined hatchet, beneath a black W.

Occurs ubiquitously.

DESCR. Similar to the burnet companion.[789] Upper wings ash-grey, marked with a fuscous fasciole and a jet-black spot medially, then a fuscous macula posteriorly trilobed. Wings pale beneath, posteriorly darkish maculate; medially a linear, black fascia with the character W or M, behind an arcuate, black spot.

[787] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

[788] See no. 1140.

[789] See no. 1161.

1163. PH. NOCTUA *Vitis idaeae* [*Nomen dubium*],[790] almost tongueless; wings ash-grey, with a transverse, rather saturated fascia; lower wings flat.

Lives on lingonberry.

DESCR. Same size as the preceding species. Entirely ash-grey, inelegant. All wings ash-grey above, with a broad, transverse, darker ash-grey fascia. Ash-grey beneath, anteriorly darker, posteriorly paler. Lower wings with the shape and size almost as for the upper wings, flat, and minimally plicate; hence a singular appearance. Anus tufted. Legs hirsute. Antennae only one third of the length of the body. Very similar to the pale eggar[791] so that the illustration by *Reaumur* shows this one rather than the other.

1164. PH. NOCTUA *meticulosa* [*Phlogophora meticulosa* (Linnaeus, 1758). Eng. Angle shades, Sw. Tandfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings erose, pale; upper wings flesh-coloured at base, with a fuscous triangle.

Phalaena, antennae awl-shaped; tongue coiled; wings deflexed, erose, pale, with a darkish triangle including a flesh-coloured area; thorax gibbous. *Fn.* 815.

Merian. Eur. t. 34.

Goed. Belg. 1. p. 109. t. 56. Meticulosa.

List. Goed. p. 118. f. 44.

Reaum. Gall. 1. t. 8. f. 25. 26 & t. 14. f. 12. 13.

De Geer. Ins. 1. t. 5. f. 14.

Lives on all herblike plants: wallflower,[792] nettle, and mercury. Rather rare around us.

1165. PH. NOCTUA *fraxini* [*Catocala fraxini* (Linnaeus, 1758). Eng. Blue underwing or Clifden nonpareil, Sw. Blåbandat ordensfly; Fam. Erebidae, Subfam. Erebinae, Eng. Erebine moths], cristate; tongue coiled; wings dentate, deflexed, cloudy ash-grey; lower wings black above, with a bluish fascia.

Roes. Ins. 4. t. 28. f. 1.

Hamburg. Magaz. tom. 18. f. 1–4.

Lives on ash and aspen.

DESCR. The largest of our moths. Body ash-grey, beneath white. Upper wings cloudy, dusky whitish above, with one or two white and black streaks and a somewhat larger white spot in the middle. Three fasciae beneath, alternating with white and black. Lower wings black above, with a broad, blue, white-margined fascia. White beneath, with a crescent, arcuate fascia, and border, all black. All wings are repand at posterior margin.

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[790] Linnaeus seems uncertain and compares this species with the pale eggar, *Trichiura crataegi* (Linnaeus, 1758). The DESCR. here agrees well with this suggestion. Synonomy however not officially accepted.

[791] See no. 1126.

[792] *Cheiranthus cheiri* is today *Erysimum cheiri*.

1166. PH. NOCTUA *pacta* [*Catocala pacta* (Linnaeus, 1758). Sw. Rosenryggat ordensfly; Fam. Erebidae, Subfam. Erebinae, Eng. Erebine moths], cristate; tongue coiled; wings ash-greyish; lower wings red, with two black fasciae; abdomen red above.

Lives on goat willow.

DESCR. Body somewhat larger, ash-grey. Abdomen red above. Upper wings ash-grey above, with three undulating streaks and a lunate, blackish eyespot in the middle, alongside a faded macula. Lower wings blood-coloured, with a black, arcuate fascia in the middle and another larger one at the posterior white margin.

1167. PH. NOCTUA *pronuba* [*Noctua pronuba* (Linnaeus, 1758). Eng. Large yellow underwing, Sw. Större bandfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings incumbent, grey; lower wings deep yellow, with a jet-black, submarginal fascia.

Phalaena, antennae setaceous; tongue coiled; wings incumbent, outer ones cloudy lavender blue; lower wings deep yellow, with a jet-black, marginal fascia. *Fn.* 870.

Hoffn. Ins. 15. f. 18.

Goed. Belg. 1. p. 71. f. 14. Noctua.

List. Goed. p. 114. f. 41.

Blank. Belg. 35. t. 6. f. D. E. F.

Germ. 28. t. 6. D. E. F.

Alb. Ins. 72. f. C. D.

Merr. Pin. 198. Papilio major, cum exterioribus alis fuscis, internis aureis nigra linea fimbriatis.

Merr. Eur. t. 49.

Raj. Ins. 237. n. 18. Papilio major, alis praelongis: exterioribus vel rufis vel ex cinereo nigricantibus; interioribus fulvis cum fascia lata nigra prope imum marginem.

Frisch. Germ. 10. p. 17. t. 15. f. 4.

Reaum. Gall. 1. t. 14. f. 8. 9.

Act. Ups. 1736. p. 124. n. 60. Papilio alis depressis griseis, obscure maculatis, inferioribus flavis, margine nigro.

Lives on penny cress and shepherd's purse, also on various kinds of ragwort, bear's ear primula, primrose, and wallflower.[793]

DESCR. Thorax indistinctly cristate. Upper wings cloudy greyish blue tending to ash-greyish, with a reniform fuscous macula, posteriorly round, pale. At outer alar angle, near lower margin, two black spots. Lower wings deep yellow on each side, with a submarginal black fascia.

[793] For *Cheiranthus*, see the com. to no. 1164.

1168. PH. NOCTUA *myrtilli* [*Anarta myrtilli* (Linnaeus, 1761). Eng. Beautiful yellow underwing, Sw. Ljunghedfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings grey with a white streak; lower wings anteriorly deep yellow and posteriorly black.

Roes. Ins. 4. t. 11. f. A. B. C.

Lives on bog blueberry.[794]

DESCR. Small, easily the smallest of the noctuid moths. Body blackish, with white incisures. Thorax slightly grey. Anus slightly tufted. Upper wings blackish, cloudy purplish tending to rusty brown, with a repand, white streak near base, and another near posterior margin. A triangular white macula in the middle. Upper wings beneath with black, purplish, and whitish maculae. Lower wings anteriorly above deep yellow, posteriorly jet-black with the posterior margin verging on white. Beneath anteriorly likewise deep yellow with a black spot; posteriorly jet-black with a rusty brown, rather indistinct macula near outer angle.

1169. PH. NOCTUA *chrysitis* [*Diachrysia chrysitis* (Linnaeus, 1758). Eng. Burnished brass, Sw. Grönglänsande metallfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, upper wings orichalceous, with a grey fascia.

Phalaena, antennae setaceous; tongue coiled; wings deflexed, cloudy, with one or two golden fasciae. *Fn.* 875.

Mer. Eur. v. 1. p. 14. t. 39.

Raj. Ins. 182. Phalaena media, alis exterioribus duplici area transversa viridi-aurata serici instar splendente insignibus.

Lives on mint. It extracts honey from the flowers while flying.

DESCR. Middle-sized. Head, anterior part of thorax, and antennae whitish light yellow. Upper wings cloudy, at posterior margin indistinctly ash-grey, then a pale gold-coloured fascia. Then the wings are cloudy with a golden tincture, which sets up, as it were, another golden fascia; finally, the wings are cloudy ash-greyish at alar base. Upper wings fuscous beneath, posteriorly grey at margin. Lower wings darkish above and the same wings are slightly grey beneath with a blackish, recurved arch and a crescent-shaped spot.

1170. PH. NOCTUA *festucae* [*Plusia festucae* (Linnaeus, 1758). Eng. Gold spot, Sw. Gulbrunt metallfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, upper wings varying with light yellow and rusty brown and with three silvery maculae.

Act. Stockh. 1748. t. 6. f. 3. 4.

Pet. Gaz. t. 7. f. 7. Phal. occidentalis angliae lituris ex aureo & argenteo mixtis.

Lives on floating sweet-grass or water mannagrass;[795] most beautiful.

DESCR. Middle-sized. Head, forelegs, antennae, and tongue are red-yellow. Thorax becoming paler with a dorsal, fuscous fascicle. Abdomen light yellow. Upper wings variously light yellow and rusty

[794] Lives in fact on common heather, *Calluna vulgaris*.

[795] *Festuca fluitans*, nowadays *Glyceria fluitans*.

brown. Longitudinal silvery maculae medially on both wings and a single linear macula at tip. The alar base is also shining with silver. Lower wings lead grey tending to whitish yellow.

1171. PH. NOCTUA *gamma* [*Autographa gamma* (Linnaeus, 1758). Eng. Silver Y, Sw. Gammafly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings fuscous, inscribed with a Greek gamma.

Phalaena, antennae setaceous; tongue coiled; wings deflexed; outer wings fuscous, inscribed with a Greek γ. *Fn.* 873.

Reaum. Gall. 2. t. 26. & t. 27. f. 4. 5. & tom. 1. t. 19. f. 2.

Frisch. Germ. 1. 5. p. 37. t. 15.

Blank. Belg. 54. t. 8. f. N. O. P. Geometra secundus.

Pet. Gaz. t. 64. f. 6. Phalaena lambda.

Goed. Belg. 2. p. 82. t. 21. Philopson.

List. Goed. p. 41. f. 14.

Merian. Eur. 3. t. 82.

Raj. Ins. 163. n. 17. Phalaena e mediis minuscula, alis exterioribus cinereo & nigro colore variis, media parte linea alba γ literam aliquatenus referente, notatis.

Act. Ups. 1736. p. 25. n. 68. Papilio alis depressis litera γ aurea inscriptis.

Lives on wormwood, southernwood, lettuce, and borage.

DESCR. Upper wings cloudy fuscous, beautifully variegated, marked with the letters γ or λ. Lower wings fuscous. Tongues[796] are very long.

The alar letter varies between a silvery and golden colour, perhaps depending on sex. The illustration by *Frisch* differs in the position of the letter γ, the two shanks of which face back towards outer margin in our specimen, contrary to that which *Frisch* portrays.

1172. PH. NOCTUA *interrogationis* [*Syngrapha interrogationis* (Linnaeus, 1758). Eng. Scarce silver, Sw. Frågeteckensmetallfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings ash-grey, with a question mark inscribed in white.

Clerck. Phal. t. 6. f. 7. Phalaena Interrogationis.

Occurs ubiquitously around us.

DESCR. Stature of the silver Y.[797] Large fascicles on dorsum. Upper wings varying with ash-grey and fuscous, and a very white question mark in the middle so ingeniously inscribed that everybody notices it at first glance. Lower wings whitish yellow beneath.

[796] *Sic!* Lat. *Linguae.*

[797] See no. 1171.

1173. PH. NOCTUA *fulvago* [*Tiliacea sulphurago* (Denis & Schiffermüller, 1775). Sw. Tvåringat gulvingsfly], cristate; tongue coiled; wings pale, with rusty brown fasciae; palps, abdomen, and wings red-yellowish beneath.

Clerck. Phal. t. 6. f. 15.

Occurs in Stockholm.[798]

DESCR. Similar to the following species. Wings slightly pale greyish blue, with one or two rusty brown fasciae; posteriorly an indistinct fascia punctate on each side. Lower wings pale. All pale light yellow beneath. Palps, abdomen, and tibiae red-yellow. Legs with white wool beneath.

1174. PH. NOCTUA *citrago* [*Tiliacea citrago* (Linnaeus, 1758). Eng. Orange sallow, Sw. Trestreckat gulvingsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, deep yellow; upper wings with three rusty brown, oblique fasciae.

Lives on willow.

DESCR. Middle-sized, similar to a geometer moth. Wings flat, incumbent, bright deep yellow, with 3 or 4 oblique, purplish streaks; between the 2nd or 3rd streak, a rusty brown spot with a red-brown ring; between the 3rd and 4th streaks, a reniform macula, red-brown at margin. Lower wings whitish above. All with purplish spot and arch beneath.

1175. PH. NOCTUA *pallens* [*Mythimna pallens* (Linnaeus, 1758). Eng. Common wainscot, Sw. Halmgult gräsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongue coiled; wings deflexed, pale, with a very small spot; posterior margins with black spots beneath.

Clerck. Phal. t. 4. f. 1. Phalaena pallens.

Occurs in Uppland.

DESCR. Middle-sized. Entirely pale whitish. Wings of the same colour, striate. Upper wings medially with a black spot so minute that it is barely visible. All wings similar beneath with black speckles; posterior margin with the minutest black spots.

1176. PH. NOCTUA *leporina* [*Acronicta leporina* (Linnaeus, 1758). Eng. Miller or Poplar dagger moth, Sw. Vitt aftonfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], smooth; tongue coiled; wings deflexed, white, with black, branched spots.

De Geer. Ins. 1. t. 12. f. 10–17.

Lives on alder and willow.

DESCR. Similar to the white ermine,[799] but the wings are scattered with fewer spots. Body entirely white, not light yellow, and abdomen not punctate with black.

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[798] Not found in Sweden since the 19th century.

[799] See no. 1138.

1177. PH. NOCTUA *ludifica* [*Trichosea ludifica* (Linnaeus, 1758). Sw. Gäck; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings green and abdomen light yellow, both punctate.

Occurs around us; rather rare.[800]

DESCR.[801] Similar to the merveille du jour.[802] Head white above, black between antennae. Thorax white, with black spots and anteriorly with a double, backwardly directed, black arch. Upper wings whitish, with black marks scattered all over, medially marked with the figure 2. Abdomen dorsally cristate, with black tips, light yellow, with three longitudinal rows of black maculae.

1178. PH. NOCTUA *aprilina* [*Griposia aprilina* (Linnaeus, 1758). Eng. Merveille du jour, Sw. Grönt ekfly; Fam. Noctuidae, Eng. Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings green with a jet-black fascia and maculae; posteriorly with trigonal spots.

De Geer. Ins. 1. t. 5. f. 22. 23.

Lives in shrubbery.

DESCR. Middle-sized. Wings of a whitish greenish colour, maculate with jet-black; posterior margin with a double row of spots shaped as arrow points. Wings ash-grey beneath, with fuscous spot and arch; posterior margin with jet-black, pointed spots. Legs maculate with black and white.

1179. PH. NOCTUA *aceris* [*Acronicta aceris* (Linnaeus, 1758). Eng. The Sycamore, Sw. Lönnaftonfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, greyish white; upper wings with thin, undulating, black lines and an oval, black ring.

Frisch. Ins. 1. t. 5.

Lives on maple and horse chestnut.

DESCR. Middle-sized. Wings greyish white tending to ash-grey; posterior margin punctate with black; thin fuscous line at alar base; oval and reniform macula as in the related moths.

1180. PH. NOCTUA *chi* [*Antitype chi* (Linnaeus, 1758). Eng. Grey chi, Sw. Gråvitt klippfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, grey-white; upper wings marked with a black χ.

Roes. Ins. 1. *Phal.* 2. t. 13.

Lives on columbine and larkspur.

DESCR. Middle-sized. Wings cloudy, dusky greyish white, medially marked with a jet-black χ.

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[800] Extinct in Sweden.

[801] Linnaeus seems to have mixed up two different species in this same description: *Trichosea ludifica* and *Moma alpium*.

[802] See no. 1178.

1181. PH. NOCTUA *psi* [*Acronicta psi* (Linnaeus, 1758). Eng. Grey dagger, Sw. Psiaftonfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, grey-white; upper wings marked with the black letters ψ.

Phalaena, antennae setaceous; tongue coiled; wings deflexed, grey-white, with black maculae resembling a ψ. *Fn.* 879.

Frisch. Germ. 2. p. 13. t. 2. Eruca dorso saccato.

Reaum. Gall. 1. t. 42. f. 5. 6.

Raj. Ins. 350. Eruca rarius pilosa, cornu in medio dorso erecto.

Goed. Belg. 1. p. 62. t. 22. Admirabilis.

List. Goed. p. 209. f. 92.

Lives on apple, oak, alder, and hazel.

DESCR. Middle-sized. Upper wings grey-white, scattered with maculae resembling the inverted letter ψ. A solitary black line towards the rostrum on each side through the eyes. Lower wings whitish, with a black spot beneath. Male with more obvious marks of a ψ. Female, however, is distinguished by a black omicron on the upper wings.

1182. PH. NOCTUA *absinthii* [*Cucullia absinthii* (Linnaeus, 1761). Eng. The Wormwood, Sw. Absintkapuschongfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings ash-greyish, fasciated and punctate with blackish; lower wings whitish.

Clerck. Phal. t. 8. f. 9.

Frisch. Ins. 7. p. 19. t. 12.

Roes. Ins. 1. *Phal.* 2. t. 61.

Lives on wormwood or absinthe.

DESCR. Middle-sized. Thorax covered by two small, rising tufts. Abdomen with brushes of black hairs on dorsum. Upper wings greyish white, striate, with two blackish fasciae, undulating, uneven, between which there are 4 very small spots tetragonally arranged; posterior margin punctate with black. Lower wings whitish, with a black spot beneath.

1183. PH. NOCTUA *conspicillaris* [*Egira conspicillaris* (Linnaeus, 1758). Eng. Silver cloud; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattfly], cristate; tongue coiled; wings incumbent plain, pale grey.

Occurs in Uppsala.[803] *T. Bergman.*

DESCR. A middle-sized rustic moth.[804] Wings incumbent, flat, grey. Antennae half the length of the body. A remarkable feature is the somewhat rounded, ash-grey lamina behind each eye, which being bent forwards covers the whole eye so that this lamina can only be seen beneath, and it would easily be mistaken for an eye, if it were not stretched out.

[803] Not occurring in Sweden.

[804] See the com. to no. 1152.

1184. PH. NOCTUA *umbratica* [*Cucullia umbratica* (Linnaeus, 1758). Eng. The Shark, Sw. Skuggkapuschongfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings lanceolate, striate, grey-white; thorax with small rising crescent-shaped tufts.

Roes. Ins. 1. *Phal.* 2. t. 25.

Lives on common sowthistle.

DESCR. Entirely grey-white, without maculae. Upper wings almost lanceolate and quasi-striate. Small, thoracic rising tufts either meeting at the top of thorax or turned back above eyes and resembling two crescents, frontally hirsute.

1185. PH. NOCTUA *exsoleta* [*Xylena exsoleta* (Linnaeus, 1758). Eng. Sword-grass, Sw. Större mantelfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings lanceolate, pleated, faded, dorsally darkish; collar compressed.

Frisch. Ins. 5. t. 11. f. 1.

Roes. Ins. 1. *Phal.* 2. t. 24.

Lives on pea, orache, and goosefoot.

DESCR. Body ash-grey. Wings oblong, deflexed, slightly pale sooty. Thorax anteriorly pale, laterally white near alar insertion, pale rusty brown beneath, blackish at mouth.

1186. PH. NOCTUA *verbasci* [*Cucullia verbasci* (Linnaeus, 1758). Eng. Mullein moth, Sw. Kungsljuskapuschongfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings indistinct, with lateral fuscous margins.

Raj. Ins. 168. n. 25.

352. n. 31.

Frisch. Ins. 6. t. 9.

Lives on mullein and figwort.

DESCR. Somewhat larger and oblong. Thorax covered with a double connivent, pale crest, behind which it is rusty brown on the back. Upper wings oblong, dark bluish grey, with both margins fuscous; these margins are divided in the middle by a whitish streak. Wings fuscous beneath, with a whitish, oblique fascia.

1187. PH. NOCTUA *putris* [*Axylia putris* (Linnaeus, 1761). Eng. The Flame, Sw. Träfärgat jordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, indistinct and weakly punctate; outer margin fuscous, with an added subocellate macula.

Inhabits gardens.

DESCR. Similar to the mullein moth,[805] but shorter; two linear, fuscous spots at the position of the scutellum. Upper wings dark bluish grey, with barely visible thin undulating, weak, and punctate lines; outer margin rusty brown, adjacent to a rusty brown macula in the middle with a violet spot.

[805] See no. 1186.

1188. PH. NOCTUA *pinastri* [*Dypterygia scabriuscula* (Linnaeus, 1758).[806] Eng. Bird's wing, Sw. Pilörtsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, with distinctive jet-black marks and dorsal margin posteriorly pale.

Phalaena scabriuscula. *Syst. nat*. 10. p. 516. n. 108. *Clerck. Phal*. t. 1. f. 8.

Lives on Scots pine.

DESCR.[807] A middle-sized rustic moth.[808] Upper wings black, with distinctive jet-black marks; three striae at posterior margin; lower margin posteriorly with some white spots; pale thinner margin distinct by means of a jet-black, repand line. Thorax fascicular, pale.

1189. PH. NOCTUA *tragopoginis* [*Amphipyra tragopoginis* (Clerck, 1759). Eng. Mouse moth, Sw. Treprickigt buskfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], weakly cristate; tongue coiled; upper wings fuscous, with three black, closely arranged spots; lower wings dark bluish grey.

Frisch. Ins. 11. p. 33. t. 9.

Lives on goat's beard and creeping thistle. Larva green, with 6 white lines and black spiracles.

DESCR. A middle-sized rustic moth,[809] inelegant, fuscous. Upper wings with three very small, well spaced spots medially above, of which the 1st one is anterior, the 2 others posterior. Lower wings dark bluish grey.

1190. PH. NOCTUA *exclamationis* [*Agrotis exclamationis* (Linnaeus, 1758). Eng. Heart and dart, Sw. Åkerjordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings incumbent, fuscous, with a thin, jet-black line and cordate macula; lower wings white.

Clerck. Phal. t. 1. f. 4. Ph. exclamationis.

Inhabits meadows.

DESCR. A middle-sized rustic moth.[810] Upper wings dark ash-grey with some palish, indistinct, repand streaks; near the regular macula in front, there is a linear jet-black blotch; the regular reniform macula, likewise jet-black. Lower wings white.

1191. PH. NOCTUA *comma* [*Leucania comma* (Linnaeus, 1761). Eng. Shoulder-striped wainscot, Sw. Kommatecknat gräsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings ash-grey, deflexed, with a thin, black line adjacent to a narrower white one.

Inhabits gardens; not uncommon.

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[806] Linnaeus named this species in *Syst. nat*. (1758) *Phalaena scabriuscula*, which also is obvious from his citation four lines below. However, in 1761 he renamed the species *Ph. pinastri* and changed the label of the type specimen! A quite unnecessary replacement name.

[807] Surprisingly Linnaeus overlooks the very conspicuous pattern on the forewing: like a bird's wing.

[808] See the com. to no. 1152.

[809] See the com. to no. 1152.

[810] See the com. to no. 1152.

DESCR. A middle-sized rustic moth.[811] Upper wings ash-grey, weakly striated. A linear, jet-black, longitudinal blotch, from alar base to the middle, and from this blotch a rather long white stria adjacent to the lower margin. Wing ash-grey beneath. Abdomen weakly rusty brown.

1192. PH. NOCTUA *gothica* [*Orthosia gothica* (Linnaeus, 1758). Eng. Hebrew character, Sw. Gotiskt sälgfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings darkish having a black, marginal arch with a white line.

Clerck. Phal. t. 1. f. 1. Phal. gothica.

Inhabits groves.

DESCR. Middle-sized. Upper wings ash-grey, without the typical maculae; an alar arch in the middle, curved towards the outside, black, with a marginal, white line. Posteriorly a repand, pale streak. Beneath a fuscous alar spot and an indistinct arch.

1193. PH. NOCTUA C *nigrum* [*Xestia c-nigrum* (Linnaeus, 1758). Eng. Setaceous Hebrew character or Spotted cutworm, Sw. C-tecknat jordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings depressed, ash-grey, with a black, outwardly indistinct macula and a thin apical, jet-black line.

Phalaena, antennae setaceous; wings depressed, ash-grey, with an indistinct macula and a dark C beneath; lower wings whitish. *Fn.* 874.

Clerck. Phal. t. 1. f. 3. Phalaena C nigrum.

Inhabits gardens; abundant.

DESCR. Middle-sized. Upper wings ash-grey above, with a lateral, jet-black, oblong, arcuate macula that is deep yellow at sinus; another reniform, whitish yellow macula; black blotch at posterior margin. Lower wings almost snow-white above. All wings ash-greyish beneath, with a large, indistinctly fuscous arch feigning the letter C. Thorax anteriorly grey.

1194. PH. NOCTUA *leucomelas* [*Aedia leucomelas* (Linnaeus, 1758). Eng. Sorcerer, Eastern alchymist or Sweet potato leaf worm; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings cloudy blackish, with a white macula; lower wings anteriorly snow-white.

Clerck. Phal. t. 1. f. 2. Phalaena leucomelas.

Occurs ubiquitously.[812]

DESCR. Middle-sized. Upper wings cloudy blackish, with a large white macula. Lower wings likewise black, with an even larger, ovate, white macula at base occupying almost half of the wing, and posterior alar margin is white. All wings concolorous beneath, but darker black and white.

[811] See the com. to no. 1152.

[812] Does not occur in Sweden.

1195. PH. NOCTUA *typica* [*Naenia typica* (Linnaeus, 1758). Eng. The Gothic, Sw. Gråribbat kvällsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, darkish, with reticulate, pale streaks and a reniform macula.

Roel. Ins. 2. t. 56

Lives on willow.

DESCR. A middle-sized rustic moth.[813] Upper wings ash-grey with the typical white-margined maculae and three whitish streaks crossed posteriorly by striae; hence the wing resembles a network.

1196. PH. NOCTUA *atriplicis* [*Trachea atriplicis* (Linnaeus, 1758). Eng. Orache moth, Sw. Mållfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings cloudy with a bifid, whitish blotch.

Roel. Ins. 1. *Phal.* 2. t. 31.

Lives on orache and dock.

DESCR. A middle-sized rustic moth.[814] Upper wings cloudy deep yellow and fuscous, posteriorly a repand, whitish yellow streak; close to the typical maculae, at the inner side, an oblong pale whitish yellow blotch, posteriorly bifid, pointed.

1197. PH. NOCTUA *oleracea* [*Lacanobia oleracea* (Linnaeus, 1758). Eng. Bright-line brown-eye, Sw. Grönsaksfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed; upper wings darkish, bimaculate, and with a terminal, bidentate streak.

Phalaena, antennae setaceous; wings deflexed, fuscous; upper wings with a double pale macula; thorax gibbous at tip and base. *Fn.* 877.

Raj. Ins. 160. n. 10.

Lives on lettuce and undergoes a metamorphosis in the soil.

DESCR. Double thoracic fascicle on the back: the one at the base of the gibbous thorax, the other at tip. The moth is entirely fuscous, but medially on the upper wing, at the thicker margin, there are two pale maculae, of which the foremost is rounded and the posterior one reniform. Inside the posterior margin, a whitish line ending in a double tooth. Lower wings ash-grey. Anus tufted.

1198. PH. NOCTUA *perspicillaris* [*Actinotia polyodon* (Clerck, 1759). Eng. Purple cloud, Sw. Tandat johannesörtsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn],[815] cristate; tongue coiled; wings deflexed, of a burnt colour, and striate, posteriorly doubly bidentate; head umbrella-shaped.

Clerck. Phal. t. 2. f. 3. Phalaena polyodon.

Occurs around us; rather rare. *T. Bergman.*

[813] See the com. to no. 1152.

[814] See the com. to no. 1152.

[815] See no. 1219.

DESCR. Middle-sized or smaller. The body is covered with two roundish, pale, umbrella-shaped appendages, which are embellished with three fuscous fasciae. Upper wings of a quasi-scorched colour, with broad striae that turn pale; a reniform, pale macula in the middle; posteriorly the pale striae end in 2 teeth near the outer angle and in 2 in the middle. Lower wings becoming red-brown beneath, with a white disc and a very small, black spot.

1199. PH. NOCTUA *strigilis* [*Oligia strigilis* (Linnaeus, 1758). Eng. Marbled minor, Sw. Hundäxingsängsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; wings deflexed, cloudy, with relatively short, black striae inside the terminal white fascia.

Inhabits groves.

DESCR. A rather small rustic moth.[816] Upper wings greyish blue tending to ash-greyish, cloudy, with a whitish fascia at base and a terminal broad, whitish fascia, which is penetrated anteriorly by many short, black striae.

1200. PH. NOCTUA *rumicis* [*Acronicta rumicis* (Linnaeus, 1758). Eng. Knot grass, Sw. Syreaftonfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, ash-grey, bimaculate, with a white blotch at the thinner margin.

De Geer. Ins. t. 9. f. 22.

Lives on dock and sowthistle.

DESCR. A middle-sized rustic moth.[817] Upper wings grey-white and cloudy blackish; grey-white macula at alar base; white macula in the middle of the thinner margin; the typical frontal macula is orbicular with black ring and spot.

1201. PH. NOCTUA *lucipara* [*Euplexia lucipara* (Linnaeus, 1758). Eng. Small angle shades, Sw. Lyktbärare; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, purplish, with a black fascia and posteriorly a light yellow spot.

Inhabits groves; rather rare.

DESCR. A rather small or middle-sized rustic moth.[818] Upper wings anteriorly and posteriorly with areas that are broadly red-brownish, shining, but medially cloudy fuscous; the typical posterior macula deep yellow, shining. Head and thorax fuscous.

1202. PH. NOCTUA *triplasia* [*Abrostola triplasia* (Linnaeus, 1758). Eng. Dark spectacle, Sw. Brungult nässelfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, with two opposite, separated streaks and three greyish blue, intermediate maculae.

De Geer. Ins. 1. t. 6. f. 20. 21.

Lives on sowthistle, hops, and nettle.

[816] See the com. to no. 1152.

[817] See the com. to no. 1152.

[818] See the com. to no. 1152.

DESCR. A middle-sized rustic moth.[819] Upper wings cloudy fuscous, with two recurved, black streaks; the wings are paler in front of and behind these streaks; four white spots posteriorly at lower margin.

1203. PH. NOCTUA *occulta* [*Eurois occulta* (Linnaeus, 1758). Eng. Great brocade or Great gray dart, Sw. Större skogsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, cloudy fuscous, with a streak, and lower wings shorter, white-margined.

Clerck. Phal. t. 1. f. 6. Phal. occulta.

Occurs around us; less abundant. *Dr Holm.*

DESCR. It is easily the largest of our rustic moths.[820] Upper wings cloudy, dusky grey-white; an ovate, whitish macula in front of a reniform, ash-grey macula. Three white, repand streaks: the first in front of the ovate macula, the second behind the cordate macula, and the third very narrow at posterior margin. Lower wings much shorter, ash-grey beneath with blackish spot and arch; posterior margin entirely white.

1204. PH. NOCTUA *flavicornis* [*Achlya flavicornis* (Linnaeus, 1758). Eng. Yellow horned, Sw. Björkgulhornspinnare; Fam. Drepanidae, Eng. Hooktip moths, Sw. Sikelvingar], cristate; tongue coiled; upper wings ash-grey, with three jet-black streaks; antennae deep yellow.

Clerck. Phal. t. 6. f. 9.

Lives on aspen. *T. Bergman.*

DESCR. A middle-sized rustic moth.[821] Upper wings dark ash-grey above, with two black, repand streaks, rather close to the thinner margin, with an interjacent whitish macula. Sides of thorax gibbous, almost covered with elevated, alar rudiments. Antennae whitish yellow, as if gradually becoming lamellose, base white.

1205. PH. NOCTUA *brassicae* [*Mamestra brassicae* (Linnaeus, 1758). Eng. Cabbage moth, Sw. Kålfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, cloudy ash-grey, with a cordate macula that is maculate with white.

Roes. Ins. 1. *Phal.* 2. t. 29.

Lives on cabbage, tobacco, and bogbean; abundant in the fields of Västergötland.

DESCR. A middle-sized rustic moth[822] that is difficult to determine. Wings ash-grey and cloudy fuscous; the typical reniform macula strewn with some white spots. Lower margin with four white spots.

[819] See the com. to no. 1152.

[820] See the com. to no. 1152.

[821] See the com. to no. 1152.

[822] See the com. to no. 1152.

1206. PH. NOCTUA *pisi* [*Ceramica pisi* (Linnaeus, 1758). Eng. Broom moth, Sw. Ärtfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, cloudy grey; posterior streak white, with maculate anal angle.

Raj. Ins. 160. n. 10.

Roes. Ins. 1. *Phal.* 2. t. 52.

Lives on pea and ragwort.

DESCR. A middle-sized rustic moth.[823] Upper wings cloudy grey, posteriorly a flexuous, white streak, which forms a rather large white macula at anal angle.

1207. PH. NOCTUA *oxyacanthae* [*Allophyes oxyacanthae* (Linnaeus, 1758). Eng. Green-brindled crescent, Sw. Hagtornsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings deflexed, greyish, with an oval, pale macula and a white, anal streak.

Roes. Ins. 1. *Phal.* 2. t. 33.

Lives on hawthorn and blackthorn.

DESCR. A somewhat larger rustic moth.[824] Upper wings grey with a single rather large, oval macula inclining to deep yellow. Margin posteriorly broader, ash-greyish; linear white blotch, almost longitudinal, near thinner margin close to anus.

1208. PH. NOCTUA *persicariae* [*Melanchra persicariae* (Linnaeus, 1761). Eng. Dot moth, Sw. Vitfläckigt lundfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings with cloudy fasciae having a reniform, white macula and lunate, whitish yellow pupil.

Roes. Ins. 1. *Phal.* 2. t. 36.

Lives on knotweed and fleeceflowers.

DESCR. Upper wings dusky blackish, with cloudy veins; posterior margin quasi-dentate with white speckles. Lower wings anteriorly pale, posteriorly darkish with a whitish margin. All weakly greyish blue beneath, with a broad, indistinct fascia and black spot. Anus rusty brown.

1209. PH. NOCTUA *hepatica* [*Polia hepatica* (Clerck, 1759). Eng. Silvery arches, Sw. Gröngrått lundfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings weakly greyish blue, with a rusty brown, relatively short, and terminally plicate fascia.

Clerck. Phal. t. 8. f. 3. Ph. hepatica.

Occurs ubiquitously.

DESCR. A middle-sized rustic moth.[825] Upper wings liver-coloured above, with a rusty brown fascia, barely extended near inner side; then a terminal fascia that is narrower, unequal, rusty brown; posterior margin plicate and subdentate. Lower wings weakly fuscous with a posterior light yellow

[823] See the com. to no. 1152.

[824] See the com. to no. 1152.

[825] See the com. to no. 1152.

margin. Wings ash-grey tending to weakly red-brownish beneath, with a lunate blackish spot and arch. Sides of thorax dusky rusty brown. Thoracic and abdominal dorsum cristate with many teeth.

1210. PH. NOCTUA *plebeja* [*Hada plebeja* (Linnaeus, 1761). Eng. Shears, Sw. Tandlundfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings cloudy black; lower wings deep yellow tending to rusty brown and maculate with black on each side.

Lives in Uppland. *T. Bergman.*

DESCR. The size of a burnet companion.[826] Upper wings above cloudy black and ash-grey, with two white maculae at inner margin; two alar white spots at base. Lower wings on each side and upper wings deep yellow tending to rusty brown beneath, with two black, transverse maculae, and posterior margin black. Legs lanate. Tibiae black with white rings.

1211. PH. NOCTUA *tritici* [*Euxoa tritici* (Linnaeus, 1761). Eng. White-line dart, Sw. Vetejordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate, ash-grey, with two palish maculae and one blackish macula; tongue coiled.

Frisch. Ins. 10. t. 19.

Lives on the spikes of wheat.

DESCR. A rustic moth,[827] the size of an antler moth,[828] very difficult to distinguish.[829] Larva naked, light yellow, with three white lines. Body entirely ash-grey, with an oval and reniform macula, just as is the case in the other rustic moths; a black macula within the oval macula and an equivalent-sized black macula alongside. Legs with white rings.

1212. PH. NOCTUA *vaccinii* [*Conistra vaccinii* (Linnaeus, 1761). Eng. Chestnut, Sw. Lingonplattfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], tongue coiled; wings rusty brown, indistinctly cloudy, with a spot and a posterior streak that consists of seven fuscous spots.

Lives on blueberries and lingonberry.

DESCR. Rather small. Upper wings dull rusty brown above and indistinctly cloudy; medially with a somewhat larger, black spot; posteriorly in front of the margin, a streak consisting of 7 very small, fuscous spots. Body and wings blackish beneath with a fuscous streak. Upper wings beneath and lower wings above blackish.

1213. PH. NOCTUA *litura* [*Agrochola litura* (Linnaeus, 1761). Eng. Brown-spot pinion, Sw. Kantfläckigt backfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings grey-white, with a fuscous fascia and four black blotches at margin.

Occurs in Stockholm. C. *Clerck.*

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[826] See no. 1161.

[827] See the com. to no. 1152.

[828] See no. 1140.

[829] In fact a species complex comprising *Euxoa tritici*, *E. nigrofusca*, and *E. eruta*.

DESCR. Stature of the Hebrew character,[830] but smaller. Upper wings grey-white, with four marginal, transverse, black blotches, equally well spaced: of these, 1st at alar base; 2nd connected with the opposite wing through a thin, undulating, blackish line; 3rd connected with the opposite through a broad, indistinct, darkish, arcuate fascia; and 4th at the tip, with a thin, oblique line, even visible beneath.

1214. PH. NOCTUA *depuncta* [*Eugnorisma depuncta* (Linnaeus, 1761). Eng. Plain clay, Sw. Punktjordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings greyish, with blackish marginal blotches and posterior streak punctate.

Inhabits forests.

DESCR. Middle-sized. Upper wings ash-grey or slightly greyish, with 2 black spots at base, then 2 or 3 black ones merged into a blotch at the thicker margin, then an ovate and reniform macula, also an indistinct, rather dark streak, and finally a transverse row consisting of the most minute black spots; posterior alar margin rather dark. Wings pale beneath, with a spot and a linear, transverse, blackish fascia.

1215. PH. NOCTUA *oculea* [*Amphipoea oculea* (Linnaeus, 1761). Eng. Ear moth, Sw. Rödbrunt stamfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings rusty brown-grey having a reniform, snow-white macula with a deep yellow crescent-shaped pupil.

Inhabits groves.

DESCR. A middle-sized or rather small rustic moth.[831] Upper wings cloudy grey, with an indistinct rusty brown tincture; the frontal wing macula orbicular, indistinct, rusty brown, the posterior one reniform, in which there is a deep yellow crescent with a rusty brown margin; at the thicker margin, behind the typical maculae, there are three of the most minute, white spots. Wings beneath with fuscous arch and spot.

1216. PH. NOCTUA *plecta* [*Ochropleura plecta* (Linnaeus, 1761). Eng. Flame shoulder or Flame-shouldered dart, Sw. Mindre jordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], weakly cristate; tongue coiled; wings dark brown, with a black line, and the thicker margin whitish.

Inhabits forests.

DESCR. Middle-sized or smaller. Upper wings dark brown; the thicker margin whitish from thorax almost to tip; a black line running from thorax through the typical maculae separates the dark brown wing from the white margin; posteriorly an outer margin with three of the most minute white spots. Upper wings red-brownish beneath at posterior margin. Lower wings whitish, with a black spot beneath.

[830] See no. 1192.

[831] See the com. to no. 1152.

1217. PH. NOCTUA *polymita* [*Polymixis polymita* (Linnaeus, 1761). Sw. Grönbrunt klippfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings ash-grey, with three fasciae, variegated with white and black.

Merian. Europ. t. 35?

DESCR. A middle-sized rustic moth.[832] Upper wings ash-grey; three white fasciae, variegated with black, and also the two typical maculae; posterior margin with sagittate, black spots. Thorax bears three somewhat larger white maculae.

1218. PH. NOCTUA *retusa* [*Ipimorpha retusa* (Linnaeus, 1761). Eng. Double kidney, Sw. Inbuktat vecklarfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], weakly cristate; tongue coiled; wings grey, apically notched, with three paler streaks.

Inhabits groves.

DESCR. Middle-sized. Upper wings apico-posteriorly notched, ash-grey tending to ash-greyish, minimally cloudy; three pale streaks: the first at base, the second obliquely transverse, which is followed by an oval and a reniform macula, and the third transverse, oblique, which continues in a transverse flexuous line. Wings ash-grey beneath, with fuscous spot and arch.

1219. PH. NOCTUA *polyodon* [*Actinotia polyodon* (Clerck, 1759). Eng. Purple cloud, Sw. Tandat johannesörtfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn],[833] cristate, cloudy ash-grey; posterior margin multidentate; tongue coiled.

Inhabits gardens; abundant.

DESCR. A somewhat larger rustic moth.[834] Upper wings cloudy ash-greyish, with a flexuous streak in front of the typical maculae; behind these one or two undulating, paler streaks; posterior margin terminates in about eight teeth. Beneath fuscous spot and indistinct arch.

1220. PH. NOCTUA *nigricans* [*Euxoa nigricans* (Linnaeus, 1761) Eng. Garden dart, Sw. Svart jordfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings blackish with the typical, paler maculae.

Occurs around us; abundant.

DESCR. A middle-sized rustic moth.[835] Upper wings more dusky blackish than in any other of our moths, just as the entire body is of the same colour. Lower wings slightly whitening.

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[832] See the com. to no. 1152.

[833] See no. 1198.

[834] See the com. to no. 1152.

[835] See the com. to no. 1152.

1221. PH. NOCTUA *turca* [*Mythimna turca* (Linnaeus, 1761). Eng. Double line, Sw. Rödbrunt gräsfly; Fam. Noctuidae, Eng. Noctuid moths or Owlet moths, Sw. Nattflyn], cristate; tongue coiled; wings ash-grey tending to red-brown, with two fuscous streaks and a white crescent.

Occurs around us; rather rare.

DESCR. Middle-sized. Upper wings ash-grey tending to red-brown or of the colour of red wine, with two widely spaced streaks; medially a minute, white crescent without any of the typical maculae. All wings purplish beneath, with a fuscous streak.

1222. PH. GEOMETRA *sambucaria* [*Ourapteryx sambucaria* (Linnaeus, 1758). Eng. Swallow-tailed moth, Sw. Svansmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings caudate, angular, whitish yellow, with two lines; posterior tips bipunctate.

Goed. Ins. 2. t. 84.

Roes. Ins. 1. *Phal.* 3. t. 6.

Raj. Ins. 177. n. 1.

Lives on elderberry in Skåne.

DESCR. Large. Wings pale whitish yellow above; anterior wings with two streaks inclining to deep yellow; posterior wings with a single streak, the posterior red-brownish angle of which is stretched out into an awl-shaped tail; a fuscous spot on each side close to the tail, outer one purplish. All wings whitish beneath, without maculae.

1223. PH. GEOMETRA *amataria* [*Cyclophora punctaria* (Linnaeus, 1758). Eng. Maiden's blush, Sw. Ekgördelmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[836] antennae pectinate; wings angular, all covered with a fine pale powder, and with a rusty brown streak and another that is transverse, fuscous, curved, and repand.

Wilk. Pap. t. 1. a 5.

Lives on oak.

DESCR. Middle-sized. Wings whitish, covered with a fine powder. A rusty brown, straight, and transverse streak runs from the angle of one forewing to the angle of its opposite; another streak, from the same angle to the opposite one, is curved, repand and fuscous; alar tips red-brown-margined.

1224. PH. GEOMETRA *falcataria* [*Drepana falcataria* (Linnaeus, 1758). Eng. Pebble hook-tip, Sw. Ockragul sikelvinge; Fam. Drepanidae, Eng. Hooktip and False owlet moths, Sw. Sikelvingar], antennae pectinate; wings falcate, greyish blue; anterior wings with grey waves and fascia and a fuscous spot.

De Geer. Ins. 1. t. 24. f. 7.

Lives on birch and alder.

[836] See no. 1250.

DESCR. Middle-sized. Wings greyish blue, on each side with grey undulations. Anterior wings falcate, with a rusty brown streak behind the somewhat larger fuscous spot.

1225. PH. GEOMETRA *putatoria* [*Jodis putata* (Linnaeus, 1758). Eng. Bilberry emerald, Sw. Blåbärslundmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings angular, all whitish, with two repand, bright white streaks.

Clerck. Phal. t. 3. f. 9. Phalaena putata.

Inhabits forests.

DESCR. Pearl white colour. All wings with two repand, white streaks above, without the median spot. All wings snow-white beneath.

1226. PH. GEOMETRA *lactearia* [*Jodis lactearia* (Linnaeus, 1758). Eng. Little emerald, Sw. Ljusgrön lundmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[837] antennae bipectinate; wings angular, white, without maculae; antennae apically setaceous.

Phalaena, entirely snow-white; antennae setaceous; tongue coiled. *Fn.* 865.

Occurs ubiquitously; not uncommon.

DESCR. Of a rather small size. All wings snow-white, without maculae; posterior ones ending in a right angle. Antennae strongly hirsute at lower part, upper part entirely setaceous.

1227. PH. GEOMETRA *vernaria* [*Jodis lactearia* (Linnaeus, 1758). Eng. Little emerald, Sw. Ljusgrön lundmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[838] antennae pectinate; wings greenish, with two repand, white streaks. Antennae apically setaceous.

Occurs in Dalarna. C. *Blom.*

DESCR. Very similar to the preceding species,[839] but wings pale greenish with two repand, white streaks; the anterior ones adapted to the posterior. Entirely palish beneath. It resembles closely the small grass emerald.[840]

1228. PH. GEOMETRA *vibicaria* [*Rhodostrophia vibicaria* (Clerck, 1759). Eng. Common pink-barred, Sw. Lädermätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings angular, weakly greyish blue, with purple spot, fascia, and streak.

Clerck. Phal. t. 3. f. 2. Phalaena vibicaria.

Occurs at Jumkil. *A. Berger.*

DESCR. Middle-sized. Antennae pale. Wings pale or greyish blue; on each one a transverse, purple spot; purplish fascia, anteriorly more saturated; purplish streak; margin entirely purplish. All wings purplish beneath.

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[837] See no. 1227.

[838] See no. 1226.

[839] In fact synonymous.

[840] See no. 1256.

1229. PH. GEOMETRA *lacertinaria* [*Falcaria lacertinaria* (Linnaeus, 1758). Eng. Scalloped hook-tip, Sw. Tandad sikelvinge; Fam. Drepanidae, Eng. Hooktip and False owlet moths, Sw. Sikelvingar], antennae pectinate; wings erose, inclining to deep yellow; posteriorly with two rather saturated rusty brown streaks and a fuscous spot.

De Geer. Ins. 1. t. 7. f. 7. 8.

Lives on oak.

DESCR. Middle-sized. Upper wings light yellow, somewhat cloudy, posteriorly darker; margin unequally dentate; two rusty brown, oblique streaks, between which there is a fuscous spot. Between the teeth of the posterior margin, the streaks are maculate with white. Lower wings verging on white above. All light yellow beneath, posteriorly somewhat cloudy, with a fuscous spot in the middle.

1230. PH. GEOMETRA *alniaria* [*Ennomos alniaria* (Linnaeus, 1758). Eng. Canary-shouldered thorn, Sw. Alflikmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings erose, light yellow, covered with a fuscous powder, and with two fuscous streaks.

Phalaena, tongueless; antennae pectinate; wings angulate-dentate, red-yellow, with a double fuscous line; thorax light yellow. *Fn.* 834.

Goed. Belg. 2. p. 161. t. 38. Terribilis. *an?*[841]

Raj. Ins. 290. n. 21. Eruca geometra rubescens teres bacilliformis, cum duplici tuberculo insigni in medio dorso & tribus inferioribus exstantibus annulis e tuberculis compositis.

Lives on alder, on the leaves of which it feeds.

DESCR. The appearance of the larva resembles so closely an alder branch of the previous year or the year before that, so that nature could hardly ever have created anything more similar as to thickness, form, colour, tubercles, roughness, in short all aspects. The larva is as long as the width of 3 to 4 fingers, almost as broad as a rather small goose feather; colour ash-grey tending to grey; 10 legs, of which the preceding 6 are close to head and short, 2 at the cauda, and 2 slightly in front of the anal legs. Towards cauda the animal gradually broadens; towards head, which is remarkable, it is attenuated. It is smooth. The various tubercles match the vestiges of the petioles so that, if anyone had observed the branch of an alder, there would have been no need for a description.

The moth itself emerges after a month. Thorax hirsute, light yellow. Abdomen flesh-coloured. All wings angular or erose, red-yellow. Upper wings with two indistinctly fuscous, well spaced lines. Lower wings red-yellow above, also beneath, but with fuscous, indistinct spots, scattered at random with a lunate, fuscous macula in the middle and black spots at all alar margins. No mouth. Antennae tufted with a whitish rachis that has flesh-coloured fine hairs.

[841] See the com. to no. 130.

1231. PH. GEOMETRA *pennaria* [*Colotois pennaria* (Linnaeus, 1761). Eng. Feathered thorn, Sw. Spinnarmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings red-brownish, with two rather dark streaks and a subterminal black spot, white in the middle.

Occurs in Västergötland. *T. Bergman*.

DESCR. Same size as the preceding species. Body cinnamon-coloured. Antennae very similar to a feather, half the length of the body. Upper wings with two transverse, darkish streaks and a spot placed in between. In front of the alar angle, a blackish spot, white in the middle, visible on each side. Concolorous beneath.

1232. PH. GEOMETRA *pruniaria* [*Angerona prunaria* (Linnaeus, 1758). Eng. Orange moth, Sw. Plommonmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings subdentate, deep yellow, with a fuscous powder; anterior wings with a fuscous crescent.

Uddm. Diss. 69. Phalaena alis patentibus pallidis dentatis puncto fusco oblongo.

Alb. Ins. 42. t. 69.

Lives on blackthorn.

DESCR. Rather large. Wings of male red-yellow, those of female light yellow; scattered and covered with a fuscous powder on each side; a fuscous crescent medially on each side. Posterior margin of the lower wings as if dentate, with fuscous maculae.

1233. PH. GEOMETRA *piniaria* [*Bupalus piniaria* (Linnaeus, 1758). Eng. Bordered white, Sw. Tallmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings fuscous, with a bimaculate, white disc; cloudy and weakly fasciate beneath.

Phalaena, antennae pectinate; tongue coiled; wings rather plain, rounded, fuscous above, frontally white.

Clerck. Phal. t. 1. f. 10. Phalaena Piniaria.

Uddm. Diss. 64.

Lives on pine.

DESCR. Middle-sized. Antennae large, black. All wings fuscous above, white-margined, and white at the base in the middle, and a white macula from two merged oblong ones, beneath all punctate with ash-grey, and with two thin undulating grey lines. Upper wings beneath with one or two large whitening maculae.

1234. PH. GEOMETRA *tiliaria* [*Nomen dubium*], antennae pectinate; wings inclining to deep yellow, beneath cloudy fasciate, with an interrupted white line.

Phalaena, antennae pectinate; wings rather plain, rounded, and tending to cloudy deep yellowish. Lower wings with a longitudinal, whitish line. *Fn.* 818.

Clerck. Phal. t. 4. f. 11. Phalaena Tiliaria.

Lives on lime and birch.

DESCR. Antennae lanceolate-pectinate, fuscous. Wings deep yellow, fasciate with a darker colour, cloudy, with indistinctly brick-red or deep yellow maculae, scattered at random on each side, and lower wings marked beneath with a longitudinal whitening line, almost interrupted twice.

1235. PH. GEOMETRA *elinguaria* [*Crocallis elinguaria* (Linnaeus, 1758). Eng. Scalloped oak, Sw. Rovmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings light yellow, anterior ones with a deep yellow fascia having a central, black spot.

Roes. Ins. 1. *Phal.* 3. t. 9.

Lives on pear.

Occurs in Skåne.

DESCR. Middle-sized. All wings light yellow. Upper wings with a very broad fascia, rather saturated deep yellow, and distinct through the rusty brown margin, a somewhat larger, fuscous spot medially. Posterior margin of all wings with the most minute black spots above. All wings posteriorly paler beneath.

1236. PH. GEOMETRA *hirtaria* [*Lycia hirtaria* (Clerck, 1759). Eng. Brindled beauty, Sw. Lurvig vintermätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings hirtous, grey-white, with three black streaks; posterior wings held close together; antennae jet-black.

Clerck. Phal. t. 7. f. 1. Phalaena hirtaria.

Occurs in the countryside.

DESCR. Middle-sized, stature as that of a noctuid moth; thorax strongly hirsute and thick. Wings deflexed, grey-white, hirtous, with three black streaks, of which the two posterior are closer to each other; alar veins elevated. Lower wings with posterior margin maculated with white. Femora markedly hirsute. Antennae are black and apically setaceous.

1237. PH. GEOMETRA *betularia* [*Biston betularia* (Linnaeus, 1758). Eng. Peppered moth, Sw. Björkmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings white, weakly fasciate, and with black speckles; thorax with a jet-black fascia.

Phalaena, antennae setaceous; tongue coiled; wings outspread, snow-white, with ash-greyish scattered speckles. *Fn.* 850.

Act. Stockh. 1755. p. 214. t. 6. f. 3.

De Geer Ins. 1. t. 17. f. 22.

Gadd. Satag. 82.

Lives on birch.

DESCR. Middle-sized. Entirely white, scattered all over with black powder or speckles. Wings indistinctly subfasciate on each side. Antennae black, apically setaceous.

1238. PH. GEOMETRA *defoliaria* [*Erannis defoliaria* (Clerck, 1759). Eng. Mottled umber, Sw. Lindmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings palish grey, medially white, with posterior black spot and blotch; female apterous.

Clerck. Phal. t. 7. f. 4. Phalaena defoliaria.

Reaum. Ins. 2. t. 30.

Roes. Supp. 83. t. 14. *femina.*

Lives on apple.

DESCR. Middle-sized. Antennae light yellow. Upper wings whitish yellow, scattered with fuscous speckles, and with a deep yellow fascia at base. Posterior fascia deep yellow, fractured, posteriorly with fuscous blotches. Posterior margin maculated with fuscous. Fuscous spot medially on the wing. Lower wings light yellow with fuscous speckles. Female apterous, with the appearance of a ladybird larva with seven spots.

1239. PH. GEOMETRA *ribearia* [*Deileptenia ribeata* (Clerck, 1759). Eng. Satin beauty, Sw. Barrskogslavmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings grey, weakly fasciate with fuscous; posterior fascia in the form of a necklace.

Clerck. Phal. t. 6. f. 5. Phalaena Ribeata.

Lives on red currant.

DESCR. The size of a magpie moth.[842] Upper wings grey, with three marginal, relatively short black fasciae; fourth fascia transverse, chained together by orbicular, black maculae; posterior margin with thin, black lines. Lower wings less fasciate. All wings beneath more yellow grey.

1240. PH. GEOMETRA *melanaria* [*Arichanna melanaria* (Linnaeus, 1758). Eng. Spotted beauty, Sw. Torvmossemätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings with black spots and maculae; anterior wings whitish, posterior ones deep yellow.

Clerck. Phal. t. 4. f. 2. Phalaena melanaria.

Udd. Diss. 65. Phalaena alis inferioribus flavis: maculis plurimis inaequalibus nigris.

Lives on Scots pine.[843]

DESCR. Size and appearance as those of the magpie moth.[844] All wings of a deep yellow colour, with roundish, numerous maculae scattered all over, but upper wings whitish above. Abdomen light yellow.

[842] See no. 1261.

[843] Lives on bog bilberry (*Vaccinium uliginosum*), which often grows on pine bogs.

[844] See no. 1261.

1241. PH. GEOMETRA *papilionaria* [*Geometra papilionaria* Linnaeus, 1758. Eng. Large emerald, Sw. Dagfjärilsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings green, with two undulating whitish streaks; posterior wings repand; antennae light yellow.

Phalaena, wings greenish white and rather plain. *Fn.* 922.

Roes. Ins. 4. t. 18. f. 3.

Lives on lime.

DESCR. The size of a large white.[845] Wings green, with two streaks, the posterior one whitish, indistinct and undulating, in addition with rudiments of a third streak at base. Lower wings repand at alar margin, decorated in the same way. Antennae and legs whitish yellow.

1242. PH. GEOMETRA *fasciaria* [*Hylaea fasciaria* (Linnaeus, 1758). Eng. Barred red, Sw. Barrskogsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[846] antennae pectinate; all wings red-brownish, with a broad, white-margined, rusty brown fascia.

Clerck. Phal. t. 5. f. 5. Phalaena fasciaria.

Inhabits forests.

DESCR. Middle-sized. Wings red-brownish tending to ash-grey, with a broad, transverse, rusty brown fascia, anteriorly and posteriorly white-margined. Wings are greyish blue beneath.

1243. PH. GEOMETRA *pulveraria* [*Plagodis pulveraria* (Linnaeus, 1758). Eng. American barred umber or Barred umber, Sw. Pudrad skymningsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings brick-red, with a broad, rusty brown fascia; beneath purplish tending to rusty brown.

Clerck. Phal. t. 5. f. 6. Phalaena pulveraria.

Occurs in Stockholm.

DESCR. All wings beneath strongly saturated red-yellow tending to rusty brown, above powdered ash-grey.

1244. PH. GEOMETRA *pendularia* [*Cyclophora pendularia* (Clerck, 1759). Eng. Dingy mocha, Sw. Pilgördelmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings ash-grey, with a rusty brown eyespot and a streak punctate with black.

Clerck. Phal. t. 7. f. 5. Phalaena pendularia.

Lives on willow. Larva flesh-coloured with a hanging pupa.

DESCR. Middle-sized. All wings ash-greyish. In the middle of all wings, a rusty brown eyespot with a white pupil. Behind the eyespot, a streak consisting of black spots and a posterior margin that is punctate with black. Wings concolorous beneath but without an eyespot.

[845] See no. 1035.

[846] See no. 1252.

1245. PH. GEOMETRA *atomaria* [*Ematurga atomaria* (Linnaeus, 1758). Eng. Common heath, Sw. Ängsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings inclining to deep yellow, with fuscous fasciae and speckles.

Phalaena, antennae pectinate; tongue coiled; wings rather flat, angular, cloudy, dusky light yellow. *Fn.* 840.

Frisch. Ins. 13. t. 5.

Lives on lime.

DESCR. Rather small. Wings fuscous with light yellow or whitish yellow speckles and fuscous fasciae; these wings are darker above than beneath. A single dark fascia beneath.

1246. PH. GEOMETRA *carbonaria* [*Macaria carbonaria* (Clerck, 1759). Eng. Netted mountain moth, Sw. Mjölonmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], black; antennae pectinate; wings with three whitish, undulating, somewhat interrupted streaks, anterior streak more remote.

Clerck. Phal. t. 1. f. 11. Phalaena carbonaria.

Occurs in the countryside.

DESCR. The size of the preceding species. Wings more indistinct beneath.

1247. PH. GEOMETRA *fuliginaria* [*Parascotia fuliginaria* (Linnaeus, 1761). Eng. Waved black, Sw. Svampfly; Fam. Erebidae, Subfam. Boletobinae, Sw. Svampflyn], antennae pectinate; wings black, undulated and punctate with white, beneath greyish.

Clerck. Phal. t. 8. f. 7.

Occurs in the countryside.

DESCR. Stature as that of the common heath,[847] but smaller and entirely jet-black. Antennae reduced. Wings with undulating, interrupted, white fasciae. Beneath grey, punctate with white.

1248. PH. GEOMETRA *wauaria* [*Macaria wauaria* (Linnaeus, 1758). Eng. The V-moth, Sw. Måbärsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings ash-grey, anterior wings with four relatively short, unequal, black fasciae.

Phalaena, antennae pectinate; tongue coiled; wings outspread, whitish, with four thin, transverse, marginal black lines. *Fn.* 845.

Act. Ups. 1736. p. 23. n. 44. Papilio alis planis albidis, fasciis linearibus nigricantibus.

Goed. Belg. 1. p. 23. t. 35. Somnolentus.

List. Goed. 38. t. 12.

Pet. Mus. 3. n. 4. Phalaena hortensis media cinerea, maculis fuscis notata.

[847] See no. 1245.

Raj. Ins. 179. Phalaena minor, alis amplis e cinereo albicantibus, interdum fusco cinereis, quatuor in exteriorum margine maculis linearibus e rufo nigricantibus.

Frisch. Germ. 3. p. 15. t. 3. f. 1. Eruca spithametra viridilutea maculis nigris.

Merian. Eur. t. 25.

Commonly called "the W-letter".

Lives on red currant and gooseberry.

DESCR. Antennae whitish, slightly plumose. Wings plain, whitish ash-grey above, the larger ones marked with four thin, transverse, black lines at outer margin, of which the second is longer than the others, but the fourth broader. Wings are palish grey beneath. Antennae in male pectinate, in female entirely setaceous and only serrate.

1249. PH. GEOMETRA *margaritaria* [*Campaea margaritaria* (Linnaeus, 1761). Eng. Light emerald, Sw. Blekgrön mätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae weakly pectinate; wings pearl white, with a deep yellowish fascia resembling a rivulet and fuscous borders.

Occurs in Stockholm. C. *Clerck.*

DESCR. The size of the preceding species. Wings with a linear, deep yellowish fascia from middle of anterior wings to angle of anus; in front of this fascia, the wing is bluish white or pearl white, with one or two fasciae at base; in the middle of the upper wings, a deep yellowish Latin letter B; outside the common fascia the wing is fuscous or dusky bluish; outermost margin often consisting of fine white hairs.

1250. PH. GEOMETRA *punctaria* [*Cyclophora punctaria* (Linnaeus, 1758). Eng. Maiden's blush, Sw. Ekgördelmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[848] antennae pectinate; wings angular, ash-grey tending to greyish, with a rusty brown streak and a transverse row of jet-black spots.

Udd. Diss. 67. Phalaena alis pallide griseis linea transversali ferruginea.

Clerck. Phal. t. 5. f. 11. Phalaena punctaria.

Occurs in Finland.

DESCR. Rather small. Wings whitish yellow, posterior wings angular. All wings have a rusty brown streak medially; a row of jet-black spots behind the streak on both wing surfaces of all wings.

1251. PH. GEOMETRA *pusaria* [*Cabera pusaria* (Linnaeus, 1758). Eng. Common white wave, Sw. Snövit streckmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; all wings snow-white, with three indistinct streaks.

Clerck. Phal. t. 3. f. 6. Phalaena pusaria.

Lives on alder and birch.

[848] See no. 1223.

DESCR. Small. Entirely white. All wings snow-white above, scattered with barely visible ash-greyish speckles. Three streaks indistinctly ash-grey, equally well spaced. All wings white beneath. Upper wings powdered with speckles near costa.

1252. PH. GEOMETRA *prosapiaria* [*Hylaea fasciaria* (Linnaeus, 1758). Eng. Barred red, Sw. Barrskogsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[849] antennae pectinate; wings inclining to deep yellow and having a rather saturated fascia on each side with a greyish blue, distinct streak.

Uddm. Diss. 66. Phalaena alis primariis dilute cinnamomeis: fasciis duabus linearibus subcaeruleis.

Clerck. Phal. t. 3. f. 1. Phalaena prosaparia.

Inhabits spruce groves in Finland.

DESCR. Somewhat larger, entirely cinnamon-coloured both above and beneath. Upper wings with a rather saturated fascia that is weakly greyish blue at both margins. Lower wings with a rather saturated streak, and with a greyish blue posterior margin. Upper wings whitish beneath at the thinner margin.

1253. PH. GEOMETRA *quadrifasciaria* [*Xanthorhoe quadrifasiata* (Clerck, 1759). Eng. Large twin-spot carpet, Sw. Fyrbandad fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae pectinate; wings grey, with an undulating fuscous fascia having a jet-black spot.

Clerck. Phal. t. 6. f. 4. Phalaena quadrifasciata.

Occurs in Stockholm.

DESCR. Rather small. Appearance as that of the shaded broad-bar.[850] Upper wings grey above. Undulating, blackish fascia in the middle, posteriorly repand, and with a distinct white streak on each side; a black spot in the middle of the fascia. Lower wings ash-greyish, weakly fasciate. Wings beneath with median spot and twin arch, each arch constructed from a double fuscous arch.

1254. PH. GEOMETRA *purpuraria* [*Lythria purpuraria* (Linnaeus, 1758). Eng. Purple-barred yellow; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[851] antennae pectinate; wings deep yellow-margined and anterior wings with two purple fasciae.

Goed. Ins. 2. t. 12.

Lives on blackthorn and oak.

DESCR. Small. Upper wings deep yellow above, with two purplish fasciae and a posterior ciliate margin. Deep yellow beneath, with a fuscous fascia.

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[849] See no. 1242.

[850] See no. 1263.

[851] See no. 1302. Not occurring in Sweden. However, the very similar *Lythria cruentaria* (Hufnagel, 1767), Sw. Mindre purpurmätare, is not uncommon in Sweden.

1255. PH. GEOMETRA *bidentata* [*Odontopera bidentata* (Clerck, 1759). Eng. Scalloped hazel, Sw. Tandmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings erose, grey, with a black, ocellate spot. Upper wings with a rather saturated fascia.

Clerck. Phal. t. 7. f. 2. Geometra bidentata.

De Geer. Ins. 1. t. 25. f. 6.

Lives on rose and alder.

DESCR. Somewhat larger, grey. Wings grey, all with a rather broad, pale spot in the middle of both sides that is jet-black at margin and posteriorly erose. Upper wings with a broad fascia, anteriorly and posteriorly distinguished by a thin, white, interrupted line. All wings with a repand, blackish striga beneath; posterior area paler and margin of posterior wings punctate with black beneath. Related to the canary-shouldered thorn,[852] but antennae entirely setaceous in my specimens.

1256. PH. GEOMETRA *viridata* [*Chlorissa viridata* (Linnaeus, 1758). Eng. Small grass emerald, Sw. Ljunglundmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings angular, green, with a pale streak.

Phalaena, antennae setaceous; tongue coiled; wings outspread, green. *Fn.* 857.

Harris. Ins. 7. t. 3. f. e-i.

Lives on hawthorn and oak.

DESCR. Small, slender. All wings green, with a pale streak above that is whitish yellow at the thicker margin.

1257. PH. GEOMETRA *emarginata* [*Idaea emarginata* (Linnaeus, 1758). Eng. Small scallop, Sw. Naggad lövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings pale, emarginate and angular, with two grey streaks.

Clerck. Phal. t. 4. f. 12.

Occurs in Stockholm.

DESCR. Small. Wings pale whitish yellow, with two linear, grey streaks, widely spaced; a fuscous spot on the disc. All wings are indistinctly emarginated posteriorly. Concolorous beneath.

1258. PH. GEOMETRA *notata* [*Macaria notata* (Linnaeus, 1758). Eng. Peacock moth, Sw. Pilbågmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings angular, pale, with three weakly fuscous fasciae; upper wings posteriorly scattered with blackish maculae.

Clerck. Phal. t. 6. f. 11. Phalaena notata.

Inhabits forests.

DESCR. Small. Wings pale, scattered with fuscous speckles; three narrow, fuscous fasciae; in the middle of the third fascia, there are four fuscous spots, arranged equally into a tetragon and

[852] See no. 1230.

resembling the excrements of flies. Posterior margin of all wings with a fuscous line, which on the anterior wing forms a fuscous, thickish crescent in the form of a marginal notch.

1259. PH. GEOMETRA *dubitata* [*Triphosa dubitata* (Linnaeus, 1758). Eng. The Tissue, Sw. Vägtornsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; anterior wings grey tending to weakly greyish blue, with a bronze purplish fascia; posterior wings dentate.

Phalaena, antennae setaceous; tongue coiled; wings outspread, dentate, with coppery ash-grey fasciae. *Fn.* 842.

A questionable moth.

Clerck. Phal. t. 6. f. 2. Phalaena dubitata.

Inhabits forests.

DESCR. Rather large. All wings, especially lower ones, posteriorly dentate. Upper wings dark greyish blue above, with a red-brownish, bronze coloured, broad, repand, somewhat shining fascia; in front of posterior margin there is what resembles a streak of pale spots.

Beneath dark greyish blue, veins punctate with fuscous and a very small black spot in the middle. This species is described in these words with great difficulty.

1260. PH. GEOMETRA *repandata* [*Alcis repandata* (Linnaeus, 1758). Eng. Mottled beauty, Sw. Vågbräddad lavmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings ash-grey, all with fuscous undulations, posterior ones with a repand, jet-black margin.

Clerck. Phal. t. 6. f. 8. Phalaena repandata.

Inhabits forests.

DESCR. Somewhat larger. All wings grey-white above, with fuscous and almost cloudy undulations and a black, repand fascia. The posterior bluntly dentate margin is circumscribed by a thin black line. All wings ash-greyish beneath, with fuscous undulations. Lower wings with a blackish spot in the middle.

1261. PH. GEOMETRA *grossulariata* [*Abraxas grossulariata* (Linnaeus, 1758). Eng. Magpie moth, Sw. Krusbärsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings whitish with rounded, black maculae; anterior wings with deep yellow streaks.

Phalaena, antennae setaceous; tongue coiled; wings outspread, white, with many unequal, black maculae. *Fn.* 849.

Mouff. Angl. p. 905.

Lat. p. 96. n. 10.

Jonst. Ins. p. 89. n. 10. t. 6.

Merr. Eur. 1. p. 11. t. 29. (*male antennis clavatis*).

Goed. Belg. 1. p. 101. t. 31.

List. Goed. p. 24. f. 9.

Blank. Belg. p. 41. t. 7. f. E. F. G. H. Geometra.

Frisch. Germ. 3. p. 14. t. 2. Spitrhometra nigro luteoque maculata.

Pet. Mus. 3. n. 4. Phalaena hortensis alba, maculis plurimis nigris insigita.
p. 4. n. 7. Eruca geometrica, pulchre variegata, grossularias depascens.
Raj. Ins. p. 178. n. 14. Phalaena media, alis amplis albis, maculis crebris nigris & lineis transversis luteis variis.
179. Eruca geometra grossularia majuscula alba rubro & nigro coloribus varia.
373. n. 1. Eruca geometra grossulariam depascens.
Lives on species of currant, almond, willow, and blackthorn.
DESCR. Rather large. Head black. Body red-yellow, maculate with black. Wings white. Upper wings with two round, red-yellow fasciae and oblong, jet-black blotches; posterior margin with 7 jet-black spots. Posterior wings white with black spots on disc and at margin. All concolorous beneath, without the red-yellow fasciae.

1262. PH. GEOMETRA *testata* [*Eulithis testata* (Linnaeus, 1761). Eng. The Chevron, Sw. Violettgrå parkmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; upper wings red-yellowish, with pale macula, white streak, and thin, white line at tip.
Occurs around us; rather rare.
DESCR. Somewhat larger. Upper wings of a cinnamon colour; on anterior wing, a curved macula touching outer margin; on posterior wing, a straight, whitish streak on the outside, curved on the inside, with a thin line at alar tip,[853] as on the shaded broad-bar,[854] but white, to which posteriorly a rather saturated macula is adjacent. Wings pale beneath with a black spot in the middle and a darkish arch consisting of two streaks.

1263. PH. GEOMETRA *chenopodiata* [*Scotopteryx chenopodiata* (Linnaeus, 1758). Eng. Shaded broad-bar, Sw. Vickerbackmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; anterior wings brick-red, with three grey fasciae, a slightly prominent spot, and a thin, apical fuscous line above.
Phalaena, antennae setaceous; tongue coiled; wings outspread, with three grey fasciae and a blackish spot. *Fn.* 856.
Act. Ups. 1736. p. 24. n. 47. Papilio alis planis griseis, fascia pallida.
Lives on goosefoot.
DESCR. Upper wings plain and outspread, light yellow, rather shining, with three grey fasciae, of which the first at base, the second well spaced and narrow, the third more widely spaced, broader, posteriorly an undulating linear blotch that is blackish at the tip of upper wing. Lower wings whitish yellow; each wing marked beneath in the middle with a black spot. Tarsi of forelegs varied with white and fuscous. Of average size. On upper wings, between the two posterior fasciae, a black spot. Posterior part of upper wings without maculae, whitish yellow. *T. Bergman* has told me that the antennae of the male are pectinate.

[853] Lat. *ad apice malae* should be written as *ad apicem alae.*
[854] See no. 1263.

1264. PH. GEOMETRA *comitata* [*Pelurga comitata* (Linnaeus, 1758). Eng. Dark spinach, Sw. Mållmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; anterior wings whitish yellow, with three grey fasciae, a spot, and a thin fuscous apical line laterally.

Inhabits gardens.

DESCR. Slightly smaller than the preceding species. Upper wings light yellow above, with three greyish fasciae; the first at the very base, the second slightly narrower, at which a black spot is adjacent, the third broader, posteriorly sinuate. At alar tip, a linear, blackish blotch.

1265. PH. GEOMETRA *citrata* [*Dysstroma citrata* (Linnaeus, 1761). Eng. Dark marbled carpet, Sw. Spetsvinklad fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings grey, with a subterminal whitish red-yellow macula and a white streak; a thin, fuscous line at tip.

Lives on the leaves of citrus, which the pale green geometer larva eats at night. *Rolander.*

DESCR. The size of the bordered white.[855] Upper wings grey above; close to the thicker margin there is a large, whitish, weakly rusty brown macula posteriorly, which is followed by the white, very slender, undulating streak; at alar tip, a linear, black blotch, just as in the two preceding species. Beneath ash-grey, posteriorly paler.

1266. PH. GEOMETRA *populata* [*Eulithis populata* (Linnaeus, 1758). Eng. Northern spinach, Sw. Blåbärsparkmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings whitish yellow, anterior wings weakly fasciate, light yellow, round maculae in the middle; fuscous blotch apically.

Clerck. Phal. t. 5. f. 13. 14. Phalaena populata.

Clerck. Phal. t. 5. f. 15. Phalaena dotata.

Lives on aspen.

DESCR. Middle-sized. Wings light yellow. Upper wings with a palish grey fascia at base. Palish grey, broad fascia in the middle, posteriorly repand, angular, marked centrally with some almost orbicular, light yellow maculae. Terminal fascia narrower, with a linear fuscous blotch at tip. Wings whitish yellow beneath, with a blackish spot medially; forewings beneath and medially, with a fuscous, weakly fasciate blotch and a fuscous, broad blotch at posterior margin.

1267. PH. GEOMETRA *prunata* [*Eulithis prunata* (Linnaeus, 1758). Eng. The Phoenix, Sw. Vitbrokig parkmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings grey; anterior wings with two pale, repand fasciae and a posterior, semi-terminal fascia.

Phalaena, antennae setaceous; tongue coiled; wings outspread, with a double fascia alternating between fuscous and white. *Fn.* 866.

[855] See no. 1233.

Clerck. Phal. t. 7. f. 3. Phalaena Prunata.

Lives on plum.

DESCR. Rather large. Upper wings darkish, with an anterior, undulating, white fascia; posterior fascia is terminal, broader, maculate, and behind this macula a marginal fascia visible even on the lower surface of the wing. Lower wings whitish, beneath a spot medially and another one at the alar angle.

1268. PH. GEOMETRA *miata* [*Chloroclysta miata* (Linnaeus, 1758). Eng. Autumn green carpet, Sw. Grön fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings with greenish undulations and two rather broad, white fasciae.

Phalaena, antennae setaceous; tongue coiled; wings outspread, maculate with ash-grey. *Fn.* 863.

Act. Ups. 1736. p. 23. n. 43. Papilio alis planis virescentibus cinereo-maculatis.

Clerck. Phal. t. 8. f. 3. Phalaena miata.

Inhabits gardens.

DESCR. Middle-sized. Upper wings greenish ash-grey, with darkish and palish, almost cloudy fasciae; medially a paler fascia with indistinct, black spots.

1269. PH. GEOMETRA *juniperata* [*Thera juniperata* (Linnaeus, 1758). Eng. Juniper carpet, Sw. Enfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings ash-greyish; anterior wings with two grey fasciae and a thin, apical, fuscous line.

Clerck. Phal. t. 2. f. 8. Phalaena juniperata.

Lives on juniper. *Mr* C. *Solander.*

DESCR. Small, stature as that of a phoenix.[856] Upper wings at the very base with an ash-greyish fascia. Broad, unequal fascia in the middle of the wing, almost interrupted at the inner margin; a fuscous line towards alar tip. All the other wings ash-grey on the surfaces of the wings, with a posterior linear, fuscous margin.

1270. PH. GEOMETRA *didymata* [*Mesotype didymata* (Linnaeus, 1758). Eng. Twin-spot carpet, Sw. Tvillingfläckad fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings whitish, indistinctly ash-grey, bifasciate, with a posterior fuscous, bilobed macula.

Clerck. Phal. t. 6. f. 10. Phalaena didymata.

Inhabits forests.

DESCR. Rather small. Upper wings whitish above, with two cloudy ash-grey fasciae: one in the middle, the other terminal, in the centre of which there is a didymous, fuscous macula; posterior margin punctate with black and with an apical, linear, blackish blotch. Wings greyish blue beneath, with a black spot in the middle and a double fuscous arch.

[856] See no. 1267.

1271. PH. GEOMETRA *plagiata* [*Aplocera plagiata* (Linnaeus, 1758). Eng. Treble-bar, Sw. Mellantaggmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; anterior wings grey-white, with trilinear, blackish, repand fasciae.

Clerck. Phal. t. 6. f. 1. Phalaena plagiata.

Inhabits forests; rather rare.

DESCR. Middle-sized. Upper wings ash-greyish above, each with five fasciae and each fascia consisting of three fuscous lines, of which the first is at base with a marginal, blackish macula, the second more indistinct, the third with a black blotch medially; the fourth blackish at outer margin, and the fifth more indistinct. Lower wings ash-grey, with a fuscous blotch at outer margin of upper wing; posteriorly fuscous beneath.

1272. PH. GEOMETRA *undulata* [*Hydria undulata* (Linnaeus, 1758). Eng. Scallop shell or Scallop shell moth, Sw. Vågig tofsmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings whitish, with fuscous, undulating, and transverse streaks strongly crowded together; posterior wings subdentate.

Uddm. Diss. 71. Phalaena alis patentibus dentatis fuscis: lineis plurimis confertis albidis & fuscis acute undulatis.

Clerck. Phal. t. 6. f. 3. Phalaena undulata.

Lives on goat willow.

DESCR. Middle-sized. All wings ash-greyish above, covered with very numerous, undulating, whitish streaks. Concolorous beneath, but with an indistinct, blackish spot in the middle.

1273. PH. GEOMETRA *liturata* [*Macaria liturata* (Clerck, 1759). Eng. Tawny-barred angle, Sw. Tallbågmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings somewhat angular, ash-greyish, with a posterior light yellow blotch and beneath bleached at tip.

Clerck. Phal. t. 6. f. 6. Phalaena liturata.

Occurs in Uppsala. *Joh. Alströmer.*

DESCR. Middle-sized. Upper wings ash-greyish; outer margin with indistinct, darkish blotches; posteriorly a short, whitish yellow fascia. Lower wings with an indistinct, whitish yellow fascia above. All bleached beneath at posterior margin. Head and collar light yellow.

1274. PH. GEOMETRA *atrata* [*Odezia atrata* (Linnaeus, 1758). Eng. Chimney sweeper, Sw. Sotmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous, jet-black; wings erect, with anterior wings apically white.

Phalaena, antennae setaceous; tongue coiled, entirely jet-black; wings erect, apically white. *Fn.* 864.

Act. Ups. 1736. p. 23. n. 35. Papilio alis planis nigris: apicibus albis.

Inhabits pastures; abundant in June and July.

DESCR. It falls among the rather small species. Entirely jet-black except for the outer wing's very tips, which are white at margin. When settled it holds the wings erect like butterflies.[857]

1275. PH. GEOMETRA *clathrata* [*Chiasmia clathrata* (Linnaeus, 1758). Eng. Latticed heath, Sw. Rutig buskmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings pale whitish yellow, with black cross lines.

Clerck. Phal. t. 2. f. 11. Phalaena clathrata.

Inhabits forests.

DESCR. Small. Wings concolorous; all white with longitudinal striae and transverse, reticulate streaks, but on the lower surface of the wing a reticulate dusky brick-red pattern of coloration, except for a single jet-black anastomosis; posterior margin as if dentate with white and black.

1276. PH. GEOMETRA *hastata* [*Rheumaptera hastata* (Linnaeus, 1758). Eng. Argent & sable or Spear-marked black moth, Sw. Vitbandad björkfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings black, maculate with white, and with two spear-shaped, dentate, white fasciae lacking maculae.

Phalaena, antennae setaceous; tongue coiled; wings outspread, cloudy black; two white fasciae. *Fn.* 861.

Clerck. Phal. t. 1. f. 9. Phalaena hastata.

Inhabits forests.

DESCR. Middle-sized. Wings jet-black, with four white, unequal streaks, of which the third alar fascia is broader and posteriorly extends like a white, spear-shaped tooth towards posterior margin.

1277. PH. GEOMETRA *tristata* [*Epirrhoe tristata* (Linnaeus, 1758). Eng. Small argent and sable, Sw. Svart mårfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings black, with some white undulations and two white undulating fasciae with black spots.

Phalaena, antennae setaceous; tongue coiled; wings outspread, with a double white fascia and a reciprocal double black fascia. *Fn.* 862.

Act. Ups. 1736. p. 23. n. 45. Papilio alis planis albidis, fasciis latis cinereis.

Clerck. Phal. t. 1. f. 13. Phalaena tristata.

Inhabits forests.

DESCR. The same appearance as that of the preceding species, but smaller. Wings jet-black, cloudy white, with a white streak close to base. White fascia punctate with black in the middle; posterior streak very narrow. Wings anteriorly white beneath and punctate with black; posteriorly blackish with a very narrow, white streak; medially a black spot.

[857] Linnaeus only refers to *Papilio*, see nos. 1031–1082.

1278. PH. GEOMETRA *albicillata* [*Mesoleuca albicillata* (Linnaeus, 1758). Eng. Beautiful carpet, Sw. Hallonfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings blackish, with a single very broad, white fascia without maculae.

Clerck. Phal. t. 1. f. 12. Phalaena albicillata.

Inhabits forests.

DESCR. Middle-sized. Upper wings white above, anteriorly and posteriorly blackish. Lower wings white, posteriorly blackish. All whitish beneath with fuscous median spot and arch; posteriorly darkish towards tips, especially upper wings.

1279. PH. GEOMETRA *marginata* [*Lomaspilis marginata* (Linnaeus, 1758). Eng. Clouded border, Sw. Mindre fläckmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings white with the outer margin interrupted by a fuscous edge.

Phalaena, antennae setaceous; tongue coiled; wings outspread, white, and at margin interrupted by fuscous on all sides. *Fn.* 860.

Act. Ups. 1736. p. 23. n. 37. Papilio alis planis albis, maculis fuscis inaequalibus marginalibus.

Clerck. Phal. t. 2. f. 5. Phalaena marginata.

Lives on hazel.

DESCR. Middle-sized. Upper wings white, with a posterior fuscous, broad, uneven margin; at outer margin a long macula at base and a shorter one in the middle; at the apical part of the posterior margin there appears another macula; in addition a roundish, fuscous macula on disc. Lower wings white; posterior margin uneven, broad, fuscous. Some individuals have a fascia comprising four fuscous maculae that are chained together. Wings concolorous beneath, with pale maculae but without a median spot.

1280. PH. GEOMETRA *ocellata* [*Cosmorhoe ocellata* (Linnaeus, 1758). Eng. Purple bar, Sw. Ögonfläckad fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings whitish, anterior ones with two darkish fasciae and an apical, ocellate, didymous macula.

Lives on hazel.

DESCR. Rather small. Upper wings white, with a fuscous fascia at the very base. Fuscous fascia maculated with black in the middle; in this part close to the inner margin, a black omicron and an ypsilon can be observed. A didymous spot at alar angle. Lower wings white. All wings greyish blue and cloudy beneath, medially a black spot. Upper wings, in front of posterior margin, with a row of spots consisting of seven whitish spots.

1281. PH. GEOMETRA *fluctuata* [*Xanthorhoe fluctuata* (Linnaeus, 1758). Eng. Garden carpet, Sw. Svartfläcksfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings ash-greyish, anterior ones with three fuscous, relatively short fasciae.

Phalaena, antennae weakly pectinate; tongue coiled; wings outspread having fasciae varying with whitish and fuscous. *Fn.* 844.

Goed. Ins. 3. t. K.

Frisch. Ins. 7. t. 19.

Lives on plum; abundant in forests.

DESCR. Smaller than the purple bar.[858] Upper wings whitish ash-greyish. Fuscous fascia at the very base of the wing. Fuscous fascia in the middle extending only halfway along the wing. Fuscous macula at the thicker margin in front of tip. Lower wings whitish above, with ash-grey undulations. All wings cloudy ash-grey beneath, with a black spot in the middle.

1282. PH. GEOMETRA *alchemillata* [*Perizoma alchemillata* (Linnaeus, 1758). Eng. Small rivulet, Sw. Dånfältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings ash-greyish; anterior wings undulated with a snow-white fascia with grey undulations, a thin line inside the tip.

De Geer. Ins. 1. t. 22. f. 16.

Lives on lady's mantle.

DESCR. Smaller than the preceding moths, but similar. Upper wings ash-grey, cloudy whitish. Posteriorly a transverse white fascia with an undulate fuscous line; a white, repand streak in front of posterior margin. Lower wings ash-grey with whitish undulations. Upper wings ash-greyish beneath, with a whitish fascia, and posteriorly darkish ash-grey; lower wings whitish beneath, posteriorly darkish.

1283. PH. GEOMETRA *crataegata* [*Opisthograptis luteolata* (Linnaeus, 1758). Eng. Brimstone moth, Sw. Citronmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings of an intense, light yellow colour, anterior ones with three rusty brown maculae at the costae, medially weakly silvery.

Phalaena luteolata. Syst. nat. 10. p. 525. n. 168.

Uddm. Diss. 70. Phalaena flava, alis patentibus macula tricuspide fusca, pupilla alba.

Lives on hawthorn and whitebeam.

DESCR. Small. All wings of an intense, light yellow colour or sulphur-coloured like the whole body. Antennae above, knees of the legs, thoracic sides, costae, and alar base are all red. Three red-brown maculae at the costa of upper wing: the first very small, the second with a rusty brown, fenestrated macula, and the last larger, trigonal. Wings almost concolorous beneath, but posterior row transverse with indistinct punctations. Lower wings with a fuscous spot in the middle.

[858] See no. 1280.

1284. PH. GEOMETRA *bilineata* [*Camptogramma bilineata* (Linnaeus, 1758). Eng. Yellow shell, Sw. Gulvingad fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings deep yellow with brick-red undulations, a repand fascia, and a fuscous and white margin.

Clerck. Phal. t. 6. f. 13. Phalaena bifasciata.

Inhabits gardens.

DESCR. Rather small. All wings light yellow on each side and with very slender, undulating fuscous streaks all over. Upper wings with a slightly darker, broad, and posteriorly sinuate fascia above; on each side a distinct, repand, whitish streak.

1285. PH. GEOMETRA *lividata* [*Idaea aversata* (Linnaeus, 1758). Eng. Riband wave, Sw. Vinkellövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[859] antennae setaceous; wings anteriorly pale with a fuscous streak, posteriorly fuscous with a pale streak.

Clerck. Phal. t. 5. f. 10. Phalaena lividata.

Occurs in the countryside.

DESCR.[860] Appearance and stature entirely as those of the following species. All wings with a median, jet-black spot on each side; wings anteriorly pale or pale sulphur-coloured, with a curved, fuscous streak; posteriorly indistinctly fuscous with a pale streak and behind this streak the fuscous colour is less saturated. All wings pale beneath with a fuscous streak behind the spot; then an indistinct fascia between the spot and streak.

1286. PH. GEOMETRA *aversata* [*Idaea aversata* (Linnaeus, 1758). Eng. Riband wave, Sw. Vinkellövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[861] antennae setaceous; wings greyish blue, with a streak at base and fuscous fascia and spot in the middle.

Clerck, Phal. t. 5. f. 7. Phalaena aversata.

Udd. Diss. 72. Phalaena alis patentibus pallidis: fascia transversali dilute fusca.

Occurs in Finland.

DESCR.[862] Rather small. All wings greyish blue, medially with a broad, transverse, fuscous fascia; anteriorly an indistinctly fuscous streak; behind the fascia, a broader indistinct streak, hardly visible. Wings almost concolorous beneath, but paler with a black spot in the middle.

1287. PH. GEOMETRA *incanata* [*Scopula incanata* (Linnaeus, 1758). Sw. Ljusgrå lövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings grey-white, posteriorly with a repand, white streak, disc with a spot, and margin punctate with black.

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[859] See nos. 1286 and 1289.

[860] Linnaeus here describes the main morph of *Idaea aversata*.

[861] See nos. 1285 and 1289.

[862] Linnaeus here describes the other common morph of *Idaea aversata* with a fuscous fascia filling the area between the two streaks.

Clerck, Phal. t. 3. f. 3. Phalaena incanata.

Inhabits forests.

DESCR. Rather small. All wings grey-white above with an undulating streak that is blackish at base. Medially a black spot. Posterior streak blackish, repand; then a white, repand streak; posterior margin punctate with black. All wings whitish ash-grey beneath, with a median, black spot; posterior streak fuscous, repand, and margin punctate with black. Posterior wings almost sharp-cornered.

1288. PH. GEOMETRA *immutata* [*Scopula immutata* (Linnaeus, 1758). Eng. Lesser cream wave, Sw. Ängslövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings whitish, concolorous, with posterior indistinct streaks and spot; margin punctate with black.

Clerck. Phal. t. 6. f. 12. Phalaena immutata.

Inhabits forests.

DESCR. Rather small. All wings white with a median jet-black spot; many whitish streaks and so indistinct that they are hardly visible, especially behind the spot. Posterior margin with very small black dots on each side. Wings concolorous beneath, but more ash-grey and as if scattered with speckles.

1289. PH. GEOMETRA *remutata* [*Idaea aversata* (Linnaeus, 1758). Eng. Riband wave. Sw. Vinkellövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[863] antennae setaceous; wings whitish yellow, with three fuscous streaks and a spot; posterior margin punctate with black.

Clerck. Phal. t. 5. f. 12. Phalaena remutata.

Occurs ubiquitously.

DESCR. Small. Wings greyish blue, with three curved, fuscous streaks, equally well spaced. Posterior margin with a fuscous streak that has fuscous spots. Fuscous spot between the first and second streaks. Wings more indistinct beneath, with the first streak often deficient.

1290. PH. GEOMETRA *immorata* [*Scopula immorata* (Linnaeus, 1758). Eng. Lewes wave, Sw. Gråbandad lövmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings inclining to deep yellow, with indistinct whitish fasciae and a marginal blackish streak.

Occurs in the countryside.

DESCR. Small. All wings ash-grey inclining to deep yellow, scattered with fuscous speckles, and numerous undulating, whitish fasciae; posterior margin ending in a barely visible streak. Wings concolorous beneath or ash-grey with many undulating, fuscous, rather obvious fasciae and posteriorly a very thin snow-white streak.

[863] See nos. 1285 and 1286.

1291. PH. GEOMETRA *strigilata* [*Pechipogo strigilata* (Linnaeus, 1758). Eng. Common fan-foot, Sw. Vitkantat sprötfly; Fam. Erebidae, Subfam. Herminiinae, Eng. Litter moths, Sw. Sprötflyn],[864] antennae setaceous; wings ash-grey, posteriorly with a transverse, straight, pale streak.

Clerck. *Phal.* t. 5. f. 2. Phalaena strigilata.

Occurs around us; rather rare.

DESCR. Small, entirely ash-grey. Wings ash-grey above, not at all elegant, with two flexuous, rather saturated, barely visible streaks, but posteriorly a transverse, straight, ash-grey streak, posteriorly white.

1292. PH. GEOMETRA *ferrugata* [*Xanthorhoe ferrugata* (Clerck, 1759). Eng. Dark-barred twin-spot carpet, Sw. Roströd fältmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings purplish, with three whitish streaks, posteriorly ash-grey, with a didymous, fuscous macula.

Inhabits gardens.

DESCR. Small. Upper wings anteriorly rusty brown tending to purplish, posteriorly ash-grey. Two linear, narrow fasciae, whitish at base; a third fascia separates the purplish colour from the ash-grey. Didymous, fuscous macula at tip in the ash-grey area. Lower wings ash-greyish. All wings ash-greyish beneath.

1293. PH. GEOMETRA *brumata* [*Operophtera brumata* (Linnaeus, 1758). Eng. Winter moth, Sw. Mindre frostfjäril; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings dusky grey, posteriorly paler, with a black streak; female apterous.

Phalaena, antennae setaceous; wings dusky grey; lower wings whitish; female apterous. *Fn.* 921.

De Geer. Ins. 1. t. 24. f. 11–19.

Raj. Ins. 369. n. 9. Eruca geometra parva pallide seu ex flavo virens, lineolis albicantibus, tum secundum longitudinem, tum transversis.

Lives on pear, apple, plum, and hornbeam.

DESCR. Wings of male ample, dusky grey, with a transverse, barely visible, rather watery fascia. Wings of female very small, ash-grey, with black maculae. Legs long, with black rings.

Larva green, with 10 legs; on each side a thin, longitudinal, white line; before emerging it hides in the pupa for a year, although it is smaller than a fly.

1294. PH. GEOMETRA *succenturiata* [*Eupithecia succenturiata* (Linnaeus, 1758). Eng. Bordered pug, Sw. Gråbomalmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; all wings whitish greyish, with black spot and rather dark edge.

[864] See no. 1345.

Clerck. Phal. t. 8. f. 8. 11. Phalaena succenturiata.

Inhabits gardens; abundant.

DESCR. Small. Thorax and anus white. Abdomen darkish. Wings oblong, all whitish above with ash-grey and fuscous, especially variable at outer edge. Upper wings with a median, black spot. All streaks posteriorly white, flexuous.

1295. PH. GEOMETRA *rectangulata* [*Pasiphila rectangulata* (Linnaeus, 1758). Eng. Green pug, Sw. Grön malmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings green, weakly fasciate with fuscous.

Clerck. Phal. t. 8. f. 6. Phalaena rectangulata.

Inhabits gardens; abundant.

DESCR. Small; stature as that of the previous species. Wings greenish above with weakly fasciate, black blotches. Wings palish ash-greyish beneath, with a median, black spot, and an arch formed by linked jet-black spots, and a posterior flexuous, white streak.

1296. PH. GEOMETRA *absinthiata* [*Eupithecia absinthiata* (Clerck, 1759). Eng. Wormwood pug, Sw. Absintmalmätare; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare], antennae setaceous; wings dark ash-grey with a spot, three marginal, black blotches, and a white anal spot.

Clerck. Phal. t. 8. f. 9. Phalaena Absinthiata.

Lives on wormwood. C. *Clerck*.

DESCR. Very closely resembles the preceding species, but with a different alar colour. Three fuscous alar blotches at the thicker margin. Black spot medially on the wing. White spot at anal angle.

1297. PH. GEOMETRA *urticata* [*Anania hortulata* (Linnaeus, 1758). Eng. Small magpie moth, Sw. Vitt nässelmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], antennae setaceous; wings white, maculate, fasciate with fuscous; thorax and anus light yellow.

Phalaena hortulata. Syst. nat. 10. p. 52. n. 195.

Phalaena, antennae setaceous; tongue coiled; wings outspread, cloudy white and fuscous; anus light yellow. *Fn.* 846.

Goed. Belg. 2. p. 37. f. 13.

List. Goed. p. 156. f. 61.

Alb. Ins. t. XXXVII. f. 60.

Reaum. Gall. 1. t. 49. f. 18. 17.

De Geer. Ins. 1. t. 28. f. 18. 19.

Pet. Gaz. 51. t. 32. f. 8. Phalaena minor alba, maculis nigrescentibus ornata.

Raj. Ins. 222. Phalaena minor; alis oblongis ex albo & caeruleo nigricante variis, ad exortum flavis.

Harris. Ins. 13. t. 6. f. 1-p.

Lives on nettle; abundant in orchards. Used to eat even St. Paul's wort and contort its leaves.

The larva is driven away from the tree top.[865] Descends by soft threads, then it ascends again via the tree cortex, if the latter has not been besmeared with glue or it is devoured by hens that have been let in. Around the summer solstice it descends and vanishes in order to transform into a pupa? DESCR. Small. Body deep yellow. Wings concolorous, fuscous, with a white disc, scattered anteriorly with roundish, fuscous maculae, posteriorly with an arcuate, fuscous fascia.

1298. PH. GEOMETRA *nymphaeata* [*Elophila nymphaeata* (Linnaeus, 1758). Eng. Brown china-mark, Sw. Näckrosmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott],[866] antennae setaceous; wings ash-grey, all similarly maculate with white, reticulate.

Phalaena, antennae setaceous; wings outspread, white, all cloudy, reticulate, glabrous. *Fn.* 851.

Act. Ups. 1736. p. 24. n. 52. Papilio alis planis nitidis albis: omnibus reticulatis.

Raj. Ins. 227. n. 87. Phalaena minor piscinas & stagna frequentans, alis utrisque albo & fusco sive nigricante colore variis?

Lives on duckweed.

DESCR. All wings resemble a double-lined blackish net, inside which the colour is whitish yellow, but quite indistinct; inside the circles or fields, the wings are entirely white with nets. If the wings are examined, they are concolorous on each side.

1299. PH. GEOMETRA *potamogata* [*Elophila nymphaeata* (Linnaeus, 1758). Eng. Brown-china mark, Sw. Näckrosmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott],[867] antennae setaceous; wings ash-grey, maculate with white, anterior wings rather indistinctly reticulate.

Phalaena, antennae setaceous; wings outspread, white, with lower wings cloudy, reticulate, glabrous. *Fn.* 853.

Loesel. Prussic. 178. Eruca nymphaeae.

Reaum. Gall. 2. t. 32. f. 11.

Act. Ups. 1736. p. 24. n. 51. Papilio alis planis nitidis albis, inferioribus reticulatis.

Lives on floating leaf pondweed.

DESCR. It is twice the size of the preceding species but very similar.[868] Upper wings indistinctly reticulate.

[865] This and the following sentences are completely misplaced. They obviously refer to the winter moth, no. 1293.

[866] See no. 1299.

[867] See no. 1298.

[868] In fact synonymous.

1300. PH. GEOMETRA *stratiotata*[869] [*Parapoynx stratiotata* (Linnaeus, 1758). Eng. Ringed china-mark, Sw. Vattenaloemott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], antennae setaceous; wings pale, weakly fasciate, anterior wings with two black spots.

Phalaena, antennae setaceous; wings outspread, ash-grey, with linear, fuscous fasciae and a black spot. *Fn.* 854.

De Geer. Ins. 1. t. 37. f. 16–18.

Lives in water bodies.

DESCR. Small. Upper wings whitish, frontally ash-greyish, anteriorly with a fuscous spot, medially a lunate, fuscous spot on the white disc. Posterior wings white, with an interrupted fuscous fascia. All wings beneath without maculae, white.

1301. PH. GEOMETRA *lemnata* [*Cataclysta lemnata* (Linnaeus, 1758). Eng. Small china-mark moth, Sw. Andmatsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], antennae setaceous; wings white, posterior wings with a terminal, black fascia having four white spots.

Phalaena, antennae setaceous; wings outspread, white, posteriorly a marginal fascia; lower wings black, with four white spots. *Fn.* 852.

Reaum. Gall. 2. t. 32. f. 13. t. 16. 17.

Lives on duckweed, where it builds a nest for the pupa above the water surface, using the leaves gathered into a cylinder.

DESCR. Small. Antennae only half the length of the body, with each segment on the other side embellished with a white triangle; when observed from different directions, the antennae seem surrounded by white rings.

Upper wings white, with a fuscous fascia at posterior margin, medially greyish blue; a black spot medially on the wing. Thin flexuous greyish blue line in front of fascia. These wings are ash-grey beneath with a fuscous spot medially.

Lower wings white, with a black fascia at posterior margin; a thin longitudinal, superincumbent, greyish blue line and a fascia with four white spots along its length; in the middle of this wing, a black spot and a blackish macula; beneath these wings are more whitish.

1302. PH. GEOMETRA *purpurata* [*Lythria purpuraria* (Linnaeus, 1758). Eng. Purple-barred yellow; Fam. Geometridae, Eng. Geometer moths or Looper moths, Sw. Mätare],[870] antennae setaceous; upper wings greenish with two purple fasciae; lower wings deep yellow beneath with a purplish blotch.

Occurs around us; rather rare.

DESCR. Appearance as that of the purple-barred yellow,[871] which it resembles very closely. All wings with a ciliate, purple margin. Upper wings greenish above with two profusely purple fasciae, the anterior short, the posterior larger; these wings are conspicuously light yellow beneath with

[869] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[870] See no. 1254. Not occurring in Sweden. However, the very similar *Lythria cruentaria* (Hufnagel, 1767), Sw. Mindre purpurmätare, is not uncommon.

[871] See no. 1254.

a purplish blotch in front of the tip. Lower wings strongly red-yellow on each side, with a large, purplish blotch beneath.

1303. PH. GEOMETRA *cingulata* [*Pyrausta cingulata* (Linnaeus, 1758). Eng. Silver-barred sable, Sw. Gjördelljusmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], antennae setaceous; all wings jet-black with a snow-white streak.

Phalaena, nasute, jet-black, with a transverse, white line; antennae setaceous; tongue coiled. *Fn.* 906.

Act. Ups. 1736. p. 23. n. 38. Papilio alis planis nigris: linea transversa alba.

DESCR. Entirely jet-black, but a white, minimally silvery, very narrow, transverse line marks the wings in the middle. It is the smallest of all moths and could have been recognized as a *Tinea* moth, if the colours of the lower wings had not enjoyed the same colours as the upper ones.

1304. PH. TORTRIX *fasciana* [*Pammene fasciana* (Linnaeus, 1761). Eng. Chestnut leafroller, Sw. Ekollonsolvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings dusky ash-greyish with a white fascia.

Inhabits orchards.

DESCR. Middle-sized. Upper wings with a dark ash-greyish colour with an outer margin maculated with white and black; a broad, recurved whitish fascia. Lower wings blackish with a ciliate, whitish margin.

1305. PH. TORTRIX *uncana* [*Deltote uncula* (Clerck, 1759). Eng. Silver hook, Sw. Gråkantat glansfly; Fam. Noctuidae, Eng. Noctuid moths, Sw. Nattflyn], wings fuscous with an outer whitish margin, from the middle extends an inwardly white recurved branch.

Clerck. Phal. t. 3. f. 7. Phalaena unca.

Inhabits forests.

DESCR. Same size as the other members of the *Tortrix* genus, but wings more deflexed, as in the noctuid moths. Therefore, I am in doubt, to where it should be referred. Since it is so small it seems rather to be related to the former. Body ash-grey. Upper wings fuscous above, but outer margin broadly white; from this whiteness something resembling a blunt branch, directed backwards, stretches out inwardly towards the alar disc; posteriorly something resembling an indistinct, whitish fascia appears. Lower wings white. All wings ash-grey beneath.

1306. PH. TORTRIX *prasinana* [*Pseudoips prasinanus* (Linnaeus, 1758). Eng. Green silver-lines, Sw. Mindre båtspinnare; Fam. Nolidae, Eng. Tuft moths, Sw. Trågspinnare], upper wings green above, with two oblique, light yellow streaks; posterior margin, antennae, and legs light yellow.

Pet. Gaz. t. 7. f. 11. Phalaena virescens lineis obliquis albescentibus.

De Geer. Ins. 1. t. 3. f. 1.

Lives on beech, oak, and alder.

DESCR. Somewhat larger. Thorax villous, greenish white. Legs and antennae red-brownish. Upper wings watery greenish, with two oblique, whitish streaks; posterior margin red-brown.

1307. PH. TORTRIX *viridana* [*Tortrix viridana* Linnaeus, 1758. Eng. Green oak tortrix, European oak leafroller or Green oak moth, Sw. Ekvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings rhomboid, upper wings green without maculae.

Phalaena, nasute, green; antennae setaceous; tongue coiled. *Fn.* 895. *It. W:goth.* 65. *Frisch. Germ.* 3. p. 18. t. 8. Papilio viridis erucae salicinae.

Lives on oak.

DESCR. It is broader than other moths, but in width quite short and posteriorly blunt. Upper wings outwardly watery green, which by no means verge on blue, but whitish green. Lower wings (and upper wings beneath) whitish with a colour verging on lead; venter white. Legs spinose and the whole moth whitish beneath. Head white.

1308. PH. TORTRIX *clorana* [*Earias clorana* (Linnaeus, 1761). Eng. Cream-bordered green pea, Sw. Grön pilspinnare; Fam. Nolidae, Eng. Tuft moths, Sw. Tråg-spinnare], wings rhomboid; upper wings green, with whitish margins.

Roes. Ins. 1. *Phal.* 4. t. 3.

Lives on silver willow.

DESCR. Resembles the preceding species so closely that it could hardly have been distinguished, were it not for the fact that the alar margin had not been pale whitish, and that it is smaller.

1309. PH. TORTRIX *hamana* [*Agapeta hamana* (Linnaeus, 1758). Eng. Hook-marked straw moth or Common yellow conch, Sw. Tistelgulvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings light yellow with spot and posterior hooked blotch, both rusty brown.

Clerck. Phal. t. 4. f. 4, 7. Phalaena hamana.

Inhabits orchards.

DESCR. Middle-sized. Upper wings light yellow. Rusty brown spot medially on dorsum; at posterior alar flexion a broken, rusty brown blotch facing the posterior legs.

1310. PH. TORTRIX *amerina* [*Archips rosanus* (Linnaeus, 1758). Eng. European leafroller or Rose tortrix, Sw. Häcksommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[872] upper wings brick-red, with a common rusty brown blotch.

Reaum. Ins. 2. t. 18. f. 6. 7.

Lives on willow.

DESCR. Very similar[873] to the European leafroller, [874] but the alar colour is brick-red without any pattern of coloration; wings posteriorly apically notched.

[872] See nos. 1314 and 1316.

[873] In fact synonymous.

[874] See no. 1314.

1311. PH. TORTRIX *ministrana* [*Eulia ministrana* (Linnaeus, 1758). Eng. Brassy tortrix, Sw. Kvällsbredvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings brick-red, with posterior red-brown margin, medially a rusty brown blotch with a thin, white line.

Phalaena, wings deflexed, pale grey, with a more saturated fascia. *Fn.* 885.

Clerck. Phal. t. 2. f. 12. Phalaena ministrana.

Inhabits small woods.

DESCR. Very closely resembles the preceding species. Wings whitish yellow tending to brick-red above, medially an indistinct, rusty brown fascia, within which there is a linear, whitish blotch; wings are posteriorly red-brown.

1312. PH. TORTRIX *piceana* [*Archips oporanus* (Linnaeus, 1758). Eng. Pine tortrix, Sw. Tallsommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[875] upper wings varying with grey and fuscous; dorsum rusty brown.

Clerck. Phal. t. 2. f. 9. Phalaena Piceana.

Lives on the needles of Scots pine, which it fastens together.

DESCR. Very similar to the following species.

1313. PH. TORTRIX *xylosteana* [*Archips xylosteanus* (Linnaeus, 1758). Eng. Variegated golden tortrix, Sw. Trysommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings brick-red, with a common rusty brown cross.

Clerck. Phal. t. 2. f. 6. Phalaena Xylostana.

Lives on dwarf honeysuckle and Siberian peatree.

DESCR. Middle-sized. Upper wings dusky purplish, but anteriorly with an oblong, deep yellow macula that is purplish at thorax. Deep yellow macula medially at the thicker alar margin and another one posteriorly; at the anal angle likewise an oblong, deep yellow macula.

1314. PH. TORTRIX *rosana* [*Archips rosanus* (Linnaeus, 1758). Eng. European leafroller or Rose tortrix, Sw. Häcksommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[876] upper wings brick-red, reticulate, with a grey, oblique fascia.

Phalaena, antennae setaceous; tongue coiled; wings incumbent, grey, lower wings with a thicker, whitish margin. *Fn.* 896.

Act. Ups. 1736. p. 25. n. 77. Papilio alis depressis brevissimis testaceis.

Lives on rose and raspberry.

DESCR. It is broader than its congeners, but in width quite short and posteriorly blunt. All wings grey or watery brick-red both above and beneath as is the whole animal, but upper wings with thin,

[875] See no. 1315.

[876] See the com. to no. 1310.

transverse lines, unequal, rather dark, barely visible. Lower wings whitish yellow at the basal part of the thicker margin. Upper wings posteriorly notched at the blackish margin.

1315. PH. TORTRIX *oporana* [*Archips oporanus* (Linnaeus, 1758). Eng. Pine tortrix, Sw. Tallsommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[877] upper wings rusty brown, reticulate and maculate with grey.

Wilk. Pap. 17. t. 2. n. 4.

Lives on apple.

DESCR. Somewhat larger. Wings deep yellow tending to brick-red. Upper wings above rusty brown, reticulate and variously maculate; alar tip slightly reflexed, prominent, posteriorly markedly blunt. All wings beneath cloudy, dusky deep yellow.

1316. PH. TORTRIX *avellana* [*Archips rosanus* (Linnaeus, 1758). Eng. European leafroller or Rose tortrix, Sw. Häcksommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[878] upper wings brick-red with rusty brown fasciae, the first is one and a third times as long as the other.

Phalaena, antennae setaceous; tongue coiled; wings incumbent, light yellow, with two oblique, grey fasciae; the posterior one is interrupted. *Fn.* 882.

Lives on hazel.

DESCR. Moth the size of the common greenbottle.[879] Wings deflexed, incumbent, short, broad. Upper wings pale whitish yellow, with two fasciae that are dusky grey and facing backwards, of which the posterior one is interrupted in the middle. Legs spinose.

1317. PH. TORTRIX *arcuana* [*Olethreutes arcuellus* (Clerck, 1759). Eng. Arched marble, Sw. Prydlig brokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings deep yellow, with three arcuate fasciae, a black, tripunctate macula, and two thin, silvery lines.

Clerck. Phal. 1. t. 10. f. 8. Phalaena arcuana.

Inhabits small woods.

DESCR. Resembles Leche's twist moth,[880] but a quarter of its size. Upper wings deep yellow; at base two silvery lines, followed by a silvery blue fascia, then a broader area with an oblong, black macula, within which there are three silvery spots, and finally two arcuate silvery fasciae antrorsely.

[877] See no. 1312.

[878] See the com. to no. 1310.

[879] See no. 1828.

[880] See no. 1318.

1318. PH. TORTRIX *lecheana* [*Ptycholoma lecheanum* (Linnaeus, 1758). Eng. Leche's twist, Sw. Blybandsvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings deep yellow, with the silvery letters I and L and also a silvery thorax.

Clerck. Phal. t. 10. f. 2. Phalaena Lecheana.

Lives on European bird cherry.

DESCR. Middle-sized. Upper wings deep yellow tending to brick-red with two silvery fasciae or streaks: the frontal transverse, the posterior recurved, at the thicker margin bifid; also, a posterior silvery margin in front of the cilia. Thorax silvery.

1319. PH. TORTRIX *forskåleana* [*Acleris forsskaleana* (Linnaeus, 1758). Eng. Maple leaftier moth or Maple button, Sw. Lönnbredvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings light yellow, reticulate with deep yellow, and a darkish blotch in the middle.

Clerck. Phal. t. 10. f. 2. 6. Phalaena Forskåleana.

Inhabits small woods.

DESCR. Small, entirely light yellow. Upper wings distinctly blunt, rusty brown, very delicately reticulate. Fascia in the middle recurved, dusky brick-red, broader at the inner parts, but rather indistinct. Lower wings light yellow, without maculae.

1320. PH. TORTRIX *branderiana* [*Pseudosciaphila branderiana* (Linnaeus, 1758). Eng. Great marble, Sw. Större aspbrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[881] Upper wings dusky brick-red, without maculae.

Inhabits small woods.

DESCR. Somewhat larger. All wings dark fuscous, without maculae, just as is the whole body also.

1321. PH. TORTRIX *fuscana* [*Pseudosciaphila branderiana* (Linnaeus, 1758). Eng. Great marble, Sw. Större aspbrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[882] upper wings fuscous.

Clerck. Phal. t. 2. f. 1. Phalaena fuscana.

Inhabits small woods.

DESCR. Somewhat larger. Entirely fuscous or dark ash-grey, without maculae.

1322. PH. TORTRIX *hartmanniana* [*Apotomis lineana* (Denis & Schiffermüller, 1775). Eng. Willow marble, Sw. Pilknoppvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings ash-grey; upper wings with a black line close to the white.

Occurs at Leufsta. *De Geer.*

[881] A variable species, thus two different descriptions by Linnaeus. See no. 1321.

[882] See the com. to no. 1320.

DESCR. Middle-sized. Upper wings ash-grey with a longitudinal, jet-black line, adjacent to which is a snow-white line on the outer side. Lower wings ash-grey.

1323. PH. TORTRIX *loeflingiana* [*Aleimma loeflingiana* (Linnaeus, 1758). Eng. Yellow oak button, Sw. Gul ekbredvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings light yellow, reticulate with deep yellow, marked with double χ χ.

Clerck. Phal. t. 10. f. 6. Phalaena Loeflingiana.

Lives on oak leaves, which it twists.

DESCR. Rather small, entirely light yellow. Anus weakly rusty brown. Upper wings pale light yellow, not clearly reticulate, but undulated with brick-red speckles; two cross-shaped, brick-red maculae at the thicker margin. Wings darkish beneath.

1324. PH. TORTRIX *bergmanniana* [*Acleris bergmanniana* (Linnaeus, 1758). Eng. Yellow rose button, Sw. Törnrosvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings deep yellow, punctate with light yellow, and having four silvery fasciae, the third one bifid.

Clerck. Phal. t. 10. f. 5. Phalaena fuscana Bergmanniana.

Inhabits small woods.

DESCR. Minute, light yellow. Upper wings markedly blunt, light yellow, with four silvery rusty brown fasciae, of which the first is at the very alar base, and the last at the posterior margin. All these fasciae are connected to the thicker margin. Additionally, the surfaces on both sides of the upper wings are sparsely scattered here and there with rusty brown speckles. Lower wings and wing surfaces darkish.

1325. PH. TORTRIX *holmiana* [*Acleris holmiana* (Linnaeus, 1758). Eng. White-triangle button, Sw. Rosensommarvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings deep yellow tending to rusty brown, with a marginal, trigonal, silvery macula.

Phalaena, antennae setaceous; tongue coiled; wings depressed, red-yellow, with a marginal, triangular, silvery macula. *Fn.* 883.

Inhabits orchards; rather rare.

DESCR. Small. Upper wings red-yellow or red-brown tending to deep yellow above; silvery, triangular macula almost in the middle of the outer margin, with its base covering the margin; upper wings fuscous beneath. Lower wings whitish. Antennae half the length of the body, very simple. Tongue coiled, very short. Eyes black.

1326. PH. TORTRIX *rolandriana* [*Clepsis rolandriana* (Linnaeus, 1758). Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings pale brick-red, with rusty brown streaks on the lower side curved forwards.

Inhabits small woods.[883]

[883] Not occurring in Sweden.

1327. PH. TORTRIX *solandriana* [*Epinotia solandriana* (Linnaeus, 1758). Eng. Variable bell, Sw. Föränderlig rullvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings pale, with a common dorsal rusty brown macula.

De Geer. Ins. 1. t. 28. f. 29. 30.

Lives on birch.

DESCR. Middle-sized. Upper wings whitish ash-grey; a somewhat larger rhomboid, rusty brown macula in the middle of dorsum, when the wings are folded together.

1328. PH. TORTRIX *hastiana* [*Acleris hastiana* (Linnaeus, 1758). Eng. Sallow button, Sw. Videvårvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings fuscous, with an antrorsely oblique, white fascia.

Clerck. Phal. t. 2. f. 7. Phalaena Hastiana.

Lives on willow.

DESCR.[884] Somewhat larger. Wings expanded anteriorly, posteriorly more forficate than in the others, fuscous. Fascia singular, linear, oblique; lower part of base curved forwards; tip facing backwards; this fascia does not touch the weaker alar margin.

1329. PH. TORTRIX *wahlbomiana*[885] [*Cnephasia asseclana* (Denis & Schiffermüller, 1775). Eng. Flax tortrix, Sw. Mellangråvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings ash-grey, with two cloudy fuscous fasciae, and a posterior indistinct blotch; palps blunt.

Phalaena, antenna setaceous; tongue coiled; wings deflexed, whitish; upper wings with a double indistinctly ash-grey fascia. *Fn.* 884.

Inhabits gardens; rather rare.

DESCR. The size of a rather small fly; wings outspread, nevertheless completely deflexed; the colour of the whole insect is white, but on the upper wings, which are bare, there is a double ash-grey fascia; this ash-grey colour is extended even towards the alar tips, as if it were a third, dimidiate fascia. Thorax is covered with longish fine hairs, which are almost raised into a hump. Antennae filiform, ash-grey.

1330. PH. TORTRIX *lediana* [*Argyroploce lediana* (Linnaeus, 1758). Sw. Skvattrambrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, with two silvery red fasciae, the posterior fascia with a spot.

Clerck. Phal. t. 10. f. 12. Phalaena Lediana.

Lives on marsh labrador tea.[886] *T. Bergman.*

[884] A very variable species. Linnaeus here describes one of several morphs.

[885] In fact a cryptic species complex.

[886] I.e. *Rhododendron tomentosum.*

DESCR. Upper wings fuscous having two silvery fasciae with a red colour superimposed; of these the posterior fascia has a large spot inserted in the middle. Antennae black, shorter than the body. The size of a mosquito.[887]

1331. PH. TORTRIX *modeeriana* [*Clepsis rurinana* (Linnaeus, 1758). Eng. Pale twist, Sw. Trysnedbandsvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings whitish yellow, with a fuscous macula at the posterior margin.

Occurs in Stockholm.

DESCR. Upper wings whitish yellow, with a faded, oblique blotch in the middle and a fuscous macula at the thicker margin at posterior parts. Lower wings whitish light yellow.

1332. PH. TORTRIX *uddmanniana* [*Notocelia uddmanniana* (Linnaeus, 1758). Eng. Bramble shoot moth, Sw. Björnbärsvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings ash-grey, with a transverse, rusty brown macula at dorsal margin.

Occurs in Stockholm.

DESCR. Upper wings ash-grey, slightly cloudy; outer margin with two very small, black streaks; a transverse, dusky rusty brown macula in the middle of the dorsal margin.

1333. PH. TORTRIX *cruciana* [*Epinotia cruciana* (Linnaeus, 1761). Eng. Willow tortrix, Sw. Prydlig videvecklåre; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings whitish ash-grey, posteriorly with an arcuate, rusty brown macula.

Occurs in Uppsala.

DESCR. Upper wings whitish ash-grey; anteriorly on the back, a common indistinct, ash-grey macula; posteriorly an arcuate, rusty brown macula in the form of crosses[888] that are turned downwards, i.e. anterior one touching the middle, but posterior one the tip, and when the maculae of both wings merge at anus, they almost resemble a cross posteriorly.

1334. PH. TORTRIX *heracleana* [*Agonopterix heracliana* (Linnaeus, 1758). Eng. Common flat-body, Sw. Flockblomsterplattmal; Fam. Depressariidae, Eng. Flatbodied moths, Sw. Plattmalar], tongueless; antennae recurved; wings grey with an indistinctly fuscous spot; thorax yellowish.

Phalaena, antennae setaceous; tongueless; head bicornate; thorax light yellow; wings incumbent, flat, dusky grey. *Fn.* 916.[889]

De Geer. Ins. 1. t. 29. f. 6. 7.

Schaeff. Ins. 1758. t. 2. f. 3. 4.

[887] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[888] Lat. *cruribus* ("shanks") should be written as *crucibus* ("crosses").

[889] See Ch. *A small fauna of Sweden*.

Lives on umbels of cow parsnip, which it devastates and envelops every year and during its metamorphosis it finally penetrates the stems.

DESCR. Nocturnal moth with flat, incumbent wings. Thorax verging on white on the back, almost trilobed behind. Head verging on white with two recurved, cristate, apically awl-shaped, black, erect jaws. Beneath it is entirely dusky whitish. There are many species of this moth type around us, which differ regarding size, but they are not easily distinguished by specific marks.

1335. PH. TORTRIX *alströmiana* [*Agonopterix alstromeriana* (Clerck, 1759). Eng. Hemlock moth, Defoliating hemlock moth or Brown-spot flat-body, Sw. Odörtsplattmal; Fam. Depressariidae, Eng. Flatbodied moths, Sw. Plattmalar], wings whitish; upper wings with a lateral, dusky rusty brown macula.

Clerck. Phal. t. 10. f. 1. Phalaena Alstromeriana.

Inhabits orchards.

DESCR. Stature as that of the common flat-body.[890] Palps awl-shaped, ascending. Wings whitish ash-grey. Upper wings at the lateral margin, medially, with a fuscous macula, interiorly rusty brown or almost blood-red; wings exarate and striate at posterior margin, punctate with black at the actual margin. Lower wings whitish ash-grey, but verging on dingy white beneath.

1336. PH. TORTRIX *logiana* [*Acleris logiana* (Clerck, 1759). Eng. Grey birch button, Sw. Björkvårvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings grey-white, scattered with black speckles; lower wings whitish.

Clerck. Phal. t. 10. f. 3. Phalaena Logiana.

Inhabits groves.

DESCR. Palps short, prominent, and almost bicornate. Wings more blunt than those of the preceding species, whitish ash-grey; a very faded ash-grey macula from outer side to margin; posteriorly exarate with streaks, scattered with barely visible blackish spots. All wings smooth beneath.

1337. PH. TORTRIX *gnomana* [*Paramesia gnomana* (Clerck, 1759). Eng. Small straw twist or Small straw tortrix, Sw. Blåbärsbredvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings light yellow, with an oblique, brick-red fascia, and a posterior marginal, rusty brown macula.

Clerck. Phal. t. 4. f. 13. Phalaena gnomana.

Occurs in Uppsala. *Joh. Alströmer.*

DESCR. Small. Wings whitish yellow, medially at outer margin, a pointed, brick-red fascia, which zigzags downwards and backwards; the outer margin is marked by a rusty brown macula at the outermost part.

[890]See no. 1334.

1338. PH. TORTRIX *schreberiana* [*Hedya dimidiana* (Clerck, 1759). Sw. Häggbrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings grey, with a marginal, trigonal, white macula.

Occurs in Uppsala.

DESCR. Similar to the white-triangle button,[891] but three times as large. Upper wings dusky grey above, weakly fasciate having a large, snow-white, trigonal macula, with a spot (posteriorly fuscous) in the middle of the outer margin. Lower wings fuscous.

1339. PH. TORTRIX *schalleriana* [*Acleris schalleriana* (Linnaeus, 1761). Eng. Viburnum button or Schaller's acleris moth, Sw. Olvonvårvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings whitish, with a lateral, rusty brown macula touching alar tip.

Inhabits small woods.

DESCR. Resembles the hemlock moth,[892] but twice as large and alar sides anteriorly broader. Upper wings whitish; anteriorly scabrous with prominent, elevated spots on each side. Rusty brown macula at thicker margin, beginning in front of the middle and running almost to alar tip along margin.

1340. PH. TORTRIX *pupillana* [*Eucosma pupillana* (Clerck, 1759). Eng. Eyed bell, Sw. Malörtsstjälkvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings whitish, with two oblique, darkish fasciae, and at tip an eyespot with a silvery pupil.

Occurs in Uppsala.

DESCR. Upper wings white above; at base a thin fuscous line; in the middle a darkish, oblique fascia; fuscous eyespot at tip with an oblong, silvery pupil. Hindwings ash-greyish as are all wings beneath.

1341. PH. TORTRIX *pariana* [*Choreutis pariana* (Clerck, 1759). Eng. Apple leaf skeletoniser, Sw. Apelgnidmal; Fam. Choreutidae, Eng. Metalmark moths, Sw. Gnidmalar], wings dark brown, with greyish blue fascia and streak, anteriorly and posteriorly jet-black.

Clerck. Phal. t. 10. f. 9. Phalaena pariana.

Inhabits small woods.

DESCR. Very small, short. Smaller than a house fly.[893] Upper wings grey tending to dark brown; anteriorly a black streak, posteriorly a broad, greyish blue fascia, medially divided. Streak undulate, black, very narrow. Beneath maculate at the white margin. Lower wings fuscous above, beneath weakly greyish blue with a fuscous fascia.

[891] See no. 1325.

[892] See no. 1335.

[893] See no. 1833.

1342. PH. TORTRIX *goiiana* [*Eana argentana* (Clerck, 1759). Eng. Silver shade, Sw. Silvergråvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings snow-white above, fuscous beneath.

Occurs in forest marshes.

DESCR. Easily the largest among our species of this genus. Body black above covered with snow-white scales. Upper wings snow-white above, fuscous beneath. Lower wings white above, whitish beneath. Femora black on inner side. Antennae half the length of the body, black, with white marks.

1343. PH. TORTRIX *mundana* [*Nudaria mundana* (Linnaeus, 1761). Eng. Muslin footman, Sw. Grå hinnvinge; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], wings naked, whitish, with two undulating streaks and a fuscous spot in the middle.

Occurs ubiquitously in meadows.

DESCR. Middle-sized. All wings naked without scales, which is absolutely unique regarding moths; wings posteriorly more rounded and perfectly obovate so that there is doubt as to which group it really should be referred. These wings are whitish with two fuscous, flexuous, repand streaks or fasciae, which divide the wings into three equal parts, a fuscous spot in the middle. Antennae setaceous, half the length of the body.

1344. PH. PYRALIS *tentacularis* [*Polypogon tentacularia* (Linnaeus, 1758). Eng. Palpin moth, Sw. Palpsprötfly; Fam. Erebidae, Subfam. Herminiinae, Eng. Litter moths, Sw. Sprötflyn], palps as long as the pectinate antennae; all wings ash-greyish, with three indistinct streaks.

Phalaena tentacularia. Syst. nat. 10. p. 522. n. 146.

Phalaena, antennae pectinate; tongue coiled; tentacles setaceous, the length of the antennae; wings rather flat. *Fn.* 841.

De Geer. Ins. 1. t. 5. f. 1.

Occurs in the countryside.

DESCR. Middle-sized. All wings ash-grey on each side. Upper wings with three darkish streaks, equally well spaced: the first and second recurved at outer margin, the third straight or transverse. Antennae pectinate. Two sword-shaped palps, extended antrorsely, almost the length of the antennae, villous at margin, broken and stretched apart at the tip.

1345. PH. PYRALIS *barbalis* [*Pechipogo strigilata* (Linnaeus, 1758). Eng. Common fan-foot, Sw. Vitkantat sprötfly; Fam. Erebidae, Subfam. Herminiinae, Eng. Litter moths, Sw. Sprötflyn],[894] palps shorter than the pectinate antennae; fore femora with an extended tuft.

Raj. Ins. 227. n. 103. h?

Clerck. Phal. t. 5. f. 3. Phalaena barbalis.

Occurs around us; rather rare.

DESCR. Very similar to the preceding species, or is it only distinct by sex? Palps half the length of the almost pectinate antennae and extended towards the antennae themselves. Anterior femora

[894]See no. 1291.

with an extended tuft as long as the palps, which is remarkable. Wings entirely as those of the preceding species, but lower wings more whitish.

1346. PH. PYRALIS *proboscidalis* [*Hypena proboscidalis* (Linnaeus, 1758). Eng. Snout, Sw. Brunstreckat näbbfly; Fam. Erebidae, Subfam. Hypeninae, Eng. Hypenine snout moths, Sw. Näbbflyn], palps extended, close together, longer than thorax; antennae pectinate; wings greyish with rusty brown streaks.

Clerck. Phal. t. 5. f. 4. Phalaena proboscidalis.

Inhabits forests.

DESCR. Rather large. Upper wings pale ash-grey tending to grey, with rusty brown speckles. Three fasciae, weakly rusty brown, anteriorly faded away, of which the first one exteriorly recurved, middle one transverse, and last one transverse with some whitish, faded spots. Palps compressed, extended, kept together, antrorsely prominent.

1347. PH. PYRALIS *rostralis* [*Hypena rostralis* (Linnaeus, 1758). Eng. Buttoned snout, Sw. Humlenäbbfly; Fam. Erebidae, Subfam. Hypeninae, Eng. Hypenine snout moths, Sw. Näbbflyn], palps extended and longer than thorax; wings greyish, with two muricate spots and an apical black line.

Raj. Ins. 214. n. 9. Phalaena media e rufo cinerascens aut pulla gemina proboscide.

Raj. Ins. Phal. 4. t. 6.

Lives on nettles and hops.

DESCR. Middle-sized. Upper wings dark greyish, posteriorly less saturated. In the anterior darker area there are some prominent whitish and fuscous spots, in the posterior area excavated striae. Near alar tip, a thin, black line, as on the shaded broad-bar.[895] Thoracic dorsum roughened with tufts. Palps adpressed, rising upwards, at upper margin pubescent.

1348. PH. PYRALIS *farinalis* [*Pyralis farinalis* (Linnaeus, 1758). Eng. Meal moth, Sw. Farinmjölmott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott], palps recurved; wings smooth, darkish, with repand, whitish streaks and a greyish blue area between.

Clerck. Phal. t. 2. f. 14. Phalaena farinalis.

Lives in kitchen flour that has been prepared for food; abundant in kitchens.

DESCR. Middle-sized. Upper wings rusty brown with two whitish streaks: anterior one recurved at base, posterior one flexuous in front of tip. Lower wings darkish above with a white streak; posterior margin black. Abdomen always rising upwards and almost erect; on the thoracic back two sharp edges at the position of the scutellum. Palps corniculate, anteriorly hirsute. Tongue coiled.

1349. PH. PYRALIS *glaucinalis* [*Hypsopygia glaucinalis* (Linnaeus, 1758). Eng. Double-striped tabby, Sw. Herkulesmott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott], palps recurved; wings glabrous, greyish blue, with two arcuate, well spaced, light yellow streaks.

Clerck. Phal. t. 5. f. 4. Phalaena glaucinalis.

[895] See no. 1263.

Lives near villages.

DESCR. Middle-sized. Wings ash-grey tending to weakly greyish blue, smooth, with two equal, light yellow streaks that are almost equally well spaced and transverse, of which the posterior one is visible even on the inferior wing surface.

1350. PH. PYRALIS *pinguinalis* [*Aglossa pinguinalis* (Linnaeus, 1758). Eng. Large tabby or Grease moth, Sw. Fettmott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott], palps recurved; tongueless; wings ash-grey, with the thicker margin weakly fasciate, black.

Phalaena, antennae setaceous; tongueless; head bicornate; wings whitish, with marginal, transverse, black fasciae. *Fn.* 915.

Roland. Act. Stockh. 1755. p. 51. t. 2.

Lives in houses; feeds on grease and butter; the most awful larva can be expelled from the human ventricle by infusing blue lichen.

DESCR. Rather large. Wings outspread and deflexed; outer ones indistinctly ash-grey; outer margin marked with various transverse, black fasciae. Lower wings whitish ash-grey. Frons with two reflexed and villous tentacles; tip hardly large but visible, blunt, erect (not recurved and pointed), naked, smooth, glabrous. Antennae setaceous.

1351. PH. PYRALIS *frumentalis* [*Evergestis frumentalis* (Linnaeus, 1761). Sw. Flammigt senapsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings ash-greyish, glabrous, with oblique, whitish, articulated fasciae.

Inhabits fields where wheat is grown.

DESCR. Middle-sized. Upper wings ash-grey tending to weakly greyish blue above, with two or three oblique fasciae verging on white and linked together by ovate maculae; posterior margin ciliate, with thin reciprocal whitish lines. Wings weakly greyish blue beneath.

1352. PH. PYRALIS *forficalis* [*Evergestis forficalis* (Linnaeus, 1758). Eng. Garden pebble, Sw. Kålmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings glabrous, pale, with rusty brown streaks that are turned obliquely backwards, and the anterior streak with a blotch.

Phalaena, antennae setaceous; tongue coiled, triangular; wings deflexed, light yellow, with two rusty brown, oblique lines. *Fn.* 880.

Act. Ups. 1736. p. 24. n. 49. Papilio alis planis pallidis nitidis.

Reaum. Gall. 1. t. 16. f. 12. 13. 14.

Lives on cabbage.

DESCR. It is entirely light yellow, middle-sized or of the same size as a rather large horsefly.[896] Posterior tibiae spinose. Wings deflexed, slightly folded, kept apart at the tips and thus like the forked tail of a bird. Three oblique lines descending backwards on the upper wing, of which the first is barely visible, the second rusty brown ending as if in a rusty brown macula in front of margin, and the third line still longer; the margin even becoming slightly darkish. All wings whitish yellow

[896]Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

beneath, marked with a thin, indistinct, oblique line. A single oblique thin line on upper side of the lower wings.

1353. PH. PYRALIS *verticalis* [*Sitochroa verticalis* (Linnaeus, 1758). Eng. Lesser pearl, Sw. Tistelängsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings glabrous, pale, weakly fasciate, undulating with fuscous beneath.

Phalaena, antennae setaceous; tongue coiled; wings outspread, whitish, weakly undulating with fuscous and shining. *Fn*. 855.

Act. Ups. 1736. p. 24. n. 50. Papilio alis planis nitidis albidis: fasciis undulatis.

Reaum. Gall. 2. t. 19. f. 1–5.

Lives on nettles.

DESCR. Middle-sized. Upper wings yellowish above, with a few weakly undulating streaks. Lower wings paler, with two indistinctly darkish strigae or fasciae. All wings whitish yellow beneath with three or four darker fuscous streaks.

1354. PH. PYRALIS *sticticalis* [*Loxostege sticticalis* (Linnaeus, 1761). Eng. Beet webworm moth, Sw. Betmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings grey, with marginal, light yellow streak, and ciliate, black margin.

Occurs in Uppsala. *Joh. Alströmer.*

DESCR. Antennae setaceous, half the length of the body. Upper wings grey tending to ash-greyish, with two ovate, black maculae or spots, between which there is a white area; whitish yellow blotch in front of alar tip; posterior margin with light yellow line and blackish cilia. Lower wings much shorter, whitish yellow. Wings with two fuscous fasciae beneath: anterior fascia consisting of a curved line, posterior composed of indistinct maculae.

1355. PH. PYRALIS *reticularis* [*Diasemia reticularis* (Linnaeus, 1761). Eng. Lettered china-mark, Sw. Bokstavsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings greyish, with light yellow spots, thin line and streak; margin ciliated, variegated.

Occurs ubiquitously.

DESCR. Small. Wings almost concolorous. Upper wings covered above with some scattered, light yellow spots, with a light yellow line obliquely longitudinal at the thinner margin. Light yellow transverse streak in front of tip. Posterior margin ciliate with fasciae and alternating, whitish lines. Beneath almost concolorous, with light yellow, clearer lines.

1356. PH. PYRALIS *purpuralis* [*Pyrausta purpuralis* (Linnaeus, 1758). Eng. Common purple-and-gold, Sw. Purpurljusmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings dusky purplish, all maculate with deep yellow.

Inhabits forests.

DESCR. Small. All wings dark purplish on each side; anteriorly maculate with some whitish yellow spots; medially an oblique, interrupted, whitish deep yellow fascia, finally a pale, very slender streak in front of posterior margin. All wings darker beneath and distinctly more embellished.

1357. PH. PYRALIS *duplaris* [*Ochropacha duplaris* (Linnaeus, 1761). Eng. Common lutestring, Sw. Björkblekmaskspinnare; Fam. Drepanidae, Eng. Hooktip and False owlet moths, Sw. Sikelvingar], upper wings cloudy ash-grey, in the middle two jet-black, parallel spots.

Inhabits forests; rather rare.

DESCR. The size of a rather large bee moth.[897] Upper wings cloudy ash-grey, across the middle more whitish. Two jet-black spots: outer spot recurved, spots parallel, not in front of one another. Lower wings pale beneath with a fuscous spot in the middle. Related to the noctuid moths.

1358. PH. TINEA *colonella* [*Aphomia sociella* (Linnaeus, 1758). Eng. Bee moth or Bumble bee wax moth, Sw. Humlemott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott],[898] wings oblong, ash-grey, with two black spots in front of the curved, undulating, indistinct streak.

Phalaena, nasute, ash-grey, with a black spot on each side; antennae setaceous; tongue coiled. *Fn.* 912.

Clerck. Phal. t. 3. f. 8. Phalaena colonella.

Inhabits gardens.

DESCR. This species should be numbered among the larger tineid moths. Wings grey-white above, slightly cloudy. Small black spot medially on outer wing on each side. Lower wings greyish white, not cloudy. Tongue coiled, very short.

1359. PH. TINEA *sociella* [*Aphomia sociella* (Linnaeus, 1758). Eng. Bee moth or Bumble bee wax moth, Sw. Humlemott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott],[899] wings oblong, ash-grey, anteriorly whitish, posteriorly pale with a streak.

Phalaena, nasute, ash-grey; tongue coiled; antennae setaceous; wings anteriorly whitish; posteriorly with a linear fascia verging on white. *Fn.* 905.

Clerck. Phal. t. 3. f. 11. Phalaena sociella.

Inhabits meadows.

DESCR. Pupae are pale inside the oblong, very tenacious, white net; many at the same time.
Moth, almost larger than the tineid moths. Legs spinose. Wings long, ash-grey verging on green, anteriorly whitish at base, that whiteness ends behind a thin, blackish line; there is a whitish, linear, transverse fascia, curved towards tip; inside the tip a thin, undulating, black line. Lower wings off-white, fuscous at margin, ending in rather long, parallel, whitish fine hairs. Eyes black.

1360. PH. TINEA *lutarella* [*Eilema lutarellum* (Linnaeus, 1758). Eng. Bright yellow footman, Sw. Ockragul lavspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], wings and body deep yellow, without maculae.

Clerck. Phal. t. 4. f. 9. Phalaena lutarella.

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[897] See no. 1358.

[898] See no. 1359.

[899] See no. 1358.

Inhabits forests.

DESCR. Resembles a caddisfly. Body entirely deep yellow except for the eyes, antennae and forelegs that are all black on inner side. Upper wings folded, beneath black. Lower wings black above.

1361. PH. TINEA *irrorella* [*Setina irrorella* (Linnaeus, 1758). Eng. Dew moth, Sw. Större borstspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], wings deep yellow, upper ones with three rows of black spots.

Phalaena, wings deep yellow with the most minute black spots. *Fn.* 920.

Act. Ups. 1736. p. 25. n. 78. Papilio alis depressis luteis; corpore nigro.

Clerck. Phal. t. 4. f. 5. Phalaena irrorella.

Occurs ubiquitously.

DESCR. Body black. Wings rather large, deep yellow, with black, even, distinct, and scattered spots, but arranged in three rows; in the first row 3 spots, in the second 4, in the third, which is at posterior margin, 5 black spots. Larger than the preceding species. Antennae weakly pectinate. Mouth almost tongueless. Anus deep yellow.

1362. PH. TINEA *mesomella* [*Cybosia mesomella* (Linnaeus, 1758). Eng. Four-dotted footman, Sw. Vit borstspinnare; Fam. Erebidae, Subfam. Arctiinae, Eng. Tiger moths, Sw. Björnspinnare], wings white above, deep yellow beneath, inwardly black.

Clerck. Phal. t. 4. f. 14. Phalaena mesomella.

Lives in grass.

DESCR. The size of the preceding species. Body deep yellow. Upper wings greyish blue or whitish ash-grey, with light yellow margin; in the middle at the outer margin, a blackish spot, and at thinner medial margin a black spot hardly visible; the hidden surfaces of the wings are fuscous.

1363. PH. TINEA *evonymella* [*Yponomeuta evonymellus* (Linnaeus, 1758).[900] Eng. Bird-cherry ermine, Sw. Häggspinnmal; Fam. Yponomeutidae, Eng. Ermine moths, Sw. Spinnmalar], upper wings white, with fifty black spots; lower wings fuscous.

Phalaena, nasute; antennae setaceous; tongue coiled; upper wings white, with black spots; lower wings fuscous. *Fn.* 891.

Albin. Ins. t. 60. f. A. B. C.

Merian. Eur. 2. p. 2. t. 2. *in medio intra folliculum.*
p. 43. t. 44. *in lana.*
gallice t. 52. & 94.

Reaum. Gall. t. 12. f. 1–9.

Raj. Ins. 197. Phalaena parva, alis longis lividis sive plumbeus, exterioribus punctis nigris crebris stictois. *obs. bis in eadem pagina.*

[900]The *Yponomeuta* species *padellus* (on *Prunus spinosa*), *evonymellus* (on *Prunus padus*), *malinellus* (on *Malus sylvestris*), and *cagnagellus* (on *Eonymus europaeus*) are difficult to distinguish on external characters, but each has its distinct foodplant. Linnaeus when naming *padellus* and *evonymellus* from the wrong plant seems to have confused his specimens or labels.

Act. Ups. 1726. p. 26. n. 81. Papilio alis depressis argenteis nigro punctatis.

Lives on the spindle tree, the leaves of which it devastates every year in such a way that the Germans call this tree "Spinnelbaum",[901] because of its threads and nets, that are knitted by the whitish yellow, gregarious larvae with ten spots on each side.

DESCR. On the outer side entirely snow-white. Upper wings with four or five rows of longitudinally arranged jet-black spots. Head and thorax also scattered with black spots. Upper wings beneath, as are also lower wings on both sides, lead-grey or fuscous. Venter white beneath, black above. Mouth with a coiled proboscis. Antennae setaceous. Legs spinose.

1364. PH. TINEA *padella* [*Yponomeuta padellus* (Linnaeus, 1758).[902] Eng. Orchard ermine or Cherry ermine, Sw. Slånspinnmal; Fam. Yponomeutidae, Eng. Ermine moths, Sw. Spinnmalar], upper wings dark bluish grey, with twenty black spots, fuscous beneath.

Frisch. Ins. 5. t. 6.

Roes. Ins. 1. *Phal.* 4. t. 7.

Lives on fruit trees: European bird-cherry, common rowan, etc., where the gregarious larvae prepare what resembles the finest and most excellent linen cloths, beneath which they conveniently camp.

DESCR. Very similar to the preceding species, but upper wings less white and almost of a lead colour, speckled with fewer black spots.

1365. PH. TINEA *sequella* [*Ypsolopha sequella* (Clerck, 1759). Eng. Pied smudge, Sw. Lönnhöstmal; Fam. Ypsolophidae. Eng. Ypsolophid moths, Sw. Höstmalar], upper wings white, with a common, sinuate, repand line having lateral, irregular, black spots.

Clerck. Phal. t. 10. f. 14. Phalaena sequella.

Inhabits forests.

DESCR. Stature as that of the preceding two species. Head, thorax, abdomen, and femora white. Upper wings snow-white, with a dorsal, longitudinal, common,[903] jet-black stripe, bifid at base, variously sinuated on the sides. Lateral black maculae, almost cruciform and of various shapes. Tibiae anteriorly fuscous. Antennae black, annulated with white, as are also the tarsi.

1366. PH. TINEA *vittella* [*Ypsolopha vittella* (Linnaeus, 1758). Eng. Elm autumn moth, Sw. Almhöstmal; Fam. Ypsolophidae. Eng. Ypsolophid moths, Sw. Höstmalar], wings ash-grey, with a dorsal, common, black line; posterior margin punctate with black.

Clerck. Phal. t. 15. f. 10. Phalaena vitella.

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[901] I.e. "Spindle tree".

[902] See the com. to no. 1363.

[903] Linnaeus here describes the moth from a dorsal view with the wings folded together forming a common black stripe as a result of their conjunction.

Lives in forests.

DESCR. Not as large as the orchard ermine.[904] Upper wings ash-grey scarcely cloudy. Common[905] black line, repand on each side, longitudinal; posterior margin with minute black spots; excavated blackish line at the very alar tip, as on the shaded broad-bar.[906]

1367. PH. TINEA *pascuella* [C*rambus pascuellus* (Linnaeus, 1758). Eng. Inlaid grass-veneer, Sw. Haggräsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], upper wings pale, with a line and two oblong, starkly white spots.

Inhabits pastures.

DESCR. Middle-sized. Upper wings yellowish. Silvery white, broad, lanceolate line, almost the length of the wing; on each side of its tip an oblong, laterally pointed macula; in front of tip two thin, oblique lines. Lower wings whitish. All wings fuscous beneath.

1368. PH. TINEA *pinetella*[907] [C*atoptria pinella* (Linnaeus, 1758). Eng. Pearl grass-veneer, Sw. Silverfläckat gräsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], upper wings light yellow, with two silvery maculae, anteriorly oblong, posteriorly ovate.

Clerck. Phal. t. 4. f. 15. Phalaena Pinetella.

Inhabits pine groves.

DESCR. Middle-sized. Very closely resembling the preceding species. Upper wings deep yellow, with a silvery, almost longitudinal macula, broken in two, of which the anterior is long and narrow at base, but the posterior is almost rhomboid with a rather saturated brick-red margin. Lower wings whitish. All wings darkish beneath.

1369. PH. TINEA *pratella* [C*rambus pratellus* (Linnaeus, 1758). Eng. Scarce grass-veneer, Sw. Tandgräsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], upper wings whitish, with a starkly white line, posteriorly branched, and tip with oblique striae.

Phalaena, nasute, whitish, with a longitudinal, silvery line, branched posteriorly; antennae setaceous; tongue coiled; *Fn.* 908.

Clerck. Phal. t. 3. f. 14. Phalaena pratella.

Inhabits the lushest meadows with the preceding species.

DESCR. If the wings are examined carefully, which elsewhere are lead white, one can observe a longitudinal silvery line medially that extends posteriorly as simple branches resembling striae.

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[904] See no. 1364.

[905] See the com. to no. 1365.

[906] See no. 1263.

[907] Misspelling by Linnaeus; in *Syst. nat.* (1758) he had named it *pinella*. *Pinetella* is obviously an influence from Clerck.

1370. PH. TINEA *culmella* [*Chrysoteuchia culmella* (Linnaeus, 1758). Eng. Garden grass-veneer, Sw. Trädgårdsgräsmott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], upper wings whitish, striate, ending in seven black spots and shining cilia.

Phalaena, nasute, whitish, with longitudinal white striae ending in a small black spot; antennae setaceous; tongue coiled. *Fn.* 907.

Raj. Ins. 229. n. 106. Phalaena minor pascuorum gemina proboscoide, alis oblongis, cum sedet circumvolutis, exterioribus ex argenteo lutescentibus vel argenteis vel plumbeis.

Reaum. Ins. 1. t. 17. f. 13. 14.

Act. Ups. 1736. p. 26. n. 82. Papilio alis depressis cuneiformibus oblongis striatis.

Lives in great numbers throughout the summer in very lush meadows that are dewy and full of grasses; sits on the tip of the grass always facing downwards; the most abundant species of all in our meadows.

DESCR. Body oblong, linear. Wings overlapping, whitish ash-grey with concave, rather pale, longitudinal striae, terminating in strongly shining white cilia. Within the bounds of these striae and the margin, there is a transverse row of very small blackish spots. Legs spinose.

1371. PH. TINEA *nemorella* [*Ypsolopha nemorella* (Linnaeus, 1758). Eng. Hooked smudge, Sw. Ljusgul trymal; Fam. Ypsolophidae. Eng. Ypsolophid moths, Sw. Höstmalar], wings curved, whitish; upper wings with a black spot.

Lives on fly honeysuckle.

DESCR. Similar to the preceding four species; a spot at inner margin of outer wing.

1372. PH. TINEA *rhomboidella* [*Hypatima rhomboidella* (Linnaeus, 1758). Eng. Lobster-clawed moth or Square-spot sober, Sw. Aspbågpalpmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings fuscous, with a rhomboid, black macula.

Phalaena, nasute, fuscous, with a bilateral black spot. *Fn.* 910.

Inhabits forests.

1373. PH. TINEA *trigonella* [*Epinotia trigonella* (Linnaeus, 1758). Eng. Birch epinotia moth or White-blotch bell, Sw. Vitfläckig björkrullvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings darkish, with a common double dorsal, trigonal, white macula.

Phalaena, nasute, cloudy fuscous, with a double dorsal, triangular, white spot. *Fn.* 911.

Inhabits the juniper groves of Falun.

DESCR. Small. Upper wings with a common, dorsal, trigonal, white macula with its tips facing backwards, as if it were made of two triangles, i.e. the anterior encroaching upon the middle part of the posterior, but otherwise these maculae are distinct.

1374. PH. TINEA *capitella* [*Lampronia capitella* (Clerck, 1759). Eng. Currant shoot borer, Sw. Vinbärsknoppmal; Fam. Prodoxidae, Eng. Yucca moths, Sw. Knoppmalar], wings black, with three whitish yellow maculae; head deep yellow.

Udd. Diss. 79. Phalaena nasuta, alis aureo fuscis: fasciis tribus argenteis: media interrupta.

Inhabits forests.

DESCR. Similar to the small concealer moths, but head clothed with honey-yellow wool. Upper wings black. On each wing three pale whitish yellow maculae, of which the first merges with the opposite one into an outwardly narrowing fascia; the second placed near outer margin; the third at inner margin and united with the opposite one; posterior margin whitish yellow.

1375. PH. TINEA *foenella* [*Epiblema foenella* (Linnaeus, 1758). Eng. White-foot bell, Sw. Gråbostjälkvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, with starkly white maculae, the anterior macula falcate, the posterior reniform.

Clerck. Phal. t. 2. f. 13. Phalaena foenella.

Inhabits meadows.

DESCR. The size of the yellow-faced bell.[908] Upper wings fuscous, with an anterior rather large, curved, white macula with the anterior end touching the inner margin, and with the other end the alar centre. Another white macula at anal angle.

1376. PH. TINEA *ramella* [*Epinotia ramella* (Linnaeus, 1758). Eng. Small birch bell, Sw. Grenrullvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings whitish ash-grey with a common, fuscous arch.

Lives among branches of oak.

DESCR. Stature as that of the broken-barred roller;[909] alar tips protruding in the same way as a tooth. Upper wings ash-grey with a rather saturated common macula at base; wings darkish posteriorly; the thicker, blackish margin striate with white.

1377. PH. TINEA *nisella* [*Epinotia nisella* (Clerck, 1759). Eng. Grey poplar bell, Sw. Mångformig aspvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], upper wings cloudy ash-grey, with a common, ovate, black macula.

Clerck. Phal. t. 12. f. 6. Phalaena nisella.

Inhabits forests.

DESCR.[910] Antennae rather short. Upper wings ash-grey, variegated with fuscous, and having a black, lanceolate, posteriorly narrower macula at inner middle, which together with its opposite member constitutes an ovate macula; posterior margin with black spots. Lower wings dark bluish ash-grey, diaphanous, without maculae.

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[908] See no. 1379.

[909] See no. 1382.

[910] Extremely variable species.

1378. PH. TINEA *salicella* [*Hedya salicella* (Linnaeus, 1758). Eng. White-backed marble, Sw. Sälgbrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings bluish ash-grey, with a dorsal, whitish-spotted area; thorax cristate.

Roes. Ins. 1. *Phal.* 4. t. 9.

Lives on willow; involuted.

DESCR. Middle-sized, almost as large as the bird-cherry ermine.[911] Upper wings cloudy fuscous; dorsum whitish; on the sides of this whiteness, a jet-black spot on each wing; blackish spots at tips. Thorax is cristate.

1379. PH. TINEA *cynosbatella* [*Notocelia cynosbatella* (Linnaeus, 1758). Eng. Yellow-faced bell, Sw. Större nyponvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings grey, apically whitish; thorax cristate.

De Geer. Ins. 1. t. 34. f. 4. 5.

Lives on rose buds.

DESCR. Middle-sized. Upper wings cloudy, dusky ash-greyish, posteriorly whitish, but the very tip ash-greyish; at anal angle a blackish spot on most of them.

1380. PH. TINEA *cinctella* [*Syncopacma cinctella* (Clerck, 1759). Eng. White-streak sober, Sw. Vitfläckspalpmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], upper wings black, with a linear, transverse, silvery fascia.

Lives on aspen? *Joh. Alströmer.*

DESCR. The size of a mosquito.[912] Upper wings oblong, jet-black; a snow-white fascia in the middle. Lower wings setaceous, ciliated. Antennae encircled with white.

1381. PH. TINEA *petiverella* [*Dichrorampha petiverella* (Linnaeus, 1758). Eng. Common drill, Sw. Gulhakad röllikarotvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[913] wings palish grey with a dorsal, light yellow blotch, and tip with three black spots.

Clerck. Phal. t. 12. f. 11. Phalaena Petiverella.

Inhabits groves.

DESCR. Minute. Upper wings dusky greyish; medially on dorsum, a whitish, transverse, slightly rhomboid spot (often a thin, transverse, fuscous line in the middle of the macula); at thicker margin close to tip, three thin, whitish, transverse lines.

[911] See no. 1363.

[912] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[913] See no. 1398.

1382. PH. TINEA *unguicella* [*Ancylis unguicella* (Linnaeus, 1758). Eng. Broken-barred roller, Sw. Ljungsikelvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings ash-grey, weakly fasciate, acuminate with a curved tip; outer margin transversely striated posteriorly with white.

Phalaena, antennae setaceous; tongue coiled; upper wings ending posteriorly in a small curved claw. *Fn.* 890.

Clerck. Phal. t. 12. f. 7. Phalaena unguicella.

Inhabits meadows.

DESCR. The size of a fly. Antennae black, filiform. Body entirely dusky blackish. Upper wings scattered with crescent-shaped, linear, transverse spots; hence wings are almost encircled with white and black; tip of upper wings or outer and thicker margins end with a small claw that is curved or arched beneath. Outer wing margin thicker, blacker, with thin, curved, white lines, beautifully variegated.

1383. PH. TINEA *mellonella*[914] [*Galleria mellonella* (Linnaeus, 1758). Eng. Greater wax moth or Honeycomb moth, Sw. Större vaxmott; Fam. Pyralidae, Eng. Pyralid moths, Sw. Solmott], wings grey-white, posteriorly purplish with white streak and black scutellum shining white at tip.

Swamm. Bibl. 1. t. 26. f. 2.

Roes. Ins. app. 242. t. 41.

Lives in beehives, where it constructs cylindrical tunnels, through which it penetrates and destroys the honeycombs. It was introduced into Stockholm in 1760 after the bees had been brought from Germany.

1384. PH. TINEA *cucullatella* [*Nola cucullatella* (Linnaeus, 1758). Eng. Short-cloaked moth, Sw. Gråpucklig trågspinnare; Fam. Nolidae, Eng. Tuft moths, Sw. Trågspinnare], wings whitish ash-grey; anteriorly a recurved, black streak.

Roes. Ins. 1. *Phal.* 4. t. 11.

Lives on European common rowan inside a conical, pilose sac.

DESCR. Middle-sized. Upper wings pale greyish white; anteriorly marked with a black, recurved arch, then two or three streaks undulating with fuscous and whitish. Lower wings verging on white. Dark ash-greyish beneath with a central spot on lower wings.

1385. PH. TINEA *arbutella* [*Argyroploce arbutella* (Linnaeus, 1758). Eng. Bearberry marble, Sw. Mjölonbrokvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings blood-coloured, with silvery, very narrow fasciae.

Lives on bearberry.

[914] Lat. *mellomella*, misspelled in the original text, should be written as *mellonella*. See Ch. *A small fauna of Sweden*.

DESCR. The size of a mosquito,[915] stature of a noctuid moth. Upper wings fuscous, reticulate or cloudy, of a red-brown or rusty brown colour. Lower wings of a weakly greyish blue colour, with a ciliate, red-brown margin.

1386. PH. TINEA *pruniella* [*Argyresthia pruniella* (Clerck, 1759). Eng. Cherry-fruit moth, Sw. Körsbärsmal; Fam. Argyresthiidae, Eng. Shiny head-standing moths, Sw. Skottmalar], wings grey; inner margin with a longitudinal, snow-white line, interrupted in the middle.

Inhabits thickets of plum groves.

DESCR. The size of a rye grain. Upper wings grey, with a common longitudinal, white, medially interrupted area from frons almost to alar tips. Head and thoracic back snow-white. Legs whitish. Antennae shorter than body, annulated with white and fuscous.

1387. PH. TINEA *curvella* [*Argyresthia curvella* (Linnaeus, 1761). Eng. Brindled argent, Sw. Äppelknoppmal; Fam. Argyresthiidae, Eng. Shiny head-standing moths, Sw. Skottmalar], weakly snow-white; wings with a recurved, ash-grey arch medially on dorsum.

Inhabits orchards.

DESCR. The size of a rye grain; entirely snow-white, with an ash-grey powder sparsely scattered at random. Common alar ash-grey arch that is crescent-shaped, recurved medially on dorsum and not touching sides; alar tips compressed, ash-greyish. Antennae slightly shorter than body, annulated with white and fuscous.

1388. PH. TINEA *gemmella* [*Stenolechia gemmella* (Linnaeus, 1758). Eng. Black-dotted groundling, Sw. Ekskottsmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings cloudy black, white, and silvery; head white.

Clerck. Phal. t. 10. f. 10. Phalaena gemmella.

Lives inside oak leaves; subcutaneous.

DESCR. Minute, verging on white, irrorated with blackish. Upper wings with a fuscous, recurved fascia; a fuscous blotch at anal angle.

1389. PH. TINEA *picarella* [*Nemapogon picarellus* (Clerck, 1759). Eng. Pied clothes moth, Sw. Skatsvampmal; Fam. Tineidae, Eng. Tineid moths, Sw. Äkta malar], white; upper wings with black line and maculae; thorax with a jet-black spot behind eyes.

Inhabits groves.

DESCR. The size of a mosquito.[916] Head, thorax, and upper wings snow-white; these wings have a longitudinal, oblique, unequal, black line; two black spots above the line; a black macula beneath

[915] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[916] Linnaeus only refers to *Culex*, see nos. 1890–1894.

the line. Entirely fuscous beneath. Antennae half the length of the body. Resembles the black-dotted groundling.[917]

1390. PH. TINEA *xylostella* [*Plutella xylostella* (Linnaeus, 1758). Eng. Diamond-back moth, Sw. Kålmal; Fam. Plutellidae, Eng. Diamondback moths, Sw. Senapsmalar], wings ash-grey, with a dorsal common, white, dentate band.
Phalaena, nasute, ash-grey, with a dorsal white band. *Fn.* 909.
Lives on leaves of dwarf honeysuckle.
DESCR. Minute, oblong, compressed, palish ash-grey. Dorsal common white alar band, dentate on each side. While the moth is resting, it extends the antennae forward.

1391. PH. TINEA *swammerdamella* [*Nematopogon swammerdamella* (Linnaeus, 1758). Eng. Large long-horn, Sw. Vårantennmal; Fam. Adelidae, Eng. Adelid moths or Fairy longhorn moths, Sw. Antennmalar], antennae very long; wings whitish yellow, pale, without maculae.
Clerck. Phal. t. 12. f. 1. Phalaena Swammerdamella.
Occurs in Stockholm.
DESCR. Middle-sized. All wings dark bluish grey tending to whitish yellow. Antennae very long, verging on white.

1392. PH. TINEA *reaumurella* [*Adela reaumurella* (Linnaeus, 1758). Eng. Green long-horn, Sw. Ekantennmal; Fam. Adelidae, Eng. Adelid moths or Fairy longhorn moths, Sw. Antennmalar], antennae very long; wings black, outwardly gilded.
Phalaena, nasute, black; wings outwardly gilded; antennae longer than body. *Fn.* 902.
Clerck. Phal. t. 12. f. 2. Phalaena Reaumurella.
Lives on willow.
DESCR. Body entirely black. Frons white. Antennae very long.

1393. PH. TINEA *degeerella* [*Nemophora degeerella* (Linnaeus, 1758). Eng. Yellow-barred long-horn, Sw. Lövskogsantennmal; Fam. Adelidae, Eng. Adelid moths or Fairy longhorn moths, Sw. Antennmalar], antennae very long; wings jet-black with a light yellow fascia.
Clerck. Phal. t. 12. f. 3. Phalaena Degeerella.
De Geer. Ins. t. 32. f. 13.
Uddm. Diss. 78. Phalaena nasuta aurea, antennis corpore quadruplo longioribus.
Occurs in great numbers at the acidulous springs of Sätra in Västmanland.
DESCR. Middle-sized. Upper wings blackish, striate, golden light yellow, with a transverse fascia in the middle; margin silvery black on each side. Antennae blackish, more than four times longer than body, and so tenacious that they easily use them to grasp.

[917] See no. 1388.

1394. PH. TINEA *robertella* [*Nematopogon robertellus* (Clerck, 1759). Sw. Barrskogsantennmal; Fam. Adelidae, Eng. Adelid moths or Fairy Longhorn moths, Sw. Antennmalar], antennae very long, white; wings fuscous; anal angle white.
Occurs in Uppsala.
DESCR. Resembles the large long-horn,[918] but slightly smaller. Wings fuscous or black, barely obviously of a gilded ash-grey colour; a white macula at anal angle.

1395. PH. TINEA *listerella* [*Dahlica listerella* (Linnaeus, 1758). Sw. Tallsäckspinnare; Fam. Psychidae, Eng. Bagworm moths, Sw. Säckspinnare],[919] antennae ordinary, weakly annulated with white; wings fuscous.
Inhabits orchards.

1396. PH. TINEA *frischella* [*Coleophora frischella* (Linnaeus, 1758). Eng. Frisch's case-moth or Clover case-bearer, Sw. Tidig grönglanssäckmal; Fam. Coleophoridae, Eng. Casebearer moths, Sw. Säckmalar], antennae ordinary, concolorous; wings dusky golden yellow.
Inhabits orchards.

1397. PH. TINEA *mouffetella* [*Athrips mouffetellus* (Linnaeus, 1758). Eng. Dotted grey groundling, Sw. Trystävmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], antennae rather short, annulated with white; wings dark bluish grey, with oblong, fuscous speckles.
Inhabits orchards.

1398. PH. TINEA *albinella* [*Dichrorampha petiverella* (Linnaeus, 1758). Eng. Common drill, Sw. Gulhakad röllikarotvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare],[920] wings fuscous, with a golden coloured, recurved, arcuate line.
Phalaena, nasute, fuscous, with a golden, oblique, transverse line. *Fn.* 901.
Inhabits groves.
DESCR. Upper wings fuscous, with a single obliquely transverse line; shanks turned backwards.

1399. PH. TINEA *bonnetella* [*Argyresthia bonnetella* (Linnaeus, 1758). Eng. Hawthorn argent, Sw. Hagtornsknoppmal; Fam. Argyresthiidae, Eng. Shiny head-standing moths, Sw. Skottmalar], wings white, with two silvery and posteriorly undulating lines.
Phalaena, nasute, white; outer wings with double dusky silvery lines, posteriorly vaguely undulating. *Fn.* 903.

[918] See no. 1391.
[919] See no. 1422.
[920] See no. 1381.

Inhabits coniferous forests.

DESCR. Tiny, the size of a mosquito,[921] snow-white. Outer wings with two small, longitudinal, dusky silvery lines at base on each side, posteriorly marked with silvery black, indistinct markings.

1400. PH. TINEA *leuwenhoekella* [*Pancalia leuwenhoekella* (Linnaeus, 1761). Eng. Violet cosmet, Sw. Mindre violbrokmal; Fam. Cosmopterigidae, Eng. Cosmet or Cosmopterigid moths, Sw. Fransmalar], black; upper wings brick-red, with two silvery jet-black maculate fasciae and a line.

Inhabits small woods.

DESCR. Small. Entirely black. Upper wings dark brick-red. Black fascia at base; black fascia medially; transverse, black macula at anal area; oblique line in front of tip; all wings black changing into a silvery colour; in addition they are mostly ciliate.

1401. PH. TINEA *goedartella* [*Argyresthia goedartella* (Linnaeus, 1758). Eng. Bronze alder moth or Golden argent, Sw. Alhängemal; Fam. Argyresthiidae, Eng. Shiny head-standing moths, Sw. Skottmalar], wings gold-coloured, with two silvery fasciae: the frontal antrorsely arcuate, the posterior backwardly arcuate.

Clerck. Phal. t. 12. f. 14. Phalaena Goedartella.

Inhabits alder thickets. Rests on its front four legs, the posterior two extended.

DESCR. Minute. Wings of a dusky golden colour; alar base white; white fascia, antrorsely recurved; macula at thicker margin; white, recurved fascia; white macula at anal area.

1402. PHALAENA TINEA *merianella* [*Eulamprotes wilkella* (Linnaeus, 1758). Eng. Painted neb, Sw. Större silverdystermal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar],[922] wings black, with three silvery fasciae transversely branched.

Phalaena, nasute, black, with three silvery, transverse lines. *Fn.* 900.

Act. Ups. 1736. p. 26. n. 84. Papilio alis depressis oblongis argenteis: lineis tribus transversis aureis: media bifurcata.

Inhabits groves.

DESCR. Tiny, oblong, black, semi-cylindrical. Thinner margin of wings ending in fine hairs, as on all moths of this order. Three transverse, silvery lines distinguish the wings, but in such a way that the interjacent black line is not broader than the silvery ones: of these the first line is bent backwards in the middle and the last forwards, but the one in the middle is transverse and its extremities are bifid on both sides. If this moth is preserved after death, the blackness disappears and instead a gilded colour appears.

[921] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[922] See no. 1403.

1403. PH. TINEA *wilkella* [*Eulamprotes wilkella* (Linnaeus, 1758). Eng. Painted neb, Sw. Större silverdystermal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar],[923] wings black, with four silvery, arcuate fasciae, of which the second is straight.

Phalaena, nasute, black, with four silvery, transverse lines. *Fn.* 899. *It. Gotland.* 260.

Occurs at Hoburgen in Gotland; jumps in very great numbers above the ground.

DESCR. It is among the smallest species of this order, oblong, black, semi-cylindrical. Head and antennae white. Thinner alar margin ending in fine hairs. Four transverse, silvery lines distinguish the wings, of these the first is recurved in the middle, the second straight, the third and fourth antrorsely curved.

1404. PH. TINEA *lyonnetella* [*Nomen dubium*], wings light yellow, with four silvery fasciae, the third bifid above.

Phalaena, nasute, light yellow, rather flat, with four transverse, dusky silvery lines. *Fn.* 904.

Inhabits forests.

DESCR. The size of a fly; 4 transverse, dusky silvery lines, of which the third is inwardly bifid and the last at the very posterior alar margin.

1405. PH. TINEA *rhediella* [*Pammene rhediella* (Clerck, 1759). Eng. Fruitlet mining tortrix, Sw. Rödspetsad solvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings black, apically red-yellow, with interrupted, silvery streaks.

Clerck. Phal. t. 12. f. 12. Phalaena Rhediella.

Inhabits groves.

DESCR. Upper wings black or weakly violet, posteriorly apically notched, red-yellow; four transverse, silvery, golden lines and two upper ones. Lower wings black with a white margin. Antennae rather short.

1406. PH. TINEA *roesella* [*Heliodines roesella* (Linnaeus, 1758), Eng. Roesel's signal, Sw. Lungrotsmal; Fam. Heliodinidae, Eng. Sun moths, Sw. Signalmalar], wings of a golden black colour, with nine silvery convex, submarginal spots.

Clerck. Phal. t. 12. f. 13. Phalaena Roesella.

De Geer. Ins. 1. t. 30 f. 10–12.

Frisch. Ins. 3. p. 31. t. 4.

Lives on the leaves of apple; subcutaneous.

DESCR. Minute. Body black. Upper wings deep yellow, with an oblong, black macula at base and a transverse black fascia; outer and inner margins black. When all the black colour vanishes on these wings, they turn into an intensely shining silvery colour.

[923] See no. 1402.

1407. PH. TINEA *rajella* [*Phyllonorycter rajellus* (Linnaeus, 1758). Eng. Common alder midget, Sw. Ljus alguldmal; Fam. Gracillariidae, Eng. Leaf blotch miner moths, Sw. Styltmalar], wings gold-coloured, with six silvery spots, the second and third originating from the same point.

De Geer. Ins. 1. t. 31. f. 11–12.

Lives on the leaves of alder; subcutaneous.

DESCR. Minute. Resembles the bronze alder moth.[924] Upper wings darkish or gold-coloured, maculate on each side with 3 white or silvery maculae, of which the second is almost transverse.

1408. PH. TINEA *linneella* [*Chrysoclista linneella* (Clerck, 1759). Eng. Linden bark-borer moth or Lime cosmet, Sw. Lindbrokmal; Fam. Parametriotidae, Sw. Märgmalar], wings red-yellow, with three elevated, silvery spots.

Clerck. Phal. t. 12. f. 8. Phalaena Linneella.

Inhabits orchards.

DESCR. Stature as that of Roesel's signal.[925] Wings with black ambit and red-yellow disc, on which there are three hemispheric, strongly convex, silvery spots, and also a thin indistinct, silvery, interrupted line at lower margin. Antennae black, white-tipped.

1409. PH. TINEA *schaefferella* [*Schiffermuelleria schaefferella* (Linnaeus, 1758). Sw. Kilskriftspraktmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings black, light yellow on disc, with a silvery streak, two longitudinal lines, and three spots.

It. Scan. 112. Phalaena Fagi.

Lives on the leaves of beech; subcutaneous; often destroys all leaves.

DESCR. In *Iter Scanicum.* 112.

1410. PH. TINEA *jungiella* [*Grapholita jungiella* (Clerck, 1759). Eng. Vetch piercer, Sw. Majvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, with seven double white maculae, the third fasciate and the last simple.

Phalaena, nasute, black; upper wings with a white crescent having a median, black line. *It. W:goth.* 141.

Clerck. Phal. t. 12. f. 9. Phalaena Jungiella.

Inhabits small woods.

DESCR. Wings dusky grey. All maculae white except for the last consisting of two thin, parallel lines. Two opposing maculae in the middle; the third rising upwards from outer margin to alar angle into an oblique fascia; the fourth, fifth, and sixth at the thicker margin behind the fascia. Thin line or simple spots at posterior margin. Posterior margin jet-black, the first dorsal spot of which is connected to its opposite member and thus resembles a forwardly arcuate crescent; this crescent is hardly of a golden or silvery colour; this moth is slightly longer than the previous ones.

[924] See no. 1401.

[925] See no. 1406.

1411. PH. TINEA *clerckella*[926] [*Lyonetia clerkella* (Linnaeus, 1758). Eng. Apple leaf miner, Sw. Körsbärslansettmal; Fam. Lyonetiidae, Eng. Lyonetiid moths, Sw. Rullvingemalar], wings silvery, posteriorly dusky gold-coloured, caudate, with a terminal jet-black eyespot.

Occurs in Stockholm. *Car. Clerck.*

DESCR. Easily the smallest of all. Upper wings silvery, apically dusky gold-coloured, weakly striated, and caudate with a round, jet-black eyespot. Antennae ordinary.

1412. PH. TINEA *harrisella* [*Phyllonorycter harrisellus* (Linnaeus, 1761). Eng. White oak midget, Sw. Gulspetsad ekguldmal; Fam. Gracillariidae, Eng. Leaf blotch miner moths, Sw. Styltmalar], wings golden silvery, blunt at tip, of an almost scorched colour, weakly ocellate.

Inhabits groves. *T. Bergman.*

DESCR. Less elongate and rather short, minute. Wings variegated with gold and silver, blunt at tip and not acuminate as that of the previous species; at the very tip it is of an almost scorched colour, weakly fuscous, and nearly ocellate, with a black spot.

1413. PH. TINEA *granella* [*Nemapogon granellus* (Linnaeus, 1758). Eng. European grain worm or European grain moth, Sw. Kornmal; Fam. Tineidae, Eng. Tineid moths, Sw. Äkta malar], wings maculate with white and black; head white.

De Geer. Act. Stockh. 1746. p. 48.

Reaum. Ins. 3. t. 20. f. 14. 16.

Roes. Ins. 1. *Phal.* 4. t. 12.

Lives in heaps of corn, where it consumes the grains.

DESCR. Small. Upper wings dark bluish grey with jet-black and white maculae so that the white maculae or black blotches are always placed close to each other. Lower wings lead-grey and maximally ciliate at the thinner margin. Frons with fine white hairs. Eyes black; behind the eyes a thin line or jet-black spot at the origin of the wings.

1414. PH. TINEA *tapetzella* [*Trichophaga tapetzella* (Linnaeus, 1758). Eng. Tapestry moth, Sw. Tapetmal; Fam. Tineidae, Eng. Clothes moths, Sw. Äkta malar], wings black, posteriorly whitish; head snow-white.

Phalaena, nasute, black; antennae setaceous; tongue coiled; head snow-white; wings posteriorly whitish. *Fn.* 892.

Raj. Ins. p. 204. n. 98. Tinea vestivora major, alis oblongis acutis: exterioribus ad scapulas nigricantibus, inferius albentibus; interioribus fuscis sive cinereis.

Reaum. Ins. 3. t. 20. f. 2–4.

Lives in clothes, furs, wallpaper, and in everything that is made of wool or fine hairs from animals; enjoys especially the clothes of Lapps, which are made of reindeer hides.

[926] Although correct spelling of Clerck's name this is an incorrect citation of the misspelled, but accepted, name in *Syst. nat.* (1758).

DESCR. The larva forms cylindrical cases of fine hairs, from which it gnaws; hence these cases enjoy the same colour as the clothes that the larva consumes; if these are variegated, the case also becomes variegated; it moves with a raised cauda, protected by the case and in this case it hides when frightened. Thus growing in thickness every day, and the case getting narrower day by day, it is dissected on the side and a new lacinia is extended. Therefore, if variously coloured clothes are exposed to the larva, the case will be of different colours just like that of an actor.
It is entirely oblong, narrow; the wings are raised towards the tip. Head white. Upper wings black, but from the middle to tip white; this whiteness is slightly stained with barely visible, fuscous spots. Lower wings ash-grey. Body and joints black. Antennae setaceous.

1415. PH. TINEA *pellionella* [*Tinea pellionella* Linnaeus, 1758. Eng. Case-bearing clothes moth, Sw. Pälsmal; Fam. Tineidae, Eng. Clothes moths, Sw. Äkta malar], wings grey-white, medially with a black spot; head palish grey.

Phalaena, nasute, grey-white; a black spot medially on the wings; head palish grey. *Fn.* 894.

Reaum. Ins. 3. t. 12. f. 12–16.

Lives in shaggy clothes, on which it gnaws and depilates while lurking inside the case, just as in the previous moth.

1416. PH. TINEA *sarcitella*[927] [*Endrosis sarcitrella* (Linnaeus, 1758). Eng. White-shouldered house moth, Sw. Vithövdad skräpmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings ash-grey; thorax with a white spot on each side.

Phalaena, nasute, ash-grey; antennae setaceous; tongue coiled; thorax with a white spot on each side. *Fn.* 893.

Roes. Ins. 1. *Phal.* 4. t. 17.

Reaum. Gall. 3. t. 6. f. 9–10.

Lives in clothes; the larva forms cylinders, with which it covers and hides itself, just as in the two preceding moths.

DESCR. It is small. Wings ash-grey. Abdomen, legs, head, and the entire lower part whitish, shining like metal in sunshine. Antennae rather short. Eyes black.

1417. PH. TINEA *vestianella* [*Coleophora vestianella* (Linnaeus, 1758). Eng. Eastern case-bearer, Sw. Smalvingad mållesäckmal; Fam. Coleophoridae, Eng. Casebearer moths, Sw. Säckmalar], wings ash-grey, at costa white; tips ascending, plumose; palps recurved.

Lives in clothes, on which it gnaws during summer and destroys in the same way as the preceding moths.

DESCR. Upper wings lanceolate, snow-white at thicker margin, and greyish blue with black speckles. Lower wings awl-shaped, lead-coloured; all very broadly ciliate. Palps prominent, recurved. Antennae rather short, annulated with white.

[927] Misspelling of the original name *sarcitrella*.

1418. PH. TINEA *pomonella* [*Cydia pomonella* (Linnaeus, 1758). Eng. Codling moth, Sw. Äpplevecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings cloudy, posteriorly with a golden red macula.

Frisch. Ins. 7. t. 10.

Roes. Ins. 1. *Phal.* 4. t. 13.

Reaum. Ins. 2. t. 40. f. 9. 10.

Lives inside the fruits of apples and pears.

DESCR. The size of the bird-cherry ermine.[928] Entirely cloudy ash-grey and fuscous. It can be distinguished by the large, dark macula shining with gold at posterior alar parts towards anal angle.

1419. PH. TINEA *strobilella* [*Cydia strobilella* (Linnaeus, 1758). Eng. Spruce seed moth, Sw. Grankottsvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, undulating with silver; lower wings fuscous with a white margin.

Phalaena, nasute, fuscous, undulating with whitish; lower wings fuscous, white-margined. *Fn.* 914.

Clerck. Phal. t. 12. f. 10.

Lives in the cones of spruce, which it leaves at the beginning of spring; abundant.

DESCR. Minute. Wings cloudy darkish and grey, at thicker margin marked with many transverse, white striae. Lower wings fuscous with posterior and thinner margin white.

1420. PH. TINEA *turionella* [*Pseudococcyx turionella* (Linnaeus, 1758). Eng. Pine bud moth, Sw. Tallknoppsvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings shining whitish grey; thorax deep yellow.

Lives inside the shoots of Scots pine.

DESCR. The size of the bird-cherry ermine.[929] Wings cloudy rusty brown and white; this whiteness appears intertwined with various unequal, silvery fasciae.

1421. PH. TINEA *dodecella* [*Exoteleia dodecella* (Linnaeus, 1758). Eng. Pine bud moth, Sw. Tallskottsmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings grey, fasciated with a pale colour, and with three pairs of fuscous spots.

De Geer. Ins. 1. t. 22. f. 22. 23.

Lives inside the shoots of Scots pine as the preceding species.

[928] See no. 1363.

[929] See no. 1363.

1422. PH. TINEA *cembrella* [*Dahlica listerella* (Linnaeus, 1758). Sw. Tallsäckspinnare; Fam. Psychidae, Eng. Bagworm moths, Sw. Säckspinnare],[930] wings fuscous, irrorated with whitish speckles.

Lives on Scots pine; larva inside the scabrous sac, in the same way as the case-bearing clothes moth.[931]

DESCR. Smaller than a house fly.[932] Wings blunt; fasciae scattered with whitish spots so that they appear ash-grey.

1423. PH. TINEA *resinella* [*Retinia resinella* (Linnaeus, 1758). Eng. Pine resin-gall moth, Sw. Hartsgallvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, with silvery ash-grey fasciae.

De Geer. Ins. 1. t. 33. f. 12. 13.

Frisch Ins. 10. t. 9.

Lives inside the pine, from where it sucks the collected resin out of the branches.

DESCR. Very similar to the codling moth.[933] Wings ash-grey, undulating transversely with black; a silvery whiteness appears.

1424. PH. TINEA *taedella* [*Epinotia tedella* (Clerck, 1759). Eng. Common spruce bell, Sw. Granbarrvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings fuscous, with three fasciae and just as many white, bifid maculae.

Clerck. Phal. t. 10. f. 13.

Lives on spruce. *Clas Alströmer.*

DESCR. Small. Wings rather short, rather blunt, with the first fascia at base, the third one medially on the wing and fractured; posteriorly three bifid, white maculae, of which two at lower margin.

1425. PH. TINEA *lappella* [*Metzneria lappella* (Linnaeus, 1758). Eng. Burdock seedhead moth, Burdock seed moth or Burdock neb, Sw. Kardborrekorgmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings pale, ascending with a black spot at tip.

Renstr. Act. Stockh. 1752. p. 66.

Lives in the capitula inside the seeds of the greater burdock. *Renström.*

DESCR. The size of the tapestry moth.[934] Wings oblong, pale brick-red or yellowish, posteriorly a little broader, scattered with one or two black speckles. Antennae rather short. Palps ascending.

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[930] See no. 1395.

[931] See no. 1415.

[932] See no. 1833.

[933] See no. 1418.

[934] Misspelling of *tapetzella*. See no. 1414.

1426. PH. TINEA *bracteella*[935] [*Oecophora bractella* (Linnaeus, 1758). Eng. Gold-base tubic, Sw. Blågul praktmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings black; anteriorly with a deep yellow, golden macula and margin.

Clerck. Phal. t. 12 f. 4. Phalaena bracteella.

Occurs around us; rather rare.

DESCR. Barely the size of a fly. Wings black; the anterior third of upper wings golden light yellow. Light yellow macula at posterior part of outer margin. Frons light yellow. Antennae short.

1427. PH. TINEA *stipella* [*Denisia stipella* (Linnaeus, 1758). Sw. Ljusgul barrskogspraktmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings black, with three sulphur-coloured maculae.

Clerck. Phal. t. 12. f. 5. Phalaena stipella.

Occurs in the countryside.

DESCR. The size of a mosquito.[936] Upper wings oblong, black, with a light yellow macula at inner base, another broader in the middle and not touching the outer margin, and an additional round one in front of tip and not touching the thinner margin.

1428. PH. TINEA *corticella* [*Lampronia corticella* (Linnaeus, 1758). Eng. Raspberry moth, Sw. Hallonknoppmal; Fam. Prodoxidae, Eng. Yucca moths, Sw. Knoppmalar], wings grey, with golden spots at margin, posteriorly with three crescents.

Lives inside the bark of fruit trees.

1429. PH. TINEA *tertianella* [*Nomen dubium*], wings ash-grey, the first fascia one and a third times as long as the second rather dark.

Lives on estates.

1430. PH. TINEA *tessella* [*Pseudotelphusa tessella* (Linnaeus, 1758). Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar],[937] wings black, with two white, broadly spaced, tessellated fasciae.

Phalaena, nasute, blackish, with two white, tessellated fasciae; antennae setaceous; tongue coiled. *Fn.* 897.

DESCR. This moth is among the largest of this group, entirely dusky black, with two linear, white fasciae crossing upper wings transversely, of which one is close to base and the other at alar tip; of these the single one is white, but with small, blackish maculae, as if tessellated.

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[935] Misspelling of *bractella*.

[936] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[937] Not occurring in Sweden.

1431. PH. TINEA *argentella* [*Elachista argentella* (Clerck, 1759). Eng. Swan-feather dwarf, Sw. Silvergräsmal; Fam. Elachistidae, Eng. Grass-miner moths, Sw. Gräsmalar], entirely silvery, without maculae.

Lives on spruce.

DESCR. Minute. Entirely silvery, including wings and legs, strongly shining. Lower wings lanceolate, ciliate on each side. Antennae shorter than body, annulated with fuscous. Eyes black.

1432. PH. TINEA *calthella* [*Micropterix calthella* (Linnaeus, 1761). Eng. Marsh marigold moth or Plain gold, Sw. Kärrkäkmal; Fam. Micropterigidae, Eng. Mandibulate archaic moths, Sw. Käkmalar], jet-black; upper wings entirely golden; head rusty brown.

Lives on the flowers of buttercup; abundant.

DESCR. Minute. Antennae barely the length of the body. Upper wings certainly appear entirely golden from a certain angle, otherwise jet-black. Differs from Frisch's case-moth[938] by the antennae that are weakly ear-shaped at base. Head rusty brown, a quarter of the size of the body.

1433. PH. TINEA *pedella* [*Stathmopoda pedella* (Linnaeus, 1761). Eng. Alder signal, Sw. Alspretmal; Fam. Stathmopodidae, Sw. Spretmalar], upper wings, linear, deep yellow, with three fuscous fasciae; hindlegs extended transversely.

Lives on alder leaves; subcutaneous. *T. Bergman*.

DESCR. Minute. Head and thorax deep yellow. Wings linear, deep yellow, with three fuscous fasciae, equally well spaced, of which the first is situated at the very base. Hindlegs extended horizontally, spinose. Antennae ordinary.

1434. PH. TINEA *ustella* [*Ypsolopha ustella* (Clerck, 1759). Eng. Variable ypsolopha moth or Variable smudge, Sw. Föränderlig höstmal; Fam. Ypsolophidae, Eng. Ypsolophid moths, Sw. Höstmalar], upper wings black, with lower margin longitudinally ash-grey.

Clerck. Phal. t. 3. f. 13. Phalaena ustella.

Inhabits swampy woods.

DESCR. Antennae half the length of the body. Upper wings black; outer margin broad, longitudinally ash-grey. Lower wings fuscous.

1435. PH. TINEA *parenthesella* [*Ypsolopha parenthesella* (Linnaeus, 1761). Eng. White-shouldered smudge, Sw. Vitstreckad höstmal; Fam. Ypsolophidae, Eng. Ypsolophid moths, Sw. Höstmalar], upper wings brick-red, with a longitudinal, whitish line.

Occurs in Stockholm.

DESCR. The size of a mosquito.[939] Wings wrapped around the body, narrow, brick-red; each with a white line running longitudinally from base to the middle so that the insect appears marked with a white line on each side. Legs as long as body.

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[938] See no. 1396.

[939] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1436. PH. TINEA *elongella* [*Caloptilia elongella* (Linnaeus, 1761). Eng. Pale red slender, Sw. Alstyltmal; Fam. Gracillariidae, Eng. Leaf blotch miner moths, Sw. Styltmalar], wings linear, brick-red; antennae the length of the body.

Occurs in Småland. *Car. Blom.*

DESCR. The size of a mosquito.[940] Upper wings deep yellow tending to brick-red, linear, longitudinally very pilose at inner margin. Lower wings whitish, awl-shaped, ciliate, and villous on each side; antennae the length of the body.

1437. PH. TINEA *punctella* [*Nomen dubium*], upper wings linear, brick-red, with four fuscous spots.

Inhabits orchards. When resting it leans upon the alar tip. *T. Bergman.*

DESCR. Very similar to the preceding species, but upper wings marked with four fuscous spots equally well spaced.

1438. PH. TINEA *bicostella* [*Pleurota bicostella* (Clerck, 1759). Eng. White streak or Heath streak, Sw. Palpljungmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings lanceolate, whitish ash-grey, with longitudinal, fuscous costa and snow-white margin.

Clerck. Phal. t. 3. f. 15.

Occurs in Uppsala. *Clas Alströmer.*

DESCR. Palps fuscous, long. Antennae half the length of the body. Wings whitish with a rather broad longitudinal line, fuscous at outer margin. Margin snow-white and parallel to the line, with two or three very small black spots along the fuscous line on disc.

1439. PH. TINEA *fuscella* [*Niditinea fuscella* (Linnaeus, 1758). Eng. Brown-dotted clothes moth, Sw. Sparvbomal; Fam. Tineidae, Eng. Clothes moths, Sw. Äkta malar], wings dusky ash-grey; upper wings with two black spots and a macula beneath anus.

Lives in houses.

[DESCR.] Fuscous blotch at tip of upper wing.

1440. PH. TINEA *minutella* [*Borkhausenia minutella* (Linnaeus, 1758). Eng. Thatch tubic, Sw. Snedbandad skräpmal; Fam. Oecophoridae, Eng. Concealer moths, Sw. Praktmalar], wings blackish, with transverse, rusty brown maculae.

Phalaena, nasute, black, with four transverse, rusty brown maculae; antenna setaceous. *It. Scan.* 216.

Occurs in the houses of Skåne.

DESCR. The size of a mosquito,[941] black. Upper wings black with two rusty brown maculae, the inner one slightly anterior, whereby a rusty brown angle is formed on the back when the wings are folded.

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[940] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[941] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1441. PH. TINEA *mercurella* [*Eudonia mercurella* (Linnaeus, 1758). Eng. Small grey, Sw. Molnugglemott; Fam. Crambidae, Eng. Grass moths, Sw. Gräsmott], wings whitish ash-grey, weakly fasciate, medially with a white spot encircled by an 8.

Inhabits forests.

DESCR. Slightly larger than a mosquito.[942] Wings palish ash-grey, with two repand, well spaced, fuscous streaks. Blackish spot barely visible in the middle of the wing. Black eyespot with a white pupil or the black sign 8 at the posterior part of the outer alar margin.

1442. PH. TINEA *populella* [*Anacampsis populella* (Clerck, 1759). Eng. Poplar sober, Sw. Aspsobermal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings cloudy greyish white and dusky black; posterior tibiae with whitish yellow hairs.

Lives on aspen; it is a moth sitting on the tree trunk. *Joh. Alströmer.*

DESCR. Small; stature as that of the preceding species. Antennae short. Lower wings lead-grey.

1443. PH. TINEA *porrectella* [*Plutella porrectella* (Linnaeus, 1758). Eng. Grey-streaked diamond-back, Streaked diamond-back or Grey-streaked smudge, Sw. Hesperismal; Fam. Plutellidae, Eng. Diamondback moths, Sw. Senapsmalar], wings verging on white; antennae ordinary and porrect; palps recurved.

De Geer. Ins. 1. t. 26. f. 15. 16.

Lives on tetradynamous plants.

DESCR. The size of a mosquito;[943] entirely verging on white, striated. Antennae the length of the body, annulated with white, porrect and approximated nearly as one. Lower wings acuminate.

1444. PH. TINEA *leucatella* [*Recurvaria leucatella* (Clerck, 1759). Eng. White-barred groundling, Sw. Svartvit böjmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings blackish with two white fasciae, of which the posterior one is more indistinct. Head white with recurved palps.

Occurs in Uppsala.

DESCR. Middle-sized. Upper wings black. Anterior fascia white, semi-orbicular or anteriorly transverse, posteriorly rounded; posterior fascia narrow, white, but spotted all over. Head entirely snow-white, just as are also the horn-shaped, recurved palps. Antennae rather short, black, annulated with white.

1445. PH. TINEA *cinerella* [*Acompsia cinerella* (Clerck, 1759). Eng. Ash-coloured sober or Ash-coloured crest, Sw. Gråpalpmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings dusky ash-grey, without maculae, somewhat shining, with horn-shaped palps.

Occurs in Uppsala.

[942] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[943] Linnaeus only refers to *Culex*, see nos. 1890–1894.

DESCR. Body entirely ash-grey including wings. Palps clavate, recurved, having hornlike projections with setaceous tips.

1446. PH. TINEA *scabrella* [*Ypsolopha scabrella* (Linnaeus, 1761). Eng. Wainscot hooktip or Wainscot smudge, Sw. Hagtornshöstmal; Fam. Ypsolophidae, Eng. Ypsolophid moths, Sw. Höstmalar], wings white, striated, and with rough black striae on dorsum; palps spinose.

Occurs in Uppsala.

DESCR. Very similar to the following species. Wings oblong, striated with black striae at dorsal margin so that the dorsal margin appears almost black. But in this part the striae project with erect scales so that here they appear strongly scabrous all over. Lower wings darkish. Antennae white, ordinary. Palps porrect and with a spine on their dorsum.

1447. PH. TINEA *asperella* [*Ypsolopha asperella* (Linnaeus, 1761). Eng. Scarce smudge, Sw. Apelhöstmal; Fam. Ypsolophidae, Eng. Ypsolophid moths, Sw. Höstmalar], wings whitish, with a common fuscous macula; tips punctate with black, apically notched.

Occurs in Uppsala.

DESCR. Entirely white above with a greyish umbra medially on the wings; medially on the back of the wings, a common rough black rhomboid macula with recurved scales; wings strongly notched or emarginate apically with a fuscous margin, pointed below; a rounded lobe above with one or two spots in front of the emargination. Antennae rather short. Palps porrect.

1448. PH. TINEA *serratella* [*Coleophora serratella* (Linnaeus, 1761). Eng. Common casebearer or Cigar casebearer moth, Sw. Björksäckmal; Fam. Coleophoridae, Eng. Casebearer moths, Sw. Säckmalar], fuscous; posterior tibiae barbate, longer than body.

Lives on pear leaves inside a crested case. *Mr* C. *Solander.*

DESCR. Entirely dusky blackish; smaller than a mosquito.[944] Antennae ordinary, annulated with white. Wings longer than abdomen. Hindlegs longer than the actual wings. Its tibiae posteriorly pilose, but not femora.

1449. PH. TINEA *juniperella* [*Dichomeris juniperella* (Linnaeus, 1761). Eng. Scotch crest or Grey juniper pulpet, Sw. Grå ennålmal; Fam. Gelechiidae, Eng. Twirler moths or Gelechiid moths, Sw. Stävmalar], wings ash-grey, with a white, undulating streak, and having four black spots.

Lives on juniper and binds the branchlets together. C. *Clerck.*

DESCR. Of average size. Upper wings ash-grey with four black spots, arranged in no particular order; posteriorly a white, undulating streak; posterior margin with black spots. Lower wings whitish.

[944]Linnaeus only refers to *Culex*, see nos. 1890–1894.

1450. PH. TINEA *gelatella* [*Exapate congelatella* (Clerck, 1759). Eng. Autumnal shade, Sw. Höstlångvecklare; Fam. Tortricidae, Eng. Tortricid moths or Leafroller moths, Sw. Vecklare], wings ash-grey; upper wings with a whitish line and two well spaced black spots; female hemipterous.

Clerck. Phal. t. 8. f. 3. Phalaena galatella.

Lives on cow parsley at the end of the defoliation month.

DESCR. Somewhat larger. Upper wings dusky greyish white, with a longitudinal, rather broad, whitish line, interrupted by two equally well spaced black spots. Lower wings dark bluish greyish tending to ash-grey. Antennae rather short. Female with two lanceolate villous, pointed, ash-grey wings, barely as long as body; both margins marked with three black spots.

1451. PH. TINEA *lichenella* [*Dahlica lichenella* (Linnaeus, 1761). Eng. Lichen case-bearer, Sw. Jungfrusäckspinnare; Fam. Psychidae, Eng. Bagworm moths, Sw. Säckspinnare], female apterous, smooth, black.

Lives on the orange wall lichen[945] above the walls of the Vaksala Chuch. Larva lives inside a sac.

DESCR. Female barely the size of a bed bug,[946] black, entirely glabrous. No male has been found, and it has not emerged from the larvae along with the females.

1452. PH. ALUCITA *monodactyla* [*Emmelina monodactyla* (Linnaeus, 1758). Eng. Morning-glory plume moth or Common plume, Sw. Åkervindefjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott], wings outspread, linear, undivided.

Inhabits small woods.

DESCR. Wings ash-grey. Upper wings linear, undivided, beneath canaliculate; lower wings are hidden beneath the upper ones. Lower wings almost tripartite with posterior branch divided all the way to base.

1453. PH. ALUCITA *didactyla* [*Geina didactyla* (Linnaeus, 1758). Sw. Humleblomsterfjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott], wings outspread, divided, fuscous, with white streaks; anterior wings bifid, posterior wings tripartite.

Lives on water avens.

DESCR. Upper wings dusky rusty brown, semi-bifid, acuminate, with some white streaks or maculae; posterior margin white below tip. Lower wings maculate with whitish. Legs annulated with white.

[945] Lat. *Lichen candelarius*, i.e. *Xanthoria candelaria*.

[946] See no. 909.

1454. PH. ALUCITA *tesseradactyla* [*Platyptilia tesseradactyla* (Linnaeus, 1761). Eng. Irish plume, Sw. Kattfotsfjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott], wings outspread, divided, cloudy ash-grey; posterior wings fuscous.

Inhabits small woods.

DESCR. Upper wings cloudy ash-grey and fuscous, with connivent fissure. Lower wings fuscous, and not maculate, tetradactyl.

1455. PH. ALUCITA *tetradactyla* [*Merrifieldia tridactyla* (Linnaeus, 1758). Eng. Western thyme plume, Sw. Fläcksprötat timjanfjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott],[947] wings outspread, divided, pale, with white lines.

Lives in stalks.

DESCR. Upper wings linear, with a white, longitudinal line so that only the margins are darker, without maculae. Legs white.

1456. PH. ALUCITA *ptero-dactyla* [*Stenoptilia pterodactyla* (Linnaeus, 1761). Eng. Brown plume, Sw. Teveronikefjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott], wings outspread, divided, brick-red, with a fuscous spot.

Inhabits small woods.

DESCR. Upper wings rusty brown tending to brick-red, bifid, but with a fissure that is not visible, unless the wings are flexed; medially a blackish spot.

1457. PH. ALUCITA *penta-dactyla* [*Pterophorus pentadactylus* (Linnaeus, 1758). Eng. White plume moth, Sw. Vitt fjädermott; Fam. Pterophoridae, Eng. Plume moths, Sw. Fjädermott], wings outspread, divided, having five snow-white divisions and with a distinct fifth wing digit.

Occurs in Hoburgen in Gotland. *Peter Bergius, Doctor of Medicine.*

DESCR. Larger than our other moths and entirely snow-white. Thorax with three fascicles. Upper wings bifid above the middle, with a posterior ciliate margin. Lower wings composed of five divisions, with the fifth wing digit distinct; all branches with overlapping scales.

1458. PH. ALUCITA *hexadactyla* [*Alucita hexadactyla* Linnaeus, 1758. Eng. Twenty-plume moth, Sw. Kaprifolfjädermott; Fam. Alucitidae, Eng. Many-plume moths, Sw. Mångfliksmott], wings outspread, divided, each one composed of six parts.

Occurs around us; rather rare.

DESCR. All wings outspread, with almost numberless rays, divided from base, with cilia almost adjoining, undulating with white and ash-grey colours.

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[947] There has been a confused application of the name *tetradactyla* to more than one species. The description here by Linnaeus refers to *tridactyla*. The other *tetradactyla* is valid as *Gillmeria ochrodactyla* (Denis & Schiffermüller, 1775). Ref.: Bull. Zool. Nomencl. 68 (2): 167–168. Opinion 2041, Case 3081 (2003).

IV. NEUROPTERA[948]

Libellula[949]

1459. LIBELLULA *quadrimaculata* [*Libellula quadrimaculata* Linnaeus, 1758. Eng. Four-spotted chaser or Four-spotted skimmer, Sw. Fyrfläckad trollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], posterior wings all with a blackish macula at base, medially and anteriorly.

Libellula, wings with a double macula at margin. *Fn.* 764.

Raj. Ins. 72. n. 3. Libella maxima; abdomine longo tenui laevi viridi splendente ad initium & finem intumescente.

Occurs around Uppsala; rather rare.

DESCR. The name given by *Ray* makes no sense, but his description is valid. Thorax stout with two light yellow maculae, which, except for the frontal one, are provided with black hirsute lines on the back. Abdomen attenuated from the broad beginning. Wings clear, at base deep yellow, but lower wings black behind the deep yellow colour. Abdominal sides and dorsum whitish yellow; cauda with two smoothly rounded appendices, bilaterally attenuated. The essential feature, by which this species is distinguished from all others, consists of the marginal spot which, just as on the other skimmers, is black towards the edges, but apart from this spot there is another fuscous or black macula at anterior margin medially on each wing; therefore, it seems as if there were two marginal spots on each wing. Eyes with a light yellow line posteriorly beneath.

1460. LIBELLULA *flaveolata* [*Sympetrum flaveolum* (Linnaeus, 1758). Eng. Yellow-winged darter, Sw. Gulfläckad ängstrollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], wings white, at base deep yellow. *Fn.* 765.

Raj. Ins. 49. n. 4. Libella maxima, abdomine breviore latioreque flavo.

Lives at water bodies in Uppland; abundant.

DESCR. Dorsum deep yellow, entirely black beneath. Thorax black, with two oblique, light yellow maculae on each side together with two light yellow preceding lines. Legs black. Frons greenish. Eyes grey. All wings with a broad, light yellow macula at base.

1461. LIBELLULA *vulgata* [*Sympetrum vulgatum* (Linnaeus, 1758). Eng. Moustached darter or Vagrant darter, Sw. Tegelröd ängstrollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], wings white; body fuscous; cauda simple. *Fn.* 766.

Raj. Ins. 49. n. 6. Libella maxima, abdomine flavo angustiore, nullis ad radicem alarum maculis fuscis.

Lives at water bodies.

DESCR. Wings white, with a dusky red-brown spot at margin. Body blackish. Anus without appendix.

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948 This taxon in the sense of Linnaeus includes the orders Odonata, Ephemeroptera, Trichoptera, Megaloptera, Plecoptera, Psocoptera, Rhaphidioptera, Mecoptera, and Neuroptera.

949 Order Odonata, Eng. Dragonflies, Sw. Trollsländor.

1462. LIBELLULA *rubicunda* [*Leucorrhinia rubicunda* (Linnaeus, 1758). Eng. Ruby whiteface or Northern white-faced darter, Sw. Nordisk kärrtrollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], only posterior wings blackish at base.

Raj. Ins. 50. n. 8. Libella abdomine pulchre rubente versus podicem latiore.

Roes. Ins. 2. *Aqu.* 2. t. 7. f. 4.

Lives at water bodies.

DESCR. Face white. Thorax black, with pale wool, and red lines; dorsum scarlet between wings. Legs black. Wings hyaline with a rusty brown macula at margin. Lower wings black at base. Abdomen black with dorsal, large, red maculae. Cauda small. Female deep yellow, whereas the male is red.

1463. LIBELLULA *depressa* [*Libellula depressa* Linnaeus, 1758. Eng. Broad-bodied chaser, Sw. Bred trollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], all wings blackish at base; thorax with two light yellow lines; abdomen flat, lanceolate, laterally whitish yellow.

Raj. Ins. 49. n. 5. Libella maxima, abdomine breviore latioreque caeruleo.

DESCR. Face inclining to deep yellow. Thorax villous, pale green, anteriorly with a light yellow line. Wings with a jet-black macula at margin and all wings blackish rusty brown at base, inner margin white. Abdomen lanceolate, greenish ash-greyish; segments 3, 4, 5, 6, and 7 are laterally deep yellow; tip dark rusty brown; anus with two very short, awl-shaped setae. Femora dark bluish grey at base. Legs black.

1464. LIBELLULA *vulgatissima* [*Gomphus vulgatissimus* (Linnaeus, 1758). Eng. Club-tailed dragonfly or Common clubtail, Sw. Sandflodtrollslända; Fam. Gomphidae. Eng. Clubtail dragonflies, Sw. Flodtrollsländor], thorax with eight yellowish streaks.

Libellula, laterally light yellow; wings white. *Fn.* 767.

Raj. Ins. 50. n. 7. Libella major, praecedenti congener.

Swam. Quart. p. 175. t. 8. f. 6.

Occurs at water bodies; abundant.

DESCR. Sides of thorax and abdomen light yellow. Wings white, not at all whitish yellow as in *Ray's* description; on dorsum longitudinally fuscous. Fuscous spots dusky rusty brown at alar margin.

1465. LIBELLULA *cancellata* [*Orthetrum cancellatum* (Linnaeus, 1758). Eng. Black-tailed skimmer, Sw. Större sjötrollslända; Fam. Libellulidae, Eng. Common skimmers, Sw. Segeltrollsländor], wings without maculae at base; abdomen, dorsum, and sides of an interrupted deep yellow colour.

Lives at water bodies.

DESCR. Face pale; frons black. Eyes posteriorly with a light yellow line interrupted by black. Thorax anteriorly brick-red with two black lines and sides with two light yellow maculae. Abdomen light yellow on dorsum with two black longitudinal lines on both sides with margins of segments black.[950]

[950] A description of the female.

1466. LIBELLULA *aenea* [*Cordulia aenea* (Linnaeus, 1758). Eng. Downy emerald, Sw. Guldtrollslända; Fam. Corduliidae, Eng. Emerald dragonflies or Green-eyed skimmers, Sw. Skimmertrollsländor], thorax bronze green.

Libellula, thorax green, shining, with light yellow lines; wings pale; abdomen black. *Fn.* 768.

Raj. Ins. 49. n. 5. Libella maxima, abdomine breviore latioreque caeruleo.
p. 140. Libella maxima, abdomine breviore & crassiore latioreque caeruleo.

DESCR. Head and thorax green, shining. Eyes weakly fuscous. Wings pale whitish yellow, in some specimens[951] light yellow at base. Fuscous spot at margin. Abdomen cylindrical, black, beneath light yellow; colour of margin gilded. Cauda diphyllous, narrow.

β *Libellula* gilded green; wings pale; legs black. *Fn.* 769.[952]

Lives at water bodies.

DESCR. Very similar to the preceding species. Cauda of male with four teeth; upper teeth pilose, each of lower ones with a double denticle. Cauda of female with 2 lanceolate small leaves. Head, thorax, and abdomen gilded with copper. Thorax pilose and without maculae. Posterior alar margin with a membranous macula posteriorly close to abdomen. Eyes leek-green. Lip pale. Abdomen of a pale whitish colour on each side beneath.

1467. LIBELLULA *grandis* [*Aeshna grandis* (Linnaeus, 1758). Eng. Brown hawker, Sw. Brun mosaikslända; Fam. Aeshnidae, Eng. Hawkers or Darners, Sw. Mosaiksländor], wings weakly greyish blue; thorax with four light yellow lines. *Fn.* 770.[953]

Libellula, grey; wings whitish yellow; thoracic sides with light yellow lines; cauda diphyllous.

Reaum. Gall. 6. t. 35. f. 3.

Raj. Ins. 49. n. 2. Libella maxima, abdomine longo tenuiori, alis flavescentibus.
p. 140. n. 2. Libella maxima, abdomine longissimo tenuiori, alis fulvescentibus.
p. 48. n. 1. Libella maxima, vulgatissima, alis argenteis.

Mouff. Lat. p. 67. Libella major 2. 3.

Lives at water bodies.

DESCR. Two lanceolate, fuscous, caudal leaves. Abdomen long, narrow, dusky red-brown, occasionally maculate with white. Bilaterally on thorax two thin, obliquely transverse, light yellow lines; thorax otherwise of the same colour as abdomen, hirsute. Wings whitish yellow with a rusty brown macula. It falls among our largest dragonflies.

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951 This species *Cordulia aenea* is yellow at the base of the hindwing, but the closely related *Somatochlora metallica* (van der Linden, 1825) is not. Probably Linnaeus could not distinguish these dragonflies as two species.

952 See Ch. *A small fauna of Sweden*.

953 See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

1468. LIBELLULA *juncea* [*Aeshna juncea* (Linnaeus, 1758). Eng. Common hawker, Sw. Starrmosaikslända; Fam. Aeshnidae, Eng. Hawkers or Darners, Sw. Mosaiksländor], alar supplementary membrane blackish; thorax with six light yellow lines; abdomen attenuated at base.

Lives at water bodies.

1469. LIBELLULA *forcipata* [*Onychogomphus forcipatus* (Linnaeus, 1758). Eng. Small pincertail or Green-eyed hooktail, Sw. Stenflodtrollslända; Fam. Gomphidae, Eng. Clubtails, Sw. Flodtrollsländor], thorax black, with various whitish yellow markings.

Libellula, thorax greenish deep yellow, with black lines; abdomen blackish, with light yellow markings.

Reaum. Gall. 4. t. 10. f. 4.
6. t. 35. f. 5.

Merr. Pin. 197. Libella maxima lutea, cum 4 vel 5 spinis in caudae extremitate.

Pet. Mus. 84. n. 819. Libella major, corpore compresso flavescente.

Lives at water bodies.

DESCR. It falls among the largest dragonflies. Male with forcipate cauda, which has two rather large opposite claws and two small points placed under them. Thorax greenish whitish yellow; anteriorly at the beginning of wings, towards head, marked with three black, doubled lines. Abdomen cylindrical, black, consisting of eight segments; on the back inscribed with a longitudinal, light yellow line, which ploughs up the first 6 segments, but not the 7th and 8th segments. Each segment distinguished laterally with a transverse, light yellow macula, and with another smaller, curved, longitudinal macula; these maculae are more evident on the female than the male. Cauda of female is armed with two points, but that of male with four. Male genitalia positioned beneath or on the first abdominal segment, those of the female beneath or on the last segment, as on all congeners. Wings hyaline, medially with marginal spot and transverse line.

1470. LIBELLULA *virgo*[954] [*Calopteryx virgo* (Linnaeus, 1758). Eng. Beautiful demoiselle, Sw. Blå jungfruslända; Fam. Calopterygidae, Eng. Broad-winged damselflies, Sw. Jungfrusländor], wings upright, coloured.

α *Libellula*, body, silky, shining; wings dusky deep yellow, with margin lacking maculae. *Fn.* 756.

Raj. Ins. p. 50. n. 11. Libella media, corpore e viridi caerulescente, alis fulvescentibus absque maculis.

DESCR. Body middle-sized, shining bluish or dull jet-black. Wings dusky deep yellow without a dark spot at outer alar margin.

β *Libellula*, body blue, shining; wings bluish green, with fuscous tip and margins without maculae. *Fn.* 757.

Raj. Ins. p. 50. n. 10. Libella media, corpore caeruleo, alis fere totis ex caeruleo nigricantibus.

954 Linnaeus is here confused by the two species *Calopteryx virgo* and *Calopteryx splendens*, both also with a striking sexual dimorphism.

DESCR. Wings, which also lack a marginal spot, are blackish blue and with a pale fuscous at tip. Cauda unguiculate.

γ *Libellula*, body gree-blue; wings weakly fuscous with a marginal, white spot. *Fn.* 758.

Raj. Ins. 51. n. 12. Libella media, corpore viridi, alis fulvescentibus maculis parvis albis prope extremum angulum.

DESCR. Body green, silky, shining, minimally blue. Legs black. Wings weakly fuscous with a marginal, oblong, spot verging on white. Cauda unarmed. This is a female of the preceding species. *De Geer.*

δ *Libellula*, body silky, shining; wings dusky gilded with a white macula. *Fn.* 759.

Hoffn. Ins. t. 11. *f. ult.*

Raj. Ins. 50. n. 9. Libella media, corpore partim viridi, partim caeruleo, alis media parte maculis amplissimis e caeruleo nigricantibus.

p. 140. n. 2. Libella media, corpore partim viridi, partim caeruleo, alis media parte maculis amplissimis e caeruleo nigricantibus oblitis.

All these dragonflies live by rivers.

DESCR. Body shining blue. Legs black. Wings from the middle towards tips bluish black; the extreme tips dusky gold-coloured; from the alar middle towards its base the colour is gilded; no marginal spot on this species.

1471. LIBELLULA *puella*[955] [*Coenagrion puella* (Linnaeus, 1758). Eng. Azure damselfly, Sw. Ljus lyrflickslända; Fam. Coenagrionidae, Eng. Narrow-winged damselflies, Sw. Dammflicksländor], wings upright, hyaline.

α *Libellula*, body silky; wings with a marginal, fuscous spot. *Fn.* 760.

Raj. Ins. p. 51. n. 15. Libella minor, alis reticulatis, dorso viridi: incusiris albicantibus.

Levenh. Arcan. 1695. p. 18. t. 19. Junfferties.

DESCR. These species belong to the rather small dragonflies. Dorsum bronze coloured along its whole length. Wings gold-coloured, shining, with a marginal, rhomboid, fuscous spot, not black. The alar reticulate vessels always consist of two nerves, longitudinally closer to each other. Thorax and abdomen dark bluish grey beneath and on their sides. Legs blackish on the outside, dark bluish grey inside. Eyes ash-grey, fuscous above. Head of a bronze colour dorsally, with a white, transverse line, trifid transversely at its thicker outermost parts. Thorax bronze green on the back; on each side marked with a longitudinal, white line. Antennae black, short; lowest segment stout.

β *Libellula*, body flesh-coloured; wings with a marginal fuscous spot. *Fn.* 761.

Raj. Ins. p. 51. n. 16. Libella media, dorso albido, duabus maculis nigris juxta incisuras.

p. 52. n. 17. Libella minor, alis reticulatis, dorso rubro maculis ad singulas incisuras nigris.

DESCR. Body flesh-coloured; thin black lines or markings on the sides of the abdominal segments. Alar spot at margin fuscous.

[955] The descriptions in no. 1471 obviously cover a number of species, also with sexual dimorphism.

γ *Libellula*, body silky; wings with a marginal black spot. *Fn.* 762.
Raj. Ins. 140. n. 1. Libella minor, corpore livide caeruleo.
DESCR. Wings white with a jet-black spot at margin. Body green-blue above, shining without being tinged in any other way. Same size as the two preceding species.

δ *Libellula*, body alternating between blue and ash-grey; wings with a black marginal spot. *Fn.* 763.
Raj. Ins. 53. n. 18. Libella minor, alis brevioribus, corpore caeruleo maculis transversis nigris.
Goed. Belg. 3. p. 29. f. R.
List. Goed. p. 228. f. 103.
All species live around swamps.
DESCR. Wings white, with a marginal jet-black spot. Abdominal segments, in dorsal view, anteriorly ash-grey, posteriorly shining bluish; the last but two and the last segments mostly ash-grey, in no way shining.

Ephemera[956]

1472. EPHEMERA *vulgata* [*Ephemera vulgata* Linnaeus, 1758. Eng. Brown mayfly or Drake mackerel mayfly, Sw. Sjösandslända; Fam. Ephemeridae, Eng. Common burrower mayflies, Sw. Sanddagsländor], cauda with three setae; wings with cloudy maculae. *Fn.* 750.
Lives by lakes.
DESCR. Differs conspicuously from the other species. Wings with reticulate, strongly fuscous veins and with cloudy, fuscous, unequal alar maculae. Caudal setae also fuscous.

1473. EPHEMERA *bioculata* [*Baetis fuscatus* (Linnaeus, 1761). Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor],[957] cauda with two setae; wings reticulate, white. *Fn.* 751.
Act. Ups. 1736. p. 27. n. 2. Ephemera alis incarnato-albis.
Blank. Belg. t. 12. f. F.
Lives close to water bodies during summer, but the larva under water.
DESCR. Head very small. Two tubercles, lentiform, elevated, deep yellow, much larger than the eyes, pellucid, incumbent on the eyes. Thorax compressed, cloudy above. Abdomen cylindrical, diaphanous with white; last segments weakly fuscous. Cauda with two erect setae, twice as long as the actual body, white; between these there are two very short, curved setae. Legs snow-white, of which anterior ones longer. Wings upright, white, opal tending to flesh-coloured, hardly shining, reticulate.

[956] Order Ephemeroptera, Eng. Mayflies, Sw. Dagsländor.
[957] See nos. 1474 and 1475.

1474. EPHEMERA *fuscata* [*Baetis fuscatus* (Linnaeus, 1761). Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor],[958] cauda with two setae; body fuscous; wings and abdominal segments white.

Occurs at Jumkil in Uppland.

DESCR. Head, thorax, and first and last four abdominal segments fuscous. Wings white; hindwings minute. Abdominal spiracles fuscous. Legs white; anterior two very long. Claws fuscous. Ocular humps large, light yellow. Antennae short, white. Cauda with two white setae, shorter than abdomen.

1475. EPHEMERA *culiciformis* [*Baetis fuscatus* (Linnaeus, 1761). Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor],[959] cauda with two setae; wings white; body fuscous. *Fn.* 753.

Lives at water bodies.

DESCR. Slightly larger than a mosquito.[960] Thorax blackish. Abdomen fuscous. Caudal setae the length of the body. 2 thick, large, dark bluish grey tubercles above eyes.

1476. EPHEMERA *horaria* [*Caenis horaria* (Linnaeus, 1758). Sw. Slamslända; Fam. Caenidae, Eng. Small squaregill mayflies, Sw. Slamdagsländor], cauda with two setae; wings white, at the thicker margin blackish. *Fn.* 754.

Act. Ups. 1736. p. 27. n. 3. Ephemera alis albis minima.

Swam. Quart. p. 87. Epemera minima.

Lives by lakes.

DESCR. Wings white with a rather thick, dusky blackish margin. Cauda armed with two setae without any small setae in between. Legs white except for the first two larger ones that are more fuscous above eye level. Two dusky purple protuberances, larger than the eyes. Abdomen ash-greyish, segmental margins white. It has what appear to be six eyes: these are described namely as two larger protuberances, two compound eyes, and on the sides of these protuberances there are two more eyes, very small, and placed in front of the protuberances.

At eventide they fly away from the lakes bearing with them the white tunic of the small pupa, which they dispose of as soon as they go to rest; hence they cover the windows and clothes of seafarers with these tunics. They only live throughout the night. During the following early morning-hour they all die. The size of a rather small house fly.[961]

1477. EPHEMERA *diptera* [*Cloeon dipterum* (Linnaeus, 1761). Eng. Common wetland mayfly or Pond olive mayfly, Sw. Gul dammslända; Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor], cauda with two setae; two wings, with a marginal fuscous costa maculate with ash-grey.

Occurs ubiquitously.

DESCR. Middle-sized. Blackish alar costa, as if inscribed with whitish markings. The lower wings hardly exist.

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958 See the com. to no. 1473.

959 See the com. to no. 1473.

960 Linnaeus only refers to *Culex*, see nos. 1890–1894.

961 See no. 1833.

1478. EPHEMERA *nigra* [*Nigrobaetis niger* (Linnaeus, 1761). Eng. Southern iron blue; Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor], cauda with two black setae; wings blackish; lower wings very small.

Lives at water bodies. *Mr* C. *Solander.*

DESCR. The size of a mosquito,[962] entirely black. Legs rather pale. Lower wings so small that they are barely visible. Alar margin rather thin, almost ciliate.

1479. EPHEMERA *mutica* [*Baetis muticus* (Linnaeus, 1758). Eng. Northern iron blue mayfly; Fam. Baetidae, Eng. Small minnow mayflies, Sw. Ådagsländor], cauda without spines; wings white, striate. *Fn.* 752.

Lives at water bodies.

DESCR. Rather small. Wings hyaline, but with minimally reticulate vessels. Cauda lacks the long setae.[963] Protuberances of head are smaller than the eyes of this species. Body of male pellucid, thorax blackish. Body of female opaque, weakly red-brownish. When they copulate, they join completely just as in dragonflies.[964]

1480. EPHEMERA *vespertina* [*Leptophlebia vespertina* (Linnaeus, 1758). Eng. Claret dun, Sw. Liten vasslända; Fam. Leptophlebidae. Eng. Prong-gilled mayflies, Sw. Starrdagsländor], black; lower wings white. *It. Oel.* 21. *Fn.* 755.

Occurs in great numbers at the River Säthälla in Småland.

DESCR. It falls among the rather small species of its genus. Whole body and upper wings black; only lower wings white, by which it distinctly differs from all species of its genus.

Phryganea[965]

1481. PHRYGANEA *phalaenoides* [*Semblis phalaenoides* (Linnaeus, 1758). Eng. Spotted caddis fly, Sw. Storfläckig kungsnattslända; Fam. Phryganeidae, Eng. Giant casemaker caddisflies, Sw. Broknattsländor], black; wings whitish; spotted with black maculae.

Uddm. Diss. 53. f. 16. Phryganea nigra, alis albo pallidis: maculis plurimis nigris.

Occurs in Finland, i.e. in Turku[966] and elsewhere.

DESCR. It is more beautiful and larger than all other known European species of this genus. Body black. Antennae half the length of the body. Wings whitish, concolorous. Upper wings scattered with many black maculae arranged in a row at posterior margin. Lower wings white, with black fascia at posterior margin but with black maculae at lower lateral margin.

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962 Linnaeus only refers to *Culex*, see nos. 1890–1894.

963 Linnaeus obviously described this species from a broken specimen. In fact it has two long anal setae.

964 Linnaeus only refers to *Libellula*, see nos.1459–1471.

965 Order Trichoptera, Eng. Caddisflies, Sw. Nattsländor.

966 See the com. to no. 450.

1482. PHRYGANEA *reticulata* [*Oligostomis reticulata* (Linnaeus, 1761). Fam. Phryganeidae, Eng. Giant casemaker caddisflies, Sw. Broknattsländor], black; wings weakly rusty, reticulated with jet-black.

Lives at water bodies.

DESCR. Middle-sized. Stature as that of a moth.[967] Upper wings weakly rusty brown with jet-black veins transversely reticulate; blackish macula at anal angle. Lower wings weakly rusty brown with a black fascia; posterior blackish margin consists of confluent, pointed maculae.

1483. PHRYGANEA *striata* [*Oligotricha striata* (Linnaeus, 1758). Eng. Great red sedge caddisfly; Fam. Phryganeidae, Eng. Giant casemaker caddisflies, Sw. Broknattsländor], wings brick-red, with striate veins. *Fn.* 738.

Act. Ups. 1736. p. 27. n. 2. Hemerobius alis testaceis venoso striatis, antennis longitudine alarum.

Aldr. Ins. p. 763. Perlarum forte species.

Lives around muddy paths.

DESCR. Appearance as that of a rather large moth.[968] Anteriorly, antennae extended the length of the body. Wings large, broad, weakly brick-red or dusky brick-red, striated with somewhat branched veins, but in no way reticulated, and with a spot. White spot posteriorly on upper wing. Body fuscous.

1484. PHRYGANEA *grisea* [*Limnephilus griseus* (Linnaeus, 1758). Fam. Limnephilidae, Eng. Northern caddisflies, Sw. Husmasknattsländor], grey; upper wings cloudy, with a marginal black macula. *Fn.* 739.

Lives at water bodies.

DESCR. It is middle-sized. Wings incumbent, posteriorly compressed. Upper wings (just as the whole body) grey, indistinctly cloudy fuscous, in the middle of which there is a black macula close to the lower or thicker margin.

1485. PHRYGANEA *grandis* [*Phryganea grandis* Linnaeus, 1758. Fam. Phryganeidae, Eng. Giant casemaker caddisflies, Sw. Broknattsländor], wings ash-grey tending to brick-red, with two thin, longitudinal, black lines having a white spot. *Fn.* 740.

Occurs in Skåne. Mr Leche.

DESCR. Large. Wings brick-red tending to ash-greyish. Upper wings with two longitudinal lines, arranged in the same row, and each marked with a white spot. Antennae long, anteriorly porrect.

967 Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

968 Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

1486. PHRYGANEA *rhombica* [*Limnephilus rhombicus* (Linnaeus, 1758). Fam. Limnephilidae, Eng. Northern caddisflies, Sw. Husmasknattsländor], wings deflexed and compressed, whitish yellow, with a rhomboid, lateral, white macula. *Fn.* 741.

Lives at water bodies. The larva is found in a sac of excretions transversely covered with grass.

DESCR. Wings large, pellucid (which it bears just as a snout moth),[969] deflexed, compressed, pale deep yellow or grey; medially on outer wing a rhomboid, whitish, oblique macula and behind it another that is whitish and barely visible. Body brick-red, as antennae and legs; above and behind the alar macula it is somewhat fuscous. This species falls among the somewhat larger members of its genus.

1487. PHRYGANEA *bimaculata* [*Neureclipsis bimaculata* (Linnaeus, 1758). Fam. Polycentropodidae, Eng. Trumpet-net and tube-making caddisflies, Sw. Fångstnätnattsländor], wings fuscous, with a double, lateral, light yellow macula. *Fn.* 742.

Lives at water bodies.

DESCR. Rather small, but not among the smallest. Wings fuscous; medially on the wings a double crescent-shaped, light yellow macula, one behind the other. Animal anteriorly narrowed.

1488.[970] PHRYGANEA *flavilatera* [*Sialis lutaria* (Linnaeus, 1758). Eng. Alderfly, Sw. Allmän sävslända; Fam. Sialidae,[971] Eng. Alderflies, Sw. Sävsländor],[972] wings reticulate; cauda unarmed; thorax laterally light yellow. *Fn.* 743.

Lives at water bodies, where it rests quietly.

DESCR. Rests with wings deflexed as a moth[973] or rather the lappet.[974] Wings palish ash-grey, reticulate, with most reticulated, fuscous veins, especially at outer margin, which is quite dilated. Body entirely blackish. Antennae only half the length of the body. Cauda simple, without slightly prominent styli. Mouth with two denticles and four at the palps. Collar anteriorly and posteriorly, but not laterally, whitish yellow.

1489. PHRYGANEA *bicaudata* [*Diura bicaudata* (Linnaeus, 1758). Eng. Lapland spring fly or Common medium stonefly; Fam. Perlodidae,[975] Eng. Stripetails or Springflies, Sw. Rovbäcksländor], wings white, venation fully reticulate; cauda with two setae. *Fn.* 744.

Act. Ups. 1736. p. 27. n. 1. Hemerobius cauda bipili, alis cinereis venoso-reticulatis.
Wagn. Helv. p. 227. 228. 229. Musca aquatilis aestiva major.

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969 Lat. *Phalaena nasuta*.

970 1788 in the original text due to a misprint.

971 Order Megaloptera, Eng. Alderflies, Dobsonflies, Sw. Vattennätvingar.

972 See no. 1513.

973 Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

974 See no. 1110.

975 Order Plecoptera, Eng. Stoneflies, Sw. Bäcksländor.

Lives at water bodies, especially at Umeå in Lapland.
DESCR. Varies greatly in size. Wings oblong, incumbent, not deflexed, anteriorly narrowed, white, with fuscous veins entirely reticulated. The cauda has two antenniform setae, which equal the length of the antennae.

1490. PHRYGANEA *nigra* [*Mystacides nigra* (Linnaeus, 1758). Fam. Leptoceridae, Eng. Longhorned caddisflies, Sw. Långhornssländor], wings bluish jet-black; antennae twice as long as body. *Fn.* 745.
Raj. Ins. p. 275. Musca parva quadripennis, antennis omnium, quas unquam vidi pro corporis magnitudine longissimis.
Act. Ups. 1736. p. 27. Hemerobius alis caeruleo-nigris, antennis corpore longioribus.
Lives at water bodies among giant reeds and bulrushes. During evenings this gregarious insect performs dances in circles resembling clouds high up in the air.
DESCR. Wings black or jet-black tinged with blue or greenish; dorsal margin medially villous. Antennae two or three times longer than body, black. Legs blackish ash-grey. Wings the length of the house fly.[976]

1491. PHRYGANEA *azurea* [*Mystacides azureus* (Linnaeus, 1761). Fam. Leptoceridae, Eng. Longhorned caddisflies, Sw. Långhornssländor], wings black, posteriorly violet.
Lives at water bodies.
DESCR. The size of a rather small fly. Wings black, each with a divided, fuscous V, but in such a way that the branching of the letter faces the posterior aspect, in which the azureous colour is found.

1492. PHRYGANEA *longicornis* [*Mystacides longicornis* (Linnaeus, 1758). Fam. Leptoceridae, Eng. Longhorned caddisflies, Sw. Långhornssländor], upper wings cloudy; antennae three times longer than body. *Fn.* 746.
Occurs at Degerö, on the shores of Lommaren in Roslagen.
DESCR. The size of a rather large mosquito.[977] Upper wings palish grey with fuscous maculae. Lower wings grey-white with a pilose margin. Antennae whitish, three or four times longer than body.

1493. PHRYGANEA *filosa* [*Nomen dubium*], wings cylindrical, incumbent, whitish yellow; antennae three times longer than body.
Lives at water bodies.

[976] See no. 1833.
[977] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1494. PHRYGANEA *waeneri* [*Tinodes waeneri* (Linnaeus, 1758). Fam. Psychomyiidae, Eng. Net tube caddisflies, Sw. Tunnelnattsländor], ash-grey; posterior wings rather pale, with an inner pilose, whitish margin. *It. W:goth.* 44.
Occurs at the shores of Vänern, which is a lake close to Lidköping.

1495. PHRYGANEA *albifrons* [*Athripsodes albifrons* (Linnaeus, 1758). Fam. Leptoceridae, Eng. Longhorned caddisflies, Sw. Långhornssländor], black; outer wings with four linear, white streaks.
Lives at water bodies.
DESCR. Entirely black, the size of a mosquito.[978] Frons white. Antennae ordinary. Upper wings with a thin, transverse, white line towards base of thinner margin; two thin lines in the middle, consisting almost of a single, transverse and interrupted line, another oblique line at the tip of the thicker margin.

1496. PHRYGANEA *bilineata* [*Athripsodes bilineatus* (Linnaeus, 1758). Fam. Leptoceridae, Eng. Longhorned caddisflies, Sw. Långhornssländor], blackish; upper wings with two thin, transverse, whitish lines at both margins.
Lives at water bodies.[979]

1497. PHRYGANEA *ciliaris* [*Notidobia ciliaris* (Linnaeus, 1761). Fam. Sericostomatidae, Eng. Bushtailed caddisflies, Sw. Krumrörsnattsländor], black; abdomen with a white line on each side; posterior tibiae rather pale; antennae ordinary.
Occurs close to Uppsala.
DESCR. Thorax pilose. Abdomen with a longitudinal, pale line on each side. Wings ciliate, especially at margin.

1498. PHRYGANEA *umbrosa* [*Nomen dubium*], black; upper wings cloudy deep yellow.
Lives at water bodies.
DESCR. The size of a mosquito.[980] Antennae the length of the body. Body black. Upper wings fuscous, irrorated with darkish greyish blue. Lower wings black.

1499. PHRYGANEA *nebulosa* [*Taeniopteryx nebulosa* (Linnaeus, 1758). Eng. February red stonefly; Fam. Taeniopterygidae,[981] Eng. Willow flies or Winter stoneflies, Sw. Vingbandbäcksländor], black; wings incumbent, palish ash-grey, cloudy; cauda with truncated setae. *Fn.* 748.
Occurs ubiquitously at the beginning of spring; abundant.

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978 Linnaeus only refers to *Culex*, see nos. 1890–1894.

979 Not occurring in Sweden.

980 Linnaeus only refers to *Culex*, see nos. 1890–1894.

981 Order Plecoptera, Eng. Stone flies, Sw. Bäcksländor.

DESCR. An insect that is oblong, narrow, subcylindrical, since it is clothed in its wings. Antennae setaceous, the length of the body, but not as long as the wings. Thorax less broad and marginate. Cauda ends with two truncated, very short setae. Body entirely jet-black except for the wings alone. Wings incumbent forming a semi-cylindrical figure, palish ash-grey, on each side with whitish maculae or fasciae that are interlucent, but not clearly visible. Outermost part of wing with three veins that are extended towards the thinner margin and strongly reticulate; the other veins are not so reticulate; no macula on the scutum,[982] but two maculae resemble coalescent ulcers.

1500. PHRYGANEA *fusca* [*Leuctra fusca* (Linnaeus, 1758). Fam. Leuctridae,[983] Eng. Rolled-winged stoneflies, Sw. Smalbäcksländor], fuscous, without maculae. *Fn.* 749.

Occurs at Stämshögen[984] at Falun.

DESCR. Small, oblong, cylindrical, entirely fuscous. Wings venose, minimally maculate, longer than body, slightly shining. Cauda without setae. Antennae somewhat shorter than body. Abdomen jet-black beneath, pale above, with seven black maculae on each side.

1501. PHRYGANEA *minuta* [*Beraeodes minutus* (Linnaeus, 1761). Fam. Beraeidae, Sw. Sandrörsnattsländor], black; palps villous and longer than head.

Lives at water bodies.

DESCR. Antennae the length of the body. Two upper palps longer than head, black, but lower ones whitish. Antennae the length of the body. Legs pale.

1502. PHRYGANEA *flava* [*Nomen dubium*], wings light yellow, reticulate; antennae the length of the body.

Lives at swamps.

1503. PHRYGANEA *saltatrix* [*Psococerastis gibbosa* (Sulzer, 1776). Sw. Klarvingad jättestövslända; Fam. Psocidae,[985] Eng. Common bark lice, Sw. Storstövsländor], antennae the length of the body, alar macula green and white. *Fn.* 747.[986]

Occurs on the Fullerö estate.

DESCR. It is very small and jumping. Body smaller than a mosquito,[987] fuscous. Antennae longer than body, seen through a lens they seem to be villous. Mouth as those of the others with palps (and therefore it is not a leafhopper,[988] but in the shape of wings similar to a leafhopper). Wings longer than body, posteriorly pressed against the body, watery, with a weakly green and white macula, at lower margin black veins, upper margin with white veins.

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982 Lat. *in clypeo thoracis*. See the com. to no. 452.

983 Order Plecoptera, Eng. Stone flies, Sw. Bäcksländor.

984 Today Stämshöjen.

985 Order Psocoptera, Eng. Bark lice, Sw. Stövsländor.

986 See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

987 Linnaeus only refers to *Culex*, see nos. 1890–1894.

988 Linnaeus only refers to *Chermes*, see nos. 1001–1014.

Hemerobius[989]

1504. HEMEROBIUS *perla* [*Chrysopa perla* (Linnaeus, 1758). Eng. Green lacewing; Fam. Chrysopidae, Eng. Green lacewings, Sw. Guldögonsländor],[990] greenish deep yellow; wings hyaline, with green vessels. *Fn.* 731.

Mouff. Lat. p. 62. *f. ult.* Musca Chrysopes.
Angl. p. 937.
Grew. Mus. p. 156.
Goed. Belg. 2. p. 40. t. 14. Audax, intrepidus.
List. Goed. p. 229. f. 104. Tolmerus.
Merr. Europ. 3. p. 49. t. 18 *f. in fructu.*
Gallice t. 175. 109.
Alb. Ins. t. 64.
Pet. Mus. p. 4. n. 6. Perla minima merdam olens.
Raj. Ins. p. 274. Musca quadripennis, corpore luteo-viridi, alis peramplis e flavo pariter virentibus.
Reaum. Gall. 3. t. 33. *f. omnes.* Leo aphidis.
Mus. Petr. 1. p. 717. Musca Chrysopis viridis.

Inhabits gardens; abundant. Larva feeds on aphids.

DESCR. Wings large, reticulate with green veins, pellucid, as if the wings only consisted of a mesh, with a marginal, oblong, green macula. Eyes globose, large, golden. Antennae setaceous, weakly fuscous. Body also green. When touched it stinks like human excrement. The eggs are placed on a long petiole.

1505. HEMEROBIUS *chrysops* [*Chrysopa perla* (Linnaeus, 1758). Eng. Green lacewing; Fam. Chrysopidae, Eng. Green lacewings, Sw. Guldögonsländor],[991] varying with green and black; wings hyaline, maculate, reticulate. *Fn.* 732.

Reaum. Gall. 3. t. 3. f. 15. 16.
Frisch. Germ. 4. p. 40. t. 23. Musca foetida auro occulata.

Lives in trees.

DESCR. Rather large. Wings striate and reticulate, with many fuscous veins at lower margin, but two more evident at thinner margin above dorsum.

1506. HEMEROBIUS *albus* [*Chrysotropia ciliata* (Wesmael, 1841). Fam. Chrysopidae, Eng. Green lacewings, Sw. Guldögonsländor], white; eyes bronze green.

Occurs in Uppsala.

DESCR. Appearance as that of the green lacewing[992] but smaller. Head entirely white. Alar vessels are slightly dark.

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989 Order Neuroptera, Eng. Netwinged insects, Sw. Nätvingar.

990 See no. 1505.

991 See no. 1504.

992 See nos. 1504 and 1505.

1507. HEMEROBIUS *hirtus* [*Megalomus hirtus* (Linnaeus, 1761). Eng. Bordered brown lacewing; Fam. Hemerobiidae, Eng. Brown lacewings, Sw. Florsländor], wings white, reticulate with fuscous, having two darkish fasciae.

Inhabits hop yards.

DESCR. The size of a fly. Body fuscous. Wings deflexed. Upper wings whitish, densely cloudy fuscous, and reticulate with closely arranged pilose veins; two arcuate, darkish fasciae at the veins. Lower wings more whitish, less venose; an arcuate fascia in the middle and another terminal one, which are both darkish. Antennae ordinary. Abdomen terminating in a pair of forceps. Legs pale. Eyes fuscous.

1508. HEMEROBIUS *phalaenoides* [*Drepanepteryx phalaenoides* (Linnaeus, 1758). Fam. Hemerobiidae, Eng. Brown lacewings, Sw. Florsländor], wings brick-red, at base mucronate, posteriorly excised.

Occurs in Uppsala; rather rare. *P. Löfling.*

DESCR. Measures the size of a moth.[993] Wings very broad, short, red-brown tending to brick-red, venation fully reticulate; above base of upper wings there is a prominent point; medially a prominent, dark spot. Two oblique fuscous streaks at the vessels; posterior margin excised with a longish, rather pointed tip.

1509. HEMEROBIUS *formicaleo* [*Myrmeleon formicarius* Linnaeus, 1767. Eng. Ant lion, Sw. Vanlig myrlejonslända; Fam. Myrmeleontidae, Eng. Ant lions, Sw. Myrlejonsländor], antennae clavate; wings hyaline, reticulated with fuscous, having a black, bilinear costa.

Hemerobius Formicaleonis. *Fn.* 733.

Reaum. Gall. 4. t. 14. f. 18. 19. Formica-leo.
t. 11. f. 8.
6. t. 32. 33. 34. f. 7. Formicaleo.

It. Oel. 149. 206. Formicaleo.

In Öland: Sandpiller.

Lives in dry sand, especially in Öland.

DESCR. The size of the ash-grey spider.[994] Abdomen large, ovate, longitudinally marked with hispid papillae in 5 rows. Thorax narrow. Mouth with a pair of long forceps meeting at tip, each large element armed with three teeth, excepting the tips, on each side pilose. Legs verging on white, on which it walks backwards like a crab, and with its abdomen it digs cavities in the sand under which it will hide.

The caddisfly[995] itself is black. Wings oblong, hyaline, reticulated with fuscous veins. The costa at lower margin consists of two elevated, jet-black veins that are parallel and united in an area far from the tip. Thorax villous.

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993 Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

994 Lat. *Aranea cinerea*, for *Aranea*, see nos. 1993–2025.

995 Linnaeus only refers to, *Phryganea*, see nos. 1481–1503.

1510. HEMEROBIUS *humuli*[996] [*Hemerobius humulinus* Linnaeus, 1758. Fam. Hemerobiidae,[997] Eng. Brown lacewings, Sw. Florsländor], wings white, with fuscous, scattered spots; antennae annulated with fuscous and white. *Fn.* 734.

Inhabits hop yards; ubiquitous.

DESCR. Body whitish, the size of an ant.[998] Wings large, white, venation fully reticulate, with small, indistinct maculae almost like spots, scattered here and there. Antennae setaceous, variegated with thin, white and fuscous lines like a necklace. Legs whitish. Eyes bronze blue. On top of abdomen on each side a row of fuscous maculae.

1511. HEMEROBIUS *sexpunctatus* [*Trichadenotecnum sexpunctatum* (Linnaeus, 1758). Sw. Fläckdroppslända; Fam. Psocidae,[999] Eng. Common barklice, Sw. Storstövsländor], wings white, with fuscous maculae, posteriorly with six distinct spots; antennae fuscous. *Fn.* 735.

Occurs ubiquitously.

DESCR. Very similar to the preceding species, but a quarter of its size. Upper wings hyaline, reticulate, and maculated with fuscous, just as in the preceding species, but six spots can be observed posteriorly on each wing, namely a single macula in each single net square.

Lower wings hyaline, without maculae; all wings golden coloured in ambient light. Antennae not variegated with white and black, as they are in the preceding species.

1512. HEMEROBIUS *flavicans* [*Lachesilla pedicularia* (Linnaeus, 1758). Eng. Cosmopolitan grain psocid, Sw. Höstövslända; Fam. Lachesillidae,[1000] Eng. Fateful barklice, Sw. Kviststövsländor],[1001] black; thorax and abdomen light yellow. *Fn.* 736.

Occurs in Uppsala; less abundant.

DESCR. The size of a louse. Antennae black, setaceous, the length of the body. Body black. Neck rather narrow, light yellow. Thorax blackish. Abdomen light yellow, ovate, smoothly rounded, encircled by eight deep incisures. Legs blackish. Wings hyaline with dark, branched veins. Appearance as that of an aphid.

1513. HEMEROBIUS *lutarius* [*Sialis lutaria* (Linnaeus, 1758). Eng. Alderfly, Sw. Allmän sävslända; Fam. Sialidae,[1002] Eng. Alderflies, Sw. Sävsländor],[1003] black; wings whitish, striate, maculated with white.

Phryganea, black; wings whitish, striate, maculated with white. *Fn.* 737.

Act. Ups. 1736. p. 27. n. 4. Hemerobius alis albis, corpore atro, antennis brevissimis.

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996 Misspelled by Linnaeus. *Humulinus* in *Syst. nat.* (1758).

997 Order Neuroptera, Eng. Netwinged insects, Sw. Nätvingar.

998 Linnaeus only refers to *Formica*, see nos. 1720–1726.

999 Order Psocoptera, Eng. Bark lice, Sw. Stövsländor.

1000 Order Psocoptera, Eng. Bark lice, Sw. Stövsländor.

1001 See no. 1515.

1002 Order Megaloptera, Eng. Alderflies, Dobsonflies, Sw. Vattennätvingar.

1003 See no. 1488.

Hoffn. Ins. 2. t. 12. juxta phalangia; *edit. altera* t. 2. f. 113.
Occurs especially in muddy courtyards in Uppsala.
DESCR. The size of a scorpion-fly.[1004] Wings longer than body, lanceolate, slightly blunt, white, striated with fuscous veins; these veins are barely reticulate, with the exception only of outer wings; two or three veins rather close to inner margin. The two outer nerves and the outermost one are almost fused at one place. But all four wings at tip of outer margin are marked with a fuscous line between the two outer vessels. Body and legs black. Abdomen jet-black beneath; two very short appendices close to the anus. Antennae black, setiform, the length of the body. Thorax somewhat flat, medially convex.

1514. HEMEROBIUS *bipunctatus* [*Psocus bipunctatus* (Linnaeus, 1761). Sw. Signalstövslända; Fam. Psocidae,[1005] Eng. Common barklice, Sw. Storstövsländor], varying with green and black; upper wings with two black maculae.
Occurs in Uppsala. *Fr. Logie.*
DESCR. Body the size of an aphid. Antennae the length of the body. Wings hyaline, reticulated with fuscous veins; upper wings with two black maculae, of which one is placed posteriorly at the thicker margin, but the other anteriorly at the thinner margin.

1515. HEMEROBIUS *pedicularius* [*Lachesilla pedicularia* (Linnaeus, 1758). Eng. Cosmopolitan grain psocid, Sw. Höstövslända; Fam. Lachesillidae,[1006] Eng. Fateful barklice, Sw. Kviststövsländor],[1007] greenish; antennae the length of the body.
Lives in houses, especially on windows; running about.
DESCR. Very similar to the larger pale booklouse[1008] so that if the wings had been removed, you would have said that it was the same insect. Antennae the length of the body. Body dusky greenish. Four wings, venose. Abdomen greenish.

Panorpa

1516. PANORPA *communis*[1009] [*Panorpa communis* Linnaeus, 1758. Eng. Common scorpionfly, Sw. Vanlig skorpionslända; Fam. Panorpidae,[1010] Eng. Scorpionflies, Sw. Skorpionsländor], wings equal, maculated with black. *Fn.* 729.
Aldr. Ins. t. 386. f. 8. 9. & 387. f. 5. 6.
Mouff. Lat. p. 62. f. 3. 4. Musca scorpiuros I. & IV.
Hoffn. Ins. t. 2. f. 14.
Merr. Pin. p. 200. Musca scorpiura.
Frisch. Germ. 9. p. 29. t. 14. f. 1. Scorpio musca.
Reaum. Gall. n. 4. t. 8. f. 9.

[1004] See no. 516.
[1005] Order Psocoptera, Eng. Bark lice, Sw. Stövsländor.
[1006] Order Psocoptera, Eng. Bark lice, Sw. Stövsländor.
[1007] See no. 1512.
[1008] See no. 1937.
[1009] See *Fn. Su.* (1761), *Addenda*, p. 559.
[1010] Order Mecoptera, Eng. Scorpionflies, Sw. Näbbsländor.

Inhabits meadows, where narrowleaf hawkweed is grown.

DESCR. Rostrum prominent downwards into a hard, corneous proboscis. Antennae setaceous, black, with 30 segments. Body fuscous, light yellow laterally. Cauda distinctly articulate. Red-brownish, bifid, pincer-like claw like that of a scorpion. Wings white with fasciate maculae, reticulated with veins. Male with a caudal pincer-like claw. Female lacks the pincer-like caudal claw.

Raphidia

1517. *Raphidia ophiopsis*[1011] [*Raphidia ophiopsis* Linnaeus, 1758. Fam. Raphidiidae,[1012] Eng. Typical snakeflies, Sw. Ormhalssländor]. *Fn.* 730.

Act. Ups. 1736. p. 28. n. 1. Raphidia aculeo recurvo.

Roes. Ins. app. 1. t. 21. f. 6. 7.

Inhabits meadows.

DESCR. In size and appearance it is most similar to the scorpion-fly.[1013] Head black, corneous, posteriorly narrow, flat above, smooth. Thorax narrow, cylindrical, black. Antennae setaceous, whitish, with numberless segments. Abdomen oblong, fuscous, with transverse, white lines. Wings diaphanous, reticulated with veins, as in dragonflies,[1014] even at outer margin an oblong, fuscous spot in some specimens, as in dragonflies. From anus a setaceous, arcuate, black point is extended, which is curved, non-functional, and half the length of the body. Sometimes armed with a sting and sometimes without, which denotes the sex. Moves even as a pupa. Alar rudiments three times shorter than abdomen. Cauda linear, recurved backwards, pressed down towards the abdominal back.

V. HYMENOPTERA

Cynips[1015]

1518. CYNIPS *rosae* [*Diplolepis rosae* (Linnaeus, 1758). Eng. Mossyrose gall wasp, Sw. Sömntornstekel; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], black; abdomen rusty brown posteriorly black; legs rusty brown.

Tenthredo, antennae with twelve black nodes; abdomen rusty brown beneath; legs light yellow; wings without maculae. *Fn.* 938.

Reaum. Gall. 3. t. 46. f. 5. 6. 7. 8. & t. 47. f. 1. 4.

Act. Ups. 1736. p. 29. n. 3. Ichneumon bedeguaris.

Blank. Belg. 187. t. 16. f. v. x. y. z. *mala.*

In Sweden: Sömntorn.

Lives on dog rose, where a protuberance grows out resembling a very branched, red-brown lichen, at the chemist's called *bedeguar*, but when it has produced

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[1011] *Fn. Su.* (1761), *Addenda*, p. 559.

[1012] Order Raphidioptera, Eng. Snakeflies, Sw. Halssländor.

[1013] See no. 1516.

[1014] Linnaeus only refers to *Libellula*, see nos. 1459–1471.

[1015] The taxon *Cynips* in the sense of Linnaeus in this section stands for gall wasps, but in the text he refers to the taxon *Tenthredo* which stands for sawflies; see next section.

the same gall on the stinking chamomille it is called *gatta gibbosa*, which is similar to the outermost segment of the thumb.

DESCR. The size of a louse. Antennae black, straight, with about 12 segments. Head and thorax gibbous, black. Abdomen subovate, shorter than wings, carinate, rusty brown beneath, black towards anus. Legs rusty brown. Wings white and without a marginal macula.

1519. CYNIPS *hieracii* [*Aulacidea hieracii* (Linnaeus, 1758). Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], of wall hawkweed.*

Tenthredo of hawkweed. *Fn.* 950.

Rupp. Jen. 163. Hieracium myophorum.

Chemn. Brunsv. 43. t. 7. Pulmonaria gallica murem referens.

Barthol. Act. Dan. 1671. p. 122. t. 283. Hieracium contortuplicatum & strumosum.

Valent. Virid. t. 328. f. 1. Hieracium murorum folio pilosissimo vulgo Pulmonaria gallica.

Hensch. Hort. Wittenb. 1. t. 1. Hieracium myophorum.

Act. Ups. 1723. p. 415. Hieracium Myophorum.

Lives on wall hawkweed and causes a variety of single galls. I have not seen the insect of this plant, but the gall has the appearance of a hairy mouse. *It. Scan.* 280.

1520. CYNIPS *glechomae* [*Liposthenes glechomae* (Linnaeus, 1758). Eng. Ground ivy gall wasp; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], of ground-ivy.*

Tenthredo of ground ivy gall. *Fn.* 949.

Blank. Belg. 186. Hedera terrestris.

Welsch. Hecast. 1. p. 127. t. 127. f. 1. Strumulae Chamaecissi.

Reaum. Gall. 3. t. 42. f. 1. 2. 3. 4. 5.

Lives on ground ivy, where there is a hard, somewhat hirsute gall on the actual leaf. However, I have not yet seen this insect.

1521. CYNIPS *quercus folii* [C*ynips quercusfolii* Linnaeus, 1758. Eng. Cherry gall wasp, Sw. Ekäpplegallstekel; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], black; thorax lined; legs grey; femora black beneath.

Tenthredo of glabrous gall on the leaves of oak. *Fn.* 947.

Frisch. Germ. 2. p. 22. t. 3. f. 5. Ichneumon gallarum foliorum Querci.

Rhed. Ins. p. 115. 157.

Leuwenh. Arcan. p. 217.

Blank. Belg. 181. t. 16. f. A-H.

Reaum. Gall. 3. t. 39. f. 14. 15. 16.

In Sweden: Galläpple.

Lives in great numbers on the leaves of oak, especially on shrubs, where many globose, reddish, glabrous galls are often found on the lower surface of the

leaf; these galls do not become hard and in the centre they contain a larva, from which the citizens make black ink.

DESCR. The length of a bed bug.[1016] Body jet-black. Head fuscous. Antennae filiform, outwardly thicker, with 12 segments. Thorax fuscous, gibbous, with 3 glabrous, elevated lines. Abdomen subovate, jet-black, shining, gibbous, sessile. Wings upright, white, with black veins, twice as long as body and without a marginal spot. Legs grey. Femora black beneath.

1522. CYNIPS *quercus baccarum* [*Neuroterus quercusbaccarum* (Linnaeus, 1758). Eng. Common spangle gall wasp; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar],[1017] black; antennal base and legs whitish yellow.

Uddm. Diss. 81. t. 1. f. 14.

Lives in pea-shaped, diaphanous galls, on the lower surface of the leaves of English oak.

1523. CYNIPS *quercus petioli* [*Andricus quercuspetioli* (Linnaeus, 1758). Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], black; legs whitish; femora fuscous.

Roes. Ins. app. t. 35. 36.

Lives in the gall, convex on each side, inflated, on the petiole or twig of oak.

DESCR. The size of a mosquito.[1018] Body black. Abdomen glabrous. Wings hyaline. Antennae almost the length of the body. All legs pale. Femora rather thick, blackish.

1524. CYNIPS *quercus pedunculi* [*Neuroterus quercusbaccarum* (Linnaeus, 1758). Eng. Common spangle gall wasp; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar],[1019] grey; wings with a linear cross.

Reaum. Ins. 3. t. 40. f. 1–6.

Lives in granular galls, linked as a chain, on male ament of oak.

1525. CYNIPS *quercus gemmae* [*Andricus fecundatrix* (Hartig, 1840). Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], on the buds of English oak.

Tenthredo of an imbricated gall. *Fn.* 948.

Reaum. Ins. 3. t. 43 *f. omnes.*

Lives on oak, where the bud turns into an imbricated, uneven, terminal gall, which feeds the insect.

DESCR. The size of a louse. Body grey or brick-red. Eyes fuscous. Antennae weakly fuscous, the length of the body. Wings hyaline with a linear cross.

[1016] See no. 909.

[1017] See no. 1524.

[1018] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1019] See no. 1522.

1526. CYNIPS *quercus corticis* [*Andricus quercuscorticis* (Linnaeus, 1761). Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], on the bark of English oak.
Lives in the cup-shaped or pezizae-formed[1020] gall with a convex disc that is encircled with more than twenty concave spots; it is insinuated in the bark of oak. *T. Bergman*.

1527. CYNIPS *quercus ramuli* [*Andricus quercusramuli* (Linnaeus, 1761). Eng. Cottonwool gall wasp; Fam. Cynipidae, Eng. Gall wasps, Sw. Gallsteklar], pale; abdomen and eyes black.
Lives in the woolly, white galls on the twigs of English oak. *Mr* C. *Solander*.
DESCR. Very small. Antennae moniliform, the length of the abdomen. Body entirely pale except for the black eyes and abdomen.

1528. CYNIPS *fagi* [*Nomen dubium*], on the common beech.
Tenthredo, of a gall on the leaves of beech. *Fn.* 946.
Frisch. Germ. 2. p. 24. t. 5. Ichneumon foliorum ulmi.
Lives on the leaves of the common beech. There is also a similar species on the leaves of field elm.
DESCR. Wings longer than body, deflexed as with the moths;[1021] marginal spot facing the ground.

1529. CYNIPS *viminalis* [*Pontania viminalis* (Linnaeus, 1758). Eng. Pea gall sawfly, Sw. Hårig poppelbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], light yellow; thorax black.
Roes. Ins. 2. *Vesp.* t. 10. f. 5. 6. 7.
Lives on basket willow within the gall, beneath the rib of the leaf.
DESCR. Small. Head and abdomen light yellow. Thorax black.

1530. CYNIPS *amerinae* [*Euura amerinae* (Linnaeus, 1758). Sw. Videgallbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], legs pale.
Lives on the branches of bay willow within the uneven, terminal gall.

1531. CYNIPS *capreae* [*Pteromalus cyniphidis* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], green, shining; legs pale. *Fn.* 940.
Frisch. Germ. 4. p. 39. t. 22.
Lives within the rusty brown galls of willow, barleycorn-shaped, insinuated medially in the leaf and also in various excrescences of the branches.

[1020] I.e. it has the shape of a fungus belonging to the genus *Peziza*; hence cup-shaped.
[1021] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

1532. CYNIPS *salicis strobili* [*Pseudencyrtus salicisstrobili* (Linnaeus, 1758). Fam. Encyrtidae, Eng. Encyrtid wasps, Sw. Sköldlussteklar], jet-black; thoracic back greenish.

Tenthredo, jet-black; thoracic back greenish; legs jumping. *Fn.* 941.

Lives on swamp willow, the branches of which terminate in a little imbricated rose. The size and form as those of a hops cone. When the scales are separated, a solitary little insect is found resting inside them, tightly enclosed at the innermost tip on the numerous small leaves that are gradually connivent; the insect appears with wings on June 5.

DESCR. The size of a flea. Whole body including legs and antennae jet-black. Antennae filiform, towards tip they are slightly more pointed, nevertheless only half the length of the body. Abdomen ovate, pointed. Jumps on its feet, although it does not exhibit particularly thickened legs. Head and thorax are greenish on the back.

Tenthredo

1533. TENTHREDO *femorata* [*Cimbex femoratus* (Linnaeus, 1758). Eng. Birch sawfly, Sw. Stor klubbhornstekel; Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate, deep yellow; body jet-black; hind femora very large.

Inhabits alder thickets.

DESCR. Rather large. Body jet-black. Antennal clubs rusty brown. Tarsi of legs brick-red. The four posterior femora large and thick. Place of scutellum excavated and empty.

1534. TENTHREDO *lutea* [*Cimbex luteus* (Linnaeus, 1758). Eng. Giant willow sawfly; Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate, deep yellow; most abdominal segments light yellow.

Tenthredo, antennae clavate, jet-black; abdominal segments 3, 4, 5 rusty brown. *Fn.* 923.

Goed. Belg. 1. p. 119. t. 64.

List. Goed. 179. f. 77. a.

Frisch. Germ. 4. p. 42. t. 25. Eruca salicina viridis, rugis sexaginta duabus.

Lives on willow, alder, and birch. Larva glabrous, green, with 28 legs; often lies like a spiral, flat shell, with a dorsal longitudinal black line, on each side light yellow.

DESCR. The actual sawfly is as large as a hornet,[1022] black, hirsute; the 3rd, 4th, and 5th abdominal segments rusty brown, the others black. Femora and tibiae black, with light yellow tarsi. Antennae clavate, light yellow; lowest segment black. Wings with jet-black veins tending to rusty brown, fuscous at posterior margin.

[1022] See no. 1670.

1535. TENTHREDO *vitellinae* [*Trichiosoma vitellina* (Linnaeus, 1761). Eng. Red-margined willow sawfly or Amber hairy-clubhorn; Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate; abdomen red-brown; dorsum black; hind femora dentate.

Lives on willow. *T. Bergman.*

DESCR. Stature as that of the following species, but it lacks the lip. Body black, pubescent. All abdominal sides, as well as beneath, red-brown, only dorsum black. Legs black. Tibiae and tarsi light yellow. Hind femora dentate close to the tip. Antennae black. Alar margin thinner, blackish.

1536. TENTHREDO *amerina* [*Pseudoclavellaria amerinae* (Linnaeus, 1758). Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate; body ash-grey; anus red-brown; lip white.

Roes. Ins. 2. *Vesp.* t. 1.

Lives on willow.

DESCR. Middle-sized. Body black with white pubescence so that it appears ash-grey. Tarsi of legs rusty brown. Anus red-brown tending to rusty brown, just as antennal clubs. Lip of mouth large, orbicular, snow-white.

1537. TENTHREDO *lucorum* [*Trichiosoma lucorum* (Linnaeus, 1758). Eng. Light-tibia hawthorn sawfly or Wood hairy-clubhorn; Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate, black; body villous, jet-black.

Tenthredo, jet-black, with clavate antennae; abdomen ovate; wings rusty brown. *Fn.* 924.

Act. Ups. 1736. p. 29. n. 9. Ichneumon ater, alis testaceis, antennis clavatis.

Lives on alder in the Lapponian districts of Umeå and Piteå.

DESCR. The size of a common bumble bee,[1023] markedly blunt. Abdomen roundish, flat, villous, jet-black, entirely silky. Thorax and head black. Antennae clavate, black, with six markedly blunt segments. Wings rusty brown with a marginal, oblong, black spot and reticulated red-brown veins; antennal club varies with black and rusty brown.

1538. TENTHREDO *fasciata* [*Abia fasciata* (Linnaeus, 1758). Eng. Blotch-winged honeysuckle sawfly; Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate, black; abdomen glabrous, jet-black; upper wings with a fuscous fascia.

Inhabits forests.

1539. TENTHREDO *nitens* [*Abia nitens* (Linnaeus, 1758). Fam. Cimbicidae, Eng. Cimbicid sawflies, Sw. Klubbhornsteklar], antennae clavate; abdomen shining bluish green.

Inhabits forests.

[1023] See the com. to no. 839.

DESCR. Middle-sized. Head and the villous thorax black. Abdomen shining bluish green. Wings rusty brown. Tibiae light yellow. Abdomen of male longitudinally blackish above with rusty brown antennae, not black as in the female.

1540. TENTHREDO *pini* [*Diprion pini* (Linnaeus, 1758). Eng. Common pine sawfly, Sw. Vanlig tallstekel; Fam. Diprionidae, Eng. Conifer sawflies, Sw. Barrsteklar], antennae pectinate, lanceolate; thorax slightly villous.

Uddm. Diss. 90. f. 13.

Lives on the needles of Scots pine. Larva blue, the two extreme ends red-yellow.

DESCR. The size of a bed bug.[1024] Body blackish. Thoracic dorsum with various sutures. Wings fuscous, with black veins and a marginal, black macula. Femora black. Tibiae pale. Antennae jet-black, half the length of the body, pectinate, acuminate, concave, with about 20 subequal rays, of which the apicals are curved inwards and forwards at tips. Female grey with black head; antennae filiform and very simple.

1541. TENTHREDO *juniperi* [*Monoctenus juniperi* (Linnaeus, 1758). Fam. Diprionidae, Eng. Conifer sawflies, Sw. Barrsteklar], antennae pectinate, blunt; thorax glabrous.

Uddm. Diss. 91. f. 12.

Lives on the common juniper. Larva watery green, scattered with black spots.

DESCR. Very similar to the preceding species but smaller. Body black. Thorax glabrous. Antennae pectinate. Femora and tibiae red-yellow, not light yellow. Female grey with black eyes.

1542. TENTHREDO *ustulata* [*Arge ustulata* (Linnaeus, 1758). Eng. Yellow-winged fusehorn; Fam. Argidae, Eng. Argid sawflies, Sw. Borsthornsteklar], antennae gradually subclavate; thorax bluish; wings with a fuscous macula.

Inhabits small woods.

1543. TENTHREDO *rustica* [*Arge rustica* (Linnaeus, 1758). Fam. Argidae, Eng. Argid sawflies, Sw. Borsthornsteklar], antennae subclavate; abdomen black, with four light yellow belts.

Inhabits the meadows of peasants.

1544. TENTHREDO *padi* [*Aneugmenus padi* (Linnaeus, 1761). Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], jet-black; antennae with seven nodes; femora and tibiae white.

Tenthredo, jet-black; tibiae and femora white. *Fn.* 944.

Lives on the leaves of European bird-cherry, which it eats from the underside and perforates so that it looks like a sieve.

[1024] See no. 909.

DESCR. Antennae, head, thorax, and abdomen jet-black. Wings greyish blue with a marginal, oblong, jet-black spot. Femora and tibiae white, but tarsi, especially posterior ones, black. Antennae antrorsely extended, acuminate with 7 or 8 segments.

1545. TENTHREDO *scrophulariae* [*Tenthredo scrophulariae* Linnaeus, 1758. Eng. Figwort sawfly; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven deep yellow nodes; abdomen with five light yellow belts, the first one more spaced.

Tenthredo, black; seven nodes; margins of abdominal segments, except for the second and third ones, light yellow. *Fn.* 935.

Blackwell. Herb. t. 87. f. 10.

Lives on any figwort, especially on the common figwort, which it devastates every year.

DESCR. Head black. Jaws black, dentate. Upper lip of mouth light yellow. Thin light yellow line beneath each eye. Antenne clavate with seven segments, rusty brown or red-yellow except for the basalmost. Thorax black; a light yellow line on each side from base to wings. On each side of thoracic base a light yellow spot and a light yellow macula beneath the alar insertion; thoracic tip with light yellow twin spots, behind another; a light yellow macula at the base of the third femoral pair. Abdominal segments 1, 4, 5, 6, 7, 8, and 9 black terminating in light yellow lines, but not on 2 and 3; thus the space is wider between the first and second light yellow lines on the back; all segments are light yellow beneath at margin. All femora black, but tibiae red-brown. Wings hyaline with a marginal, rusty brown spot, and outer margin of the larger wings rusty brown. Appearance and size as those of a hornet.[1025] Hind femora of male with a light yellow line beneath. Female with a short sting.

Pupa is equipped with legs and lies inside a clod of earth (at the roots of the figwort), in an excavation as in the pupa of the scarab beetle,[1026] where it hides from the previous year throughout the winter to the beginning of June.

Larva snow-white, the length of a finger width; thick as a goose feather; head black and with 6 and 16 or 22 legs; the entire surface above marked with black spots, of which the dorsal intermediate spots are somewhat larger.

1546. TENTHREDO *abietis* [*Cephalcia abietis* (Linnaeus, 1758). Eng. False spruce webworm or Spruce web-spinning sawfly, Sw. Större granspinnarstekel; Fam. Pamphiliidae, Eng. Webspinning and Leafrolling sawflies, Sw. Spinnarsteklar], antennae with seven nodes; body black; abdomen with four rusty brown segments. *Syst. nat.* 10. p. 556. n. 13 & 27.

Tenthredo, with seven nodes; abdomen light yellow, posteriorly black. *Fn.* 928.

Frisch. Germ. 2. p. 12. t. 1. f. 21. 22. 23. 24.

Lives abundantly on spruces in May in Uppsala.

DESCR. Eyes incumbent, blackish, diaphanous. Abdomen with three or four anterior red-brownish segments. Rest of body black. Legs red-brown.

[1025] Linnaeus only refers to *Vespa*, see nos. 1670–1683.

[1026] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

1547. TENTHREDO *cerasi* [*Caliroa cerasi* (Linnaeus, 1758). Eng. Pear slug sawfly or Cherry slug sawfly, Sw. Fruktbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body black; legs deep yellow; scutellum light yellow.

Reaum. Ins. 5. t. 12. f. 1–5.

Lives on sour cherry leaves, in which it modifies by folding.

DESCR. Body and everything else black except for all the legs, which are pale. Scutellum in this species is whitish yellow and rather often bears a light yellow spot anteriorly on wings.

1548. TENTHREDO *salicis* [*Nematus oligospilus* Förster, 1854. Eng. Willow sawfly, Allmän pilbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar],[1027] antennae with seven nodes; body light yellow; vertex of head and thorax black.

Tenthredo, light yellow; antennae with seven nodes; vertex of head and thorax medially black; alar macula ovate. *Fn.* 927.

Lives on various willows.

DESCR. Abdomen adnate as thoracic petiole is lacking, entirely light yellow. Thorax light yellow, but a large, black macula medially on the back; between forewings and hindwings, beneath, a large black macula. Head black behind eyes. Antennae fuscous, with 7 awl-shaped segments. Wings incumbent, membranous, reticulate, with a marginal black spot. Legs light yellow, but posterior tarsi blackish.

1549. TENTHREDO *mesomela* [*Tenthredo mesomela* Linnaeus, 1758. Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; abdomen almost light yellow; dorsum black with whitish yellow arches.

Tenthredo, antennae with seven nodes; dorsum black with pale, transverse, arcuate, recurved lines. *Fn.* 936.

Occurs in Östergötland. *Fr. Hasselquist.*

DESCR. Wings membranous, the larger ones with outer black margin and black, oblong spot. Femora and tibiae pale, posteriorly black. Eyes jet-black. Abdomen light yellow beneath, black on the back with pale lines curved backwards on the sides, or each segment with a pale posterolateral margin covered with a large, semi-circular macula. Tip of scutellum whitish light yellow, inside of which there is a light yellow macula and on its sides two very small, pale spots. Antennae black, with seven segments.

1550. TENTHREDO *rufipes* [*Macrophya rufipes* (Linnaeus, 1758). Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body black; abdomen with two deep yellow belts; legs red.

Occurs in the countryside.

DESCR. Middle-sized. Body black. Antennae filiform. Oral lip light yellow, acuminate. Abdomen with two belts: the first one red-yellow, the posterior one light yellow. Legs red-yellow with black tarsi; posterior tibiae black at base.

[1027] See no. 1572.

1551. TENTHREDO *campestris* [*Tenthredo campestris* Linnaeus, 1758. Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body black; abdomen with an uneven, light yellow belt; antennae and tibiae light yellow.

Occurs in the countryside.

DESCR. Middle-sized. Body black. Antennae light yellow; a rusty brown spot in front of eyes. Scutellum light yellow. Abdomen deep yellow at tip and jet-black at base.[1028] Femora black. Tibiae and tarsi light yellow. Wings with a rusty brown macula.

1552. TENTHREDO *atra* [*Tenthredo atra* Linnaeus, 1758. Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body jet-black; legs red.

Occurs in the countryside.

DESCR. Middle-sized. Body jet-black. Mouth light yellow. Legs rusty brown tending to red-brown.

1553. TENTHREDO *ovata* [*Eriocampa ovata* (Linnaeus, 1761). Eng. Red-backed alder sawfly; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body jet-black; thorax red-brown above.

Occurs in the countryside.

DESCR. Stature as that of the common pine sawfly,[1029] ovate, gibbous; head and thorax scabrous with spots.

1554. TENTHREDO *viridis* [*Rhogogaster viridis*[1030] (Linnaeus, 1758). Eng. Green sawfly; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body green; abdomen fuscous above.

Occurs in the countryside.

DESCR. Middle-sized. Body greenish light yellow. Antennae black, setaceous. Eyes black. Head between eyes black. Thoracic dorsum black. Abdomen black dorsally. Femora and tibiae with a longitudinal outer, black line.

1555. TENTHREDO *rosae* [*Athalia rosae* (Linnaeus, 1758). Eng. Turnip sawfly or Cabbage leaf sawfly, Sw. Kålbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body light yellow; costa of the upper wings longitudinal, black.

Tenthredo, with seven nodes; body light yellow; a black, longitudinal macula on wings and sternum. *Fn.* 929.

Act. Ups. 1736. p. 29. n. 14. Ichneumon alis planis luteis: margine exteriore nigris, collari nigro.

Lives on the leaves of rose.

[1028] In reality it is just the opposite.

[1029] See no. 1540.

[1030] Confused with *Rhogogaster scalaris* (Klug, 1817).

DESCR. Abdomen light yellow. Thorax light yellow, in the middle of the back and sternum black. Eyes and head black. Legs light yellow, but all tarsi with black segments. Antennae black, filiform, with 7 segments; it is unique in the alar marginal, black spot being not ovate, but extended longitudinally and adjacent to the exterior alar margin towards the very base.

1556. TENTHREDO *cincta* [*Allantus cinctus* (Linnaeus, 1758). Eng. Curled rose sawfly, Sw. Vitgördlad rosenbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body jet-black; abdomen with a white belt.

Lives on rose.

DESCR. Rather small. Body jet-black. Antennae filiform. Abdomen with a white belt. Femora black with a white base. Tibiae red-brown, white at base.

1557. TENTHREDO *livida* [*Tenthredo livida* Linnaeus, 1758. Eng. Variable tenthredo; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body jet-black; abdomen dark bluish grey above and beneath.

Ichneumon, jet-black; femora brick-red; antennae medially white. *Fn.* 955.

Occurs in the countryside.

DESCR. Head black. Mouth white. Antennae filiform, black, and white in front of the black tip. Femora red-brown, on the back fuscous. Thorax black. Abdomen dark bluish grey tending to rusty brown, at base black. Posterior tarsi black. Some differ perhaps owing to sex; abdomen entirely jet-black.

1558. TENTHREDO *septentrionalis* [C*raesus septentrionalis* (Linnaeus, 1758). Eng. Flat-legged tenthred or Birch sawfly; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar],[1031] antennae with seven nodes; hindlegs flattened, dilated.

Inhabits the meadows of peasants.

DESCR. Rather small. Head and thorax black. Antennae black, setaceous, almost the length of the body. Abdomen rusty brown, black at base. Legs rusty brown. Posterior tibiae whitish at base and black at the dilated tip, just as the tarsus is also black and dilated.

1559. TENTHREDO *duodecim-punctata* [*Macrophya duodecimpunctata* (Linnaeus, 1758). Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], antennae with seven nodes; body jet-black, with twelve white spots.

Inhabits meadows.

DESCR. Body entirely black. White macula on each side of thorax in front of wings. Scutellum white. Three abdominal segments with a white macula on each side. Last abdominal segment apically white. The second pair of femora with a white macula. Tibiae with a light yellow ring. Lips light yellow.

[1031] See no. 1571.

1560. TENTHREDO *erythrocephala* [*Acantholyda erythrocephala* (Linnaeus, 1758). Eng. Pine false webworm or Red-headed pine sawfly, Sw. Blå tallspinnarstekel; Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; body blue; head red.

Uddm. Diss. 89.

Lives on Scots pine.

DESCR. Middle-sized. Body, wings, and everything else bluish. Head red. Antennae and eyes black. Male jet-black, only jaws and oral lip light yellow. Tibiae anteriorly whitish yellow.

1561. TENTHREDO *sylvatica* [*Pamphilius sylvaticus* (Linnaeus, 1758). Eng. Thorn leafroller, Hedgerow spinner or Dark leaf-rolling sawfly; Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; body black; legs and thoracic markings light yellow.

Tenthredo, black; legs light yellow; thoracic markings light yellow. *Fn.* 931.

Inhabits forests.

DESCR. Head black, with two thin, light yellow lines posteriorly. Jaws red-brown, bidentate. Thorax black, with a light yellow tip and sides with a light yellow tubercle at base. Abdomen black. Legs light yellow, but 1st and 2nd femora black at base. Wings shining black[1032] with jet-black veins that have a marginal ovate, jet-black macula. Antennae setaceous, with more than thirty segments.

1562. TENTHREDO *nemoralis* [*Neurotoma nemoralis* (Linnaeus, 1758). Eng. European cherry webspinning sawfly; Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; body jet-black; abdominal segments laterally white.

Inhabits small woods.

1563. TENTHREDO *cynosbati* [*Janus cynosbati* (Linnaeus, 1758). Eng. Oak twig borer; Fam. Cephidae, Eng. Stem sawflies, Sw. Halmsteklar], antennae setaceous; legs rusty brown; posterior legs annulated with white and black. *Fn.* 937.

Reaum. Gall. 5. t. 14. f. 1. 2. 3. &c.

Lives on the leaves of roses.

DESCR. It falls among the small species. Appearance as that of an ichneumon wasp.[1033] Abdomen linear, entirely jet-black, but femora, tibiae, and all tarsi rusty brown except for the posterior legs that are variegated with white and black. Antennae jet-black with 18 segments.

[1032] Linnaeus in fact writes that the wings are shining black (which they are not); his mistake may be an effect of the black abdomen colour shining through.

[1033] Linnaeus only refers to *Ichneumon*, see nos. 1578–1647.

1564. TENTHREDO *reticulata* [*Caenolyda reticulata* (Linnaeus, 1758). Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; wings variegated with pale and fuscous with white, elevated, reticulated veins.

Occurs in Finland.

DESCR. Middle-sized. Head light yellow, variegated with black. Antennae setaceous, black. Thorax black, anteriorly a transverse, light yellow plate. Abdomen light yellow; anus black. Legs black. Wings fuscous, variegated with white. Additionally, veins elevated, white, reticulated.

1565. TENTHREDO *betulae* [*Pamphilius betulae* (Linnaeus, 1758). Eng. Yellow-headed leaf-rolling sawfly; Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; body red; thorax, anus, and eyes black; wings posteriorly fuscous.

Lives on birches. *Mr* C. *Solander.*

DESCR. The size and stature as those of the pine false webworm.[1034] Antennae setaceous, red, apically fuscous, with 24 segments. Head red, with 2 longitudinal lines. Eyes black. 3 conglobate spots on vertex. Thorax black, anteriorly red. Abdomen red, with a posterior black segment. Legs red. Wings greyish blue, at tips fuscous.

1566. TENTHREDO *saltuum* [*Neurotoma saltuum* (Linnaeus, 1758). Eng. Social pear sawfly or Social pear web-spinner; Fam. Pamphiliidae, Eng. Webspinning and leafrolling sawflies, Sw. Spinnarsteklar], antennae setaceous; body black; abdomen deep yellow.

Occurs ubiquitously around us.

1567. TENTHREDO *flava* [*Hoplocampa flava* (Linnaeus, 1761). Eng. Plum sawfly or Flame plum-borer; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], light yellow; alar macula rusty brown. *Fn.* 930.

Reaum. Ins. 5. t. 10. f. 6. 7.

Inhabits meadows in springtime.

DESCR. The size of a rather small ant.[1035] Body ventricose, entirely light yellow. Eyes black. Wings greyish light yellow, in the middle of which there is a rusty brown, indistinct macula.

1568. TENTHREDO *intercus* [*Tenthredo intercus* Linnaeus, 1958. Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], legs light yellow.

Lives subcutaneously in the leaves of greater burdock, also in the leaves of belladonna.

DESCR. The size of a mosquito.[1036] Body black. Antennae longer than body, black. Legs long, light yellow. Wings opalescent, with a marginal, light yellow spot; subcutaneously in belladonna.

[1034] Lat. *Tenthredo erytrocephala*; *erytrocephala* a misspelling or printing errror: an *h* missing. See no. 1560.

[1035] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[1036] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1569. TENTHREDO *rumicis* [*Nomen dubium*], of *Rumex*.
Reaum. Ins. 5. t. 10. f. 13. 14.
Lives on the leaves of docks.

1570. TENTHREDO *ulmi* [*Cladius ulmi* (Linnaeus, 1758). Eng. Elm knucklehorn; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar], of field elm.
Reaum. Ins. 5. t. 10. f. 16.
Lives on the leaves of field elm.

1571. TENTHREDO *alni* [*Craesus septentrionalis* (Linnaeus, 1758). Eng. Flat-legged tenthred or Birch sawfly; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar],[1037] of birch and alder.
Reaum. Ins. 5. t. 11. f. 1. 2.
Lives on the leaves of alder; abundant.

1572. TENTHREDO *salicis* [*Nematus oligospilus* Förster, 1854. Eng. Willow sawfly, Sw. Allmän pilbladstekel; Fam. Tenthredinidae, Eng. Common sawflies, Sw. Bladsteklar].[1038]
Tenthredo on willow. Larva blue-green; pectus and cauda deep yellow. *Fn.* 933.
Frisch. Germ. 6. p. 9. t. 4. Ichneumon flavus larvae viridis nigro punctatae.
Goed. Belg. 1. p. 65. t. 19.
List. Goed. 125. t. 49.
Reaum. Gall. 5. t. 11. f. 3.
Lives on crack willow and goat willow; abundant.
DESCR. I have seen the larva solitary, which it often is. Whole body blue or green-blue; 9 longitudinal rows of black maculae, but the first three and the last three segments of the body are red-yellow, although punctate with black. Head black, glabrous. Three pairs of feet in the red-yellow part of the body, then 6 pairs in the blue part of the body, then one pair on the red-yellow cauda, in total 20 feet.

[1037] See no. 1558.

[1038] Linnaeus here repeats no. 1548 under the same name, but only describes the larva.

Sirex

1573. SIREX *gigas* [*Urocerus gigas* (Linnaeus, 1758). Eng. Giant woodwasp, Giant horntail, Banded horntail or Greater horntail. Sw. Stor hornstekel; Fam. Siricidae, Eng. Horntails or Wood wasps, Sw. Vedsteklar or Hornsteklar],[1039] abdomen rusty brown, with segments 3, 4, 5, 6 black; thorax villous.

Tenthredo, black, with rusty brown segments; anal cornicle cylindrical. *Fn.* 925.

Act. Ups. 1736. p. 28. n. 1. Ichneumon flavus, abdomine medio nigro, cauda acuta, aculeo umbilicali triplici exserto.

Reaum. Gall. 6. t. 31. n. 1. 2.

De Geer Ins. 1. t. 36. f. 1. 2.

Act. Stockh. 1739. t. 3. f. 7.

Occurs ubiquitously; not uncommon.

DESCR. Larger than the others. Head black, behind eyes light yellow. Thorax entirely black, hirtous; base whitish yellow with a somewhat prominent spot on each side. Wings rusty brown. Antennae half the length of the body, deep yellow, 22 segments. Abdomen cylindrically oblong, with three posterior and two frontal deep yellow segments, but 3rd, 4th, 5th, 6th mostly black; last segment blunt terminating in an erect, smoothly rounded, pointed cornicle; abdomen jet-black beneath and from its middle there is a fissure towards the posterior parts, from which an erect, stiff, black sting protrudes that is longer than the abdominal cornicle, and composed of three adjoining setae. Femora short, black, with all tibiae and tarsi deep yellow.

1574. SIREX *spectrum* [*Xeris spectrum* (Linnaeus, 1758). Eng. Dark-hipped woodwasp or Long-tailed horntail, Sw. Snyltvedstekel; Fam. Siricidae, Eng. Horntails or Wood wasps, Sw. Vedsteklar or Hornsteklar],[1040] abdomen jet-black; thorax villous, with a deep yellow blotch in front of wings.

Tenthredo, jet-black; legs rusty brown; anal tip depressed, pointed. *Fn.* 926.

De Geer Ins. 1. t. 36. f. 6.

Lives in old firewood.

DESCR. Vies with the previous species as to size. Entirely jet-black. Thorax and head hirsute. Abdomen glabrous, with nine segments. Outermost or anal segment ending in a thick, pointed, flat spine, but not cylindrical as it is in the previous species. A triple sting begins beneath the middle of the abdomen and protrudes beyond the anal spine. Wings weakly fuscous. Antennae black, fuscous at base with 20 segments. Femora, tibiae, and tarsi rusty brown.

[1039] Linnaeus here describes the female of *Urocerus gigas*. The male is described in no. 1577.

[1040] Originally described by Linnaeus as *Ichneumon spectrum* due to its ichneumonid-like appearance.

1575. SIREX *juvencus* [*Sirex juvencus* Linnaeus, 1758. Eng. Blue horntail or Steel-blue sirex wood-wasp, Sw. Blå hornstekel; Fam. Siricidae, Eng. Horntails or Wood wasps, Sw. Vedsteklar or Hornsteklar],[1041] abdomen bluish jet-black; thorax unicoloured, villous.

Ichneumon, bluish black, almost hirsute; abdomen sessile; legs whitish yellow. *Fn.* 954.

De Geer Ins. 1. t. 36. f. 7.

Occurs in Roslagen.

DESCR. Middle-sized. Wings the length of the abdomen, rather broad, with outer, margin fuscous. Body jet-black, bluish. Antennae half the length of the body, brick-red at base. Legs brick-red.

1576. SIREX *camelus* [*Xiphydria camelus* (Linnaeus, 1758). Eng. Alder wood wasp, Sw. Kamelstekel; Fam. Xiphydriidae, Eng. Xiphydriid wood wasps, Sw. Halssteklar], abdomen jet-black, sides maculated with white; thorax smooth.

Uddm. Diss. 82.

Lives in old, rotten firewood.

DESCR. Rather small. Body black. Head at occiput with two white crescents and a white spot in front of eyes. Antennae black, at base rusty brown, shorter than thorax. Thorax slightly smooth, with a white blotch in front of wings. Abdomen jet-black; each segment with a pointed, white macula on each side. Legs rusty brown.

1577. SIREX *marisca* [*Urocerus gigas* (Linnaeus, 1758). Eng. Giant woodwasp, Giant horntail, Banded horntail or Greater horntail, Sw. Stor hornstekel; Fam. Siricidae, Eng. Horntails or Wood wasps, Sw. Vedsteklar or Hornsteklar],[1042] abdomen brick-red, with the last two segments black; thorax slightly villous.

Occurs in Uppsala. *P. Osbeck*.

DESCR. Stature and appearance as those of the giant woodwasp,[1043] but only half as large. Antennae light yellow, half the length of the body. Head black, on posterior sides deep yellow. Thorax black, slightly villous. The four anterior legs light yellow; the two posterior legs black with light yellow knees. Abdomen light yellow, but first segment and last two segments black.

[1041] Originally described by Linnaeus 1758 as *Ichneumon juvencus*.

[1042] Linnaeus here desribes the male of *Urocerus gigas*. The female is described in no. 1573.

[1043] See no. 1573.

Ichneumon

1578. ICHNEUMON *sugillatorius* [*Coelichneumon sugillatorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax without maculae; abdomen jet-black, with three segments having a white spot bilaterally.

Occurs around us; abundant.

DESCR. Middle-sized. Antennae black with a white ring. Head black. Thorax black, without maculae, scutellum white. Abdomen black, with three segments: the first segments with a white spot at lateral margin. Legs black. Anterior tibiae pale anteriorly.

1579. ICHNEUMON *raptorius* [*Diphyus raptorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax without maculae; second and third abdominal segments deep yellow, the others white at tip.

Inhabits meadows.

DESCR. Middle-sized. Head and thorax black, without maculae. Scutellum whitish. Antennae entirely light yellow at base. Legs deep yellow, but the 4 posterior femora black. Of abdominal segments: 1st black; 2nd, 3rd rusty brown; 4th, 5th jet-black; 6th, 7th jet-black with sulphur-coloured macula.

1580. ICHNEUMON *sarcitorius* [*Ichneumon sarcitorius* Linnaeus, 1758. Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar],[1044] scutellum yellowish; thorax without maculae; third abdominal segment posteriorly rusty brown, like the second; the sixth light yellow.

Ichneumon, black; two anterior segments rusty brown; thoracic tip light yellow. *Fn.* 976.

β *Ichneumon*, abdomen anteriorly rusty brown but posteriorly black, with light yellow incisures; antennae annulated with white. *Fn.* 981.[1045]

Occurs in Uppsala.

DESCR. Antennae, head, and thorax black, but scutellum whitish light yellow; a light yellow spot beneath alar base. Abdominal petiole black. The two anterior segments rusty brown but in such a way that the base of the posterior rusty brown segment becomes black; hence the abdominal part is rusty brown and as if marked by a transverse line; the other four abdominal segments are black. Legs rusty brown, but posterior ones with femora and tibiae black at tip. Antennae annulated with deep yellow, black-tipped.

[1044] See no. 1592.

[1045] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

1581. ICHNEUMON *extensorius* [*Ichneumon extensorius* Linnaeus, 1758. Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax without maculae; second and third abdominal segments rusty brown, last segments white at tip. *Fn.* 980.[1046]

Ichneumon, abdomen anteriorly rusty brown, posteriorly black, without maculae; antennae with a white ring.

Act. Ups. 1736. p. 50. n. 23. Ichneumon antennis spiralibus, abdomine nigro, articulis duobus superioribus testaceis.

Lives along with the preceding wasps.

DESCR. Antennae black with a white belt; head black; thorax black, at tip light yellow; legs deep yellow; femora black; wings greyish blue; abdomen black, with second and third segments rusty brown, the others without maculae.

1582. ICHNEUMON *quaesitorius* [*Ichneumon quaesitorius* Linnaeus, 1761. Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; the three last abdominal segments with dorsal, light yellow maculae.

Occurs ubiquitously.

DESCR. Middle-sized. Body entirely black; thorax without maculae, with a tiny most minute white dot beneath alar base. All legs rusty brown. Antennae with a white ring. The last three abdominal segments with small sulphur-coloured maculae above.

1583. ICHNEUMON *culpatorius* [*Probolus culpatorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; second and third abdominal segments rusty brown, the others black.

Inhabits meadows.

1584. ICHNEUMON *infractorius* [*Pristicerops infractorius* (Linnaeus, 1761). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum light yellow; thorax maculate; all abdominal segments whitish at tip; legs rusty brown.

Occurs in Kalmar. *A. Modéer.*

DESCR. Rather small. Head black. Antennae with a white ring. Eyes light yellow at margin. Thorax with a thin, light yellow line in front of wings; a light yellow spot above legs. Scutellum double and light yellow. Abdominal segments light yellow at margin. Knees of hindlegs black.

[1046] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

1585. ICHNEUMON *constrictorius* [*Nomen dubium*], scutellum yellowish; thorax bidentate, somewhat maculate; second abdominal segment rusty brown.

Occurs ubiquitously; not very common.

DESCR. Middle-sized, black. Antennae the length of the thorax, black, semi-annulated with white. Thorax with a spot beneath alar base and a light yellow or whitish scutellum. Second abdominal segment rusty brown or red-brown.

1586. ICHNEUMON *saturatorius* [*Vulgichneumon saturatorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax without maculae; last segment of the black abdomen whitish.

De Geer Ins. 1. t. 23. f. 16.

Occurs ubiquitously.

DESCR. Body black lacking maculae. Antennae with a white ring. Scutellum white. Legs rusty brown with posterior tibiae black. Anus white on one and a half segments.

1587. ICHNEUMON *molitorius* [*Ichneumon molitorius* Linnaeus, 1761. Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum white; thorax without maculae; abdominal tip and bases of tibiae white.

Occurs at Jumkil. *P. Forsskål*.

DESCR. Middle-sized. Entirely jet-black. Antennae medially white. Outermost abdominal tip with a white spot. All tibiae white at base. Wings hyaline.

1588. ICHNEUMON *crispatorius* [*Eutanyacra crispatoria* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax submaculate; abdomen entirely deep yellow tending to rusty brown, with slightly darkening tip.

Occurs ubiquitously around us.

DESCR. Middle-sized. Body black. Antennae annulated with light yellow at base. Thorax barely maculate, except for the weakly rusty brown spot at alar base. Scutellum light yellow. Legs light yellow. Femora blackish, apically light yellow. 1st abdominal segment[1047] light yellow, 2nd light yellow with a rusty brown base; 3rd rusty brown; 4th, 5th rusty brown, darkening.

1589. ICHNEUMON *pisorius* [*Protichneumon pisorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; abdomen entirely deep yellow.

α *Ichneumon*, black; abdomen and tibiae rusty brown; antennae medially white. *Fn.* 966.

β *Ichneumon*, black; abdomen and tibiae rusty brown; antennae with a white ring. *Fn.* 968.

[1047] Here Linnaeus forgot the fig. 1.

Lives in the larvae of the broom moth.[1048]

DESCR. It falls among the larger species of its genus. Head black, with blackish eyes. Antennae black, spirally curved, their middle white section forming a ring, although hardly perfect, surrounding the antennae. Thorax black; from head towards wings a whitish line on each side; a spot verging on white beneath alar insertions. All femora black, but tibiae and all tarsi pale rusty brown. Abdomen entirely rusty brown, but the abdominal petiole is black. Wings of a membranous colour with a marginal, rusty brown spot.

1590. ICHNEUMON *luctatorius* [*Diphyus luctatorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; second and third abdominal segments deep yellow.

Ichneumon, black; tibiae and second and third abdominal segments light yellow. *Fn.* 983.

Occurs in Uppsala. *R. Hast.*

DESCR. Head, thorax, and antennae black; on each side in front of eyes a light yellow macula. Thoracic tip light yellow; a light yellow spot beneath alar base. First abdominal segment is a black petiole; the other segments depressed, of which the second and third ones are light yellow, the others black, but the fourth one with three indistinct rusty brown maculae. Femora black. Legs light yellow, with black knees.

1591. ICHNEUMON *volutatorius* [*Banchus volutatorius* (Linnaeus, 1758). Ichneumonidae subfam. Banchinae, Eng. Banchine wasps, Sw. Hacksprötsteklar],[1049] scutellum yellowish; thorax variegated; all abdominal segments light yellow on dorsum.

Occurs around us; abundant.

DESCR. Middle-sized. Head light yellow, mixed with black. Thorax black, variegated with light yellow, with 2 maculae above base, 2 beneath wings: lower macula larger; 3 posterior maculae, intermediate macula crescent-shaped. Abdominal segments dorsally light yellow, basally black. Legs rusty brown. Antennae black, beneath longitudinally light yellow.

1592. ICHNEUMON *vaginatorius* [*Ichneumon sarcitorius* Linnaeus, 1758. Ichneumonidae subfam. Ichneumoninae, Ichneumonine wasps, Sw. Fjärilsparasitsteklar],[1050] scutellum yellowish; thorax maculate; abdominal segments light yellow at margin, with first and fifth unicoloured.

Occurs around us; abundant.

DESCR. Middle-sized. Body black, a light yellow macula in front of each eye. Thorax with a light yellow spot beneath alar base. Abdominal segments light yellow at margin. Forelegs deep yellow; the posterior two legs rusty brown on femora and basal part of tibiae. Antennae black, beneath longitudinally pale.

[1048] See no. 1206

[1049] See no. 1612.

[1050] See no. 1580.

1593. ICHNEUMON *persuasorius* [*Rhyssa persuasoria* (Linnaeus, 1758). Eng. Sabre wasp or Giant ichneumon; Ichneumonidae subfam. Rhyssinae, Rhyssine wasps, Sw. Raspryggsteklar], scutellum yellowish; thorax maculate; abdomen jet-black; all segments with two bilateral white spots.

Ichneumon, black; frons and abdominal spots whitish; legs red-brown. *Fn.* 964.

De Geer. Ins. 1. t. 36. f. 7.

Act. Ups. 1736. p. 29. n. 19. Ichneumon niger, abdomine cylindraceo punctato; pedibus rubris, alis albidis.

Occurs around us; rather rare.

DESCR. Antennae black. Head black; frons whitish light yellow. Thorax black with a linear, whitish macula above alar insertion. Abdomen cylindrical, long, black, with two white, oval, transverse spots at margin of each abdominal segment on the back. Legs red-brown, but posterior ones with black tibiae. Wings a little greyish blue with a marginal, oblong, jet-black spot. Some with a black sting as long as the body or longer.

1594. ICHNEUMON *lituratorius* [*Hypsantyx lituratorius* (Linnaeus, 1761). Ichneumonidae subfam. Ctenopelmatinae, Eng. Ctenopelmatine wasps, Sw. Uddbensteklar], scutellum yellowish; thorax maculate; abdomen black, with four segments medially light yellow; legs rusty brown.

Occurs in the countryside. C. *Blom*.

DESCR. Rather small. Body black. Antennae rather pale beneath. Frons light yellow at mouth. Thorax with minute, light yellow scutellum; a thin, deep yellow line on each side between head and wings. Abdomen not quite sessile. Four segments with a thin, deep yellow line marginally and medially that does not extend to the sides. Legs rusty brown; posterior tarsi fuscous.

1595. ICHNEUMON *designatorius* [*Melanichneumon designatorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; abdomen jet-black, the first four segments with a white spot on each side.

Ichneumon, jet-black; tibiae black; abdomen with four white spots on each side. *Fn.* 965.

Occurs around us; abundant.

DESCR. Body entirely black or jet-black, but a white macula on each side in front of eyes; two white spots above mouth. Thorax in front of alar base on each side having a white line running from head with a white spot, and beneath also with a white spot. White thoracic tip with a thin, transverse, white line. Abdomen long: segments 1, 2, 3, and 4 with a white macula or spot on each side; of these segments, the 1st is a petiole. No manifest sting.

1596. ICHNEUMON *edictorius* [C*tenichneumon edictorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate with two spots on each side; abdomen entirely jet-black.

Ichneumon, jet-black; tibiae and thoracic tip white. *Fn.* 960.

Inhabits meadows.

DESCR. It is middle-sized, entirely jet-black. Antennae also black; thoracic tip is only black dorsally. Femora black. All tibiae white including also the tarsi of forelegs. Abdomen almost crescent-shaped. Alar marginal spot pale.

1597. ICHNEUMON *deliratorius* [C*oelichneumon deliratorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate, with three spots on each side, and abdomen entirely jet-black; tibiae white.

Occurs ubiquitously.

DESCR. Middle-sized. Body black. Lip whitish. Thorax black. Three whitish spots barely visible at alar base. Scutellum white. Abdomen oblong, black. Legs black, with tibiae and tarsi whitish at base.

1598. ICHNEUMON *fusorius* [*Protichneumon fusorius* (Linnaeus, 1761). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax maculate; abdomen deep yellow, with a black petiole.

Occurs ubiquitously.

DESCR. The size of *Ich. pisorius*.[1051] Body black. Frons with a deep yellow line in front of each eye; two deep yellow spots at the roots of the wings. Abdomen deep yellow, with a black petiole or first segment. Femora black. Tibiae deep yellow.

1599. ICHNEUMON *fossorius* [*Diphyus fossorius* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], scutellum yellowish; thorax without maculae; abdomen entirely jet-black; legs red-brown.

Inhabits fields; abundant.

DESCR. Middle-sized. Antennae black. Head black; frons light yellow with two maculae. Thorax black. Scutellum whitish. Abdomen black. Legs rusty brown.

1600. ICHNEUMON *comitator* [C*oelichneumon comitator* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], entirely jet-black; antennae with a white fascia.

Inhabits forests.

DESCR. Body entirely black, without maculae. Wings also rather dark. Antennae medially, on one side, white.

[1051] See no. 1589.

1601. ICHNEUMON *peregrinator* [*Barichneumon peregrinator* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], black; legs subclavate and abdomen rusty brown, with the two last segments black; anus whitish.

Inhabits meadows.

DESCR. Twice the size of a louse.

1602. ICHNEUMON *incubitor* [*Gambrus incubitor* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], black; abdomen rusty brown with black tip and white macula; wings hyaline; antennae weakly fasciate.

Ichneumon, black; abdomen rusty brown with a black tip; antennae with a white ring. *Fn.* 970.

Act. Ups. 1736. p. 29. n. 7. Ichneumon aculeo triplici, pedibus abdomineque testaceis, apice nigro.

Lives ubiquitously among flowers and also in forests.

DESCR. Head and thorax black. Antennae black with a white ring. All legs rusty brown. Abdomen obversely ovate, rusty brown; last segment black, with a small triple sting. Wings membranous.

1603. ICHNEUMON *reluctator* [*Echthrus reluctator* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], black; abdomen medially pitch black; anterior tibiae clavate.

Inhabits fields.

DESCR. Middle-sized. Body black. Antennae with a snow-white ring. Abdomen black, medially gleaming, indistinctly rusty brown. Tibiae pitch black. Sting longer than abdomen.

1604. ICHNEUMON *denigrator* [*Atanycolus denigrator* (Linnaeus, 1758). Braconidae subfam. Braconinae, Eng. Braconine wasps, Sw. Rundmunsteklar], body jet-black; wings black with a hyaline crescent; abdomen brick-red, not fully sessile.

Inhabits meadows.

DESCR. Middle-sized. Body jet-black, smooth. Antennae barely the length of the body. Abdomen not fully sessile, light yellow. Sting black, the length of the body. Wings black, upper ones medially with a whitish crescent. I have seen another very similar species but without the alar, whitish crescent. Sting half the length of the body.

1605. ICHNEUMON *desertor* [*Cremnops desertor* (Linnaeus, 1758). Braconidae subfam. Agathidinae, Eng. Agathidine wasps, Sw. Långnossteklar], body deep yellow; wings fuscous, with two white fasciae.

Inhabits meadows.

DESCR. Small. Body entirely light yellow. Eyes and antennae shorter than body, black. Wings darkish, medially with a white blotch. Sting shorter than body.

1606. ICHNEUMON *corruscator* [C*ratichneumon coruscator* (Linnaeus, 1758). Ichneumonidae subfam. Ichneumoninae, Eng. Ichneumonine wasps, Sw. Fjärilsparasitsteklar], body and limbs jet-black; wings dusky hyaline.

Inhabits meadows.

1607. ICHNEUMON *rutilator* [*Tryphon rutilator* (Linnaeus, 1761). Ichneumonidae subfam. Tryphoninae, Eng. Tryphonine wasps, Sw. Skaftäggsteklar], body black, without maculae; antennae beneath, abdomen and the four anterior legs rusty brown.

Occurs in Kalmar. *Modéer.*

DESCR. Middle-sized. Antennae longitudinally whitish yellow beneath. Head with a quadrate, deep yellow frons. Thorax without maculae. Abdomen except for the black petiole rusty brown. Scutellum without maculae. The four anterior legs weakly rusty brown, the posterior two black.

1608. ICHNEUMON *manifestator* [*Ephialtes manifestator* (Linnaeus, 1758). Ichneumonidae subfam. Pimplinae, Eng. Pimpline wasps, Sw. Buktläppsteklar], body jet-black, without maculae; abdomen sessile, cylindrical; legs red-brown.

Ichneumon, jet-black; legs red-brown. *Fn.* 959.

Raj. Ins. 256. Vespa Ichneumon tota nigra; praeter pedes, qui crocei sunt.

ib. Musca tripilis corpore tenui admodum & praelongo, setis a cauda, omnium, quas unquam vidi, longissimis, exeuntibus.

De Geer Ins. 1. t. 36. f. 9.

Act. Ups. 1736. p. 29. n. 3. Ichneumon cauda tripili, abdomine tereti atro, pedibus filiformibus rubris.

Inhabits sandy places ubiquitously.

DESCR. Whole body, including antennae, head, thorax, abdomen, and sting black. Sting filiform, black, consisting of three setae (intermediate one red) that are longer than body. Abdomen cylindrical. Legs long, entirely red-brown. Wings with a marginal, blackish macula.

1609. ICHNEUMON *compunctor* [*Apechthis compunctor* (Linnaeus, 1758). Ichneumonidae subfam. Pimplinae, Eng. Pimpline wasps, Sw. Buktläppsteklar], body jet-black, without maculae; abdomen somewhat petiolate, oblong; legs red-brown, with posterior tibiae black at tip.

Ichneumon, jet-black; femora and legs brick-red; antennae pale beneath. *Fn.* 957. 958.

Occurs around us; frequently found in the pupae of butterflies.[1052]

DESCR. Rather small. Body black. Antennae half the length of the body. Palps setaceous, deep yellow. All legs rusty brown, last pair with fuscous tarsi. Abdomen black. Sting short. Antennae deep yellow beneath.

[1052] Lat. *in Pupis Papilionum.*

1610. ICHNEUMON *delusor* [*Syntactus delusor* (Linnaeus, 1758). Ichneumonidae subfam. Ctenopalmatinae, Eng. Ctenopalmatine wasps, Sw. Uddbensteklar], body black; abdomen rusty brown, at base and tip black; only patella of hind femora black.

Inhabits meadows.

1611. ICHNEUMON *titillator* [*Meringopus titillator* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], body black; abdomen rusty brown at base and tip black; hindlegs black with white tarsi.

Ichneumon, black; abdomen and forelegs red-brown in the middle; hindlegs with white tarsi. *Fn.* 982.

Occurs ubiquitously.

DESCR. Middle-sized. Body with head, thorax, legs, and antennae black, without maculae. Abdomen rusty brown with black petiole and tip. Forelegs rusty brown. Hindlegs black with white tarsi.

1612. ICHNEUMON *venator* [*Banchus volutatorius* (Linnaeus, 1758). Ichneumonidae subfam. Banchinae, Eng. Banchine wasps, Sw. Hacksprötsteklar],[1053] body jet-black, without maculae; abdomen beneath base flesh-coloured; legs red-brown; sting retractable.

Inhabits meadows.

1613. ICHNEUMON *extensor* [*Charmon extensor* (Linnaeus, 1758). Braconidae subfam. Charmontinae, Eng. Charmontine wasps], body black, without maculae; abdomen cylindrical; legs red-brown; palps setaceous.

Ichneumon, linear; antennae the length of the body; tentacles setaceous; femora clavate. *Fn.* 986.

Occurs in Skåne. *Mr Leche.*

DESCR. The length of a mosquito,[1054] very slender and oblong. Legs brick-red. Femora clavate. Abdomen clavate. Antennae the length of the body; on the cauda three setae that are as long as body. Wings folded or incumbent, with a rusty brown marginal macula. Two setae or tentacles at mouth that are as long as thorax, white. The other sex lacks caudal setae.

1614. ICHNEUMON *exarator* [*Spathius exarator* (Linnaeus, 1758). Braconidae subfam. Doryctinae, Eng. Doryctine wasps, Sw. Vedbaggsteklar], body pitch black, without maculae; abdomen and femora clavate; palps setaceous; wings with a black and white macula.

Inhabits meadows.

DESCR. Body small, narrow. Legs rather long. Sting longer than body.

[1053] See no. 1591.

[1054] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1615. ICHNEUMON *turionellae* [*Pimpla turionellae* (Linnaeus, 1758). Ichneumonidae subfam. Pimplinae, Eng. Pimpline wasps, Sw. Buktläppsteklar], black; abdomen cylindrical; fuscous alar macula inserted into the whiteness; tibiae rusty brown, annulated with white.

Lives in the larvae of the pine bud moth.[1055]

DESCR. Rather small. Body jet-black. All tibiae rusty brown, with a white ring rather close to base. Sting shorter than abdomen.

1616. ICHNEUMON *strobilellae* [*Liotryphon strobilellae* (Linnaeus, 1758). Ichneumonidae subfam. Pimplinae, Eng. Pimpline wasps, Sw. Buktläppsteklar], black; sting longer than body; legs inclining to deep yellow; posterior tibiae and tarsus black, annulated with white.

Ichneumon, black; abdomen rusty brown with black tip and black antennae. *Fn.* 971.

Act. Ups. 1736. p. 29. n. 5. Ichneumon niger, cauda exserta triplici, pedibus anterioribus abdomineque luteis.

Lives in the larvae of the spruce seed moth[1056] and those of the pine bud moth.[1057]

DESCR. Antennae, head, and thorax black. Abdomen ovate, rusty brown, with last segment black. Legs rusty brown, but hind femora black. Triple sting, almost the length of the abdomen. Wings greyish blue.

1617. ICHNEUMON *moderator* [*Phaedroctonus moderator* (Linnaeus, 1758). Ichneumonidae subfam. Campopleginae, Eng. Campoplegine wasps, Sw. Klämbaksteklar], black; abdomen petiolate, compressed; mouth palpate; legs pale; sting somewhat shorter than body.

Lives in the larva of the spruce seed moth.[1058] When the larva has been consumed, the wasp builds a sac in the larval cranium of what remains of the larva. *Mr Rolander.*

DESCR. Small. Body black. Legs pale rusty brown. Antennae the length of the body. Sting barely the length of the body. There is another wasp that has a sting twice as long as the body. The four anterior legs rusty brown.

1618. ICHNEUMON *resinellae* [*Macrocentrus resinellae* (Linnaeus, 1758). Braconidae subfam. Macrocentrinae, Eng. Macrocentrine wasps, Sw. Fjärilgömmesteklar], black; legs light yellow; abdomen subcylindrical, sessile; antennae deep yellow at base.

Lives in the larva of the pine resin-gall moth.[1059]

[1055] See no. 1420.

[1056] See no. 1419.

[1057] See no. 1420.

[1058] See no. 1419.

[1059] See no. 1423.

DESCR. Minute. Body jet-black, without maculae, filiform. Base of antennae light yellow. Legs entirely inclining to deep yellow.

1619. ICHNEUMON *praerogator* [*Tranosemella praerogator* (Linnaeus, 1758). Ichneumonidae subfam. Campopleginae, Eng. Campoplegine wasps, Sw. Klämbaksteklar], black; legs light yellow; abdomen oblong, blunt.
Lives in the larvae of the white satin moth.[1060]

1620. ICHNEUMON *mandator* [*Agrothereutes mandator* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], black; second and third abdominal segments rusty brown, tip white on the upper part; antennae unicoloured.
Inhabits orchards.

1621. ICHNEUMON *enervator* [*Nomen dubium*], black; first three abdominal segments red-brown, tip white on the upper part; antennae fasciate with white.
Ichneumon, abdomen anteriorly rusty brown, posteriorly black with four white maculae. *Fn.* 978.
Inhabits gardens.
DESCR. Head black, without maculae. Thorax without maculae, black. First abdominal segment black, second and third segments rusty brown, the others black with a white macula on the back. Legs red-brown. Hind femora black.

1622. ICHNEUMON *gravidator* [*Proctotrupes gravidator* (Linnaeus, 1758). Fam. Proctotrupidae, Eng. Proctotrupid wasps, Sw. Svartsteklar], black; first abdominal segment rusty brown extending half length of abdomen.
Inhabits small woods.

1623. ICHNEUMON *inculcator* [*Cryptus inculcator* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], black; abdomen falcate, entirely rusty brown.
Ichneumon, black; abdomen entirely rusty brown. *Fn.* 972.
Act. Ups. 1736. p. 29. n. 6. Ichneumon aculeo triplici erecto, collari nigro, abdomine pedibusque testaceis. *Fn.* 972.
Occurs ubiquitously.
DESCR. Head, antennae, and thorax black. Wings membranous. Abdomen obversely ovate, rusty brown. All legs rusty brown.

[1060] See no. 1129.

1624. ICHNEUMON *pugillator* [*Dusona pugillator* (Linnaeus, 1758). Ichneumonidae subfam. Campopleginae, Eng. Campoplegine wasps, Sw. Klämbaksteklar], black; abdomen falcate; second, third, and fourth segments red-brown; legs slender, rusty brown.

Ichneumon, black; abdomen anteriorly deep yellow and legs deep yellow. *Fn*. 975.

Raj. Ins. 255. Vespa ichneumon major & longior, abdomine multo tenuiore ligamento pectori adnexo.

De Geer Ins. 1. t. 6. f. 12.

Act. Ups. 1736. p. 29. n. 16. Ichneumon niger, abdomine falcato superne luteo, alis erectis.

Lives in the larvae of the pebble prominent.[1061]

DESCR. Agrees in appearance with the immediately preceding ichneumon wasps, but it is slightly smaller. Abdomen agrees with the previous two species since it is anteriorly deep yellow and posteriorly black on segments two and three, respectively. It differs from the earlier mentioned wasps by the generally black thorax and the similarly black abdominal petiole. Legs are mostly black. It wounds with its sting and causes pain.

1625. ICHNEUMON *ruspator* [*Helconidea ruspator* (Linnaeus, 1758). Braconidae subfam. Helconinae, Eng. Helconine wasps, Sw. Växtbaggesteklar], black; abdomen subcylindrical; legs rusty brown; femora clavate, posterior pair dentate.

Inhabits meadows and gardens.

DESCR. Middle-sized. Body entirely black, without maculae. Antennae and palps black. Legs rusty brown. Femora short, clavate, posterior pair with fuscous base and beneath equipped with a tooth. Sting the length of the body.

1626. ICHNEUMON *jaculator* [*Gasteruption jaculator* (Linnaeus, 1758). Eng. Greater pennant wasp, Sw. Slätnackad bistekel; Fam. Gasteruptiidae, Eng. Gasteruptiid wasps, Sw. Bisteklar], black; abdomen falcate, with second, third, and fourth segments red-brown; posterior tibiae clavate.

Ichneumon, with posterior tibiae clavate. *Fn*. 985.

Mouff. Lat. 64. f. 121. Musca tripilis 1.

Reaum. Gall. 4. t. 10. f. 14.

De Geer. Ins. 1. t. 36. f. 10.

Act. Ups. 1736. p. 28 n. 2. Ichneumon cauda triplici, abdomine superne flavescente, pedibus clavatis.

p. 29. 17. Ichneumon cauda inermi, abdomine falcato, pedibus clavatis.

[1061] See no. 1116.

Lives in the larvae of the large-headed resin bee,[1062] large scissor-bee,[1063] and *Sphex figulus*.[1064] It carefully searches for the larval hiding place with its antennae, then flies away, returns, and puts an egg inside the larva. *T. Bergman*.

DESCR. Head, thorax, legs, and antennae black. Sting of the female triple, black (red in the middle), hairlike, the length of the body or longer, apically white. Abdomen falcate, joined to the thoracic petiole, black, but at base red-brown. Hindlegs consist of small femora, to which there is an adjoining segment with a black, less thick tibia, and a third segment or a lower very thick tibia that is black and clavate; last segment slender, white at base.

1627. ICHNEUMON *assectator* [*Gasteruption assectator* (Linnaeus, 1758). Eng. Wild carrot wasp, Sw. Slätsprötad bistekel; Fam. Gasteruptiidae, Eng. Gasteruptiid wasps, Sw. Bisteklar], black; abdomen falcate; second, third, and fourth segments laterally red-brown; posterior tibiae clavate.

Inhabits fields.

DESCR. Similar to the preceding species, but only half as large. Body entirely black. Three abdominal segments medially rusty brown laterally. Tibiae with a ring inclining to deep yellow at base, posterior ones clavate. Sting three times shorter than abdomen.

1628. ICHNEUMON *luteus* [*Ophion luteus* (Linnaeus, 1758). Ichneumonidae subfam. Ophioninae, Eng. Ophionine wasps, Sw. Nattflysteklar], deep yellow; thorax striate; abdomen falcate.

Ichneumon, entirely deep yellow. *Fn.* 967.

Goed. Belg. 2. p. 135. f. 37.

List. Goed. 59. f. 20. C.

Raj. Ins. 253. n. 6. Vespa ichneumon major tota fulva, alis amplis: anterioribus nota fulva circa medium marginem anteriorem insignibus.

Act. Ups. 1736. p. 29. n. 15. Ichneumon flavus, abdomine falcato, alis erectis.

Lives in larvae. The larva of this wasp clings to the larva of a moth[1065] and consumes it.

DESCR. Whole body including head, thorax, abdomen, antennae, and legs are of one and the same colour, namely light yellow or watery light yellow. Wings of a membranous colour with a marginal, deep yellow spot. Abdomen arcuate, attached to the narrower base by a petiole. Antennae almost the length of the body with innumerable segments. Only eyes blackish.

[1062] See no. 1692.

[1063] See no. 1704.

[1064] See no. 1650.

[1065] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

1629. ICHNEUMON *ramidulus* [*Enicospilus ramidulus* (Linnaeus, 1758). Ichneumonidae subfam. Ophioninae, Eng. Ophionine wasps, Sw. Nattflysteklar], deep yellow; abdomen falcate and with a black tip.

Ichneumon, entirely deep yellow; abdominal tip black. *Fn.* 969.

Raj. Ins. 253. n. 7. Vespa ichneumon praecedenti congener, sed minor, tum corpore tum alis, verum imo abdomine seu cauda nigra.

Inhabits small woods; rather rare.

DESCR. Body entirely deep yellow; only the two last abdominal segments black. Wings of a membranous colour. Antennae the length of the body.

1630. ICHNEUMON *glaucopterus* [*Opheltes glaucopterus* (Linnaeus, 1758). Ichneumonidae subfam. Ctenopalmatinae, Eng. Ctenopalmatine wasps, Sw. Uddbensteklar], deep yellow; pectus black; abdomen falcate; anus black.

Ichneumon, rusty brown; abdominal tip and lower pectoral part black. *Fn.* 973.

Lives in hedges; rather rare.

DESCR. Antennae, sides of head, legs, and anterior abdominal part rusty brown, but thorax beneath and the three outermost abdominal segments black.

1631. ICHNEUMON *circumflexus* [*Therion circumflexum* (Linnaeus, 1758). Ichneumonidae subfam. Anomaloninae, Eng. Anomalonine wasps, Sw. Hängbensteklar], black; abdomen falcate, anteriorly deep yellow; hindlegs with black knees; scutellum light yellow.

Ichneumon, black; abdomen anteriorly deep yellow; legs with black knees. *Fn.* 974.

Occurs in Uppsala. *R. Hast.*

DESCR. Head black, with a light yellow line around eyes; macula of frons light yellow and lip light yellow. Antennae rusty brown. Thorax apically with a light yellow macula. Legs rusty brown, but posterior ones ovate at base and black. Femora and tibiae apically black. Abdomen light yellow tending to rusty brown, compressed, falcate, but black at tip; on abdominal dorsum a long, black line.

1632. ICHNEUMON *cinctus* [*Gelis cinctus* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], black; antennae and legs rusty brown; wings white with two black fasciae.

Ichneumon, black; white wings with two black fasciae, of which the posterior is larger. *Fn.* 984.

Inhabits meadows.

DESCR. It is small, the size of a mosquito,[1066] narrow, entirely black, with very slender and straight antennae. The whole body is jet-black, but primary femora red-brownish; wings watery, posteriorly with a large, blackish macula, in front of which is a thin transverse, black line.

[1066] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1633. ICHNEUMON *muscarum* [*Pachyneuron muscarum* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], golden yellow, with light yellow jumping legs.

De Geer. Ins. 1. t. 32. f. 19. 20.

Lives in the larvae of aphid-eating flies.

1634. ICHNEUMON *bedeguaris* [*Torymus bedeguaris* (Linnaeus, 1758). Fam. Torymidae, Eng. Torymid wasps, Sw. Gallglanssteklar], gold-coloured; thorax green; abdomen golden. *Fn.* 939.

Tenthredo, thorax bronze green, abdomen golden.

Blank. Belg. 188. n. 12. t. 16. *quoad descr.*

Germ. 142. t. 16. f. 5.

Act. Nat. Cur. ann. 12. *obs.* 10.

Lives in the rose bedeguar galls of *Cynips rosae*[1067] and the galls of *Cynips quercus*.[1068]

DESCR. The most beautiful species of this genus; the size of a tiny ant.[1069] Antennae cylindrical, black, half the length of the body. Thorax bronze green. Abdomen gilded, of a fiery colour. Legs flesh-coloured. Triple sting similar to a seta, black, middle element red, the length of the body.

1635. ICHNEUMON *juniperi* [*Torymus juniperi* (Linnaeus, 1758). Fam. Torymidae, Eng. Torymid wasps, Sw. Gallglanssteklar], gold-coloured, green; antennae black; wings with a red spot.

Ichneumon, bronze green, with black, spiral-shaped antennae. *Fn.* 987.

Lives on the juniper gall-midge[1070] inside its three cusps.

DESCR. Body entirely bronze green; the size of a louse. Antennae black, spiral-shaped. Wings watery, with a marginal red spot. Larva red. Pupa ovate, clear and pellucid, of a water-like colour.

1636. ICHNEUMON *puparum* [*Pteromalus puparum* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], gold-coloured, blue; abdomen green, shining; legs pale.

De Geer. Ins. 1. t. 30. f. 18.

Lives in the pupae of butterflies.[1071]

[1067] See no. 1518.

[1068] See no. 1521.

[1069] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[1070] See no. 1774

[1071] Linnaeus only refers to *Papilio*, see nos. 1031–1082.

1637. ICHNEUMON *larvarum* [*Eulophus larvarum* (Linnaeus, 1758). Fam. Eulophidae, Eng. Eulophid wasps, Sw. Finglanssteklar], gold-coloured, green; abdomen black with a dorsal purplish macula; legs light yellow; antennae with seven nodes.

Lives in the larvae of moths.[1072]

1638. ICHNEUMON *gallarum* [*Aulogymnus gallarum* (Linnaeus, 1761). Fam. Eulophidae, Eng. Eulophid wasps, Sw. Finglanssteklar], dusky bronze; abdomen black; tibiae whitish.

Lives on branches inside the larvae of *Cynips quercus.*[1073]

DESCR. I would have called it a gall wasp, if the place and food source had not prohibited it. As for the larvae, similar to those of the ichneumon wasp, but entirely dusky bronze except for the head. Abdomen alone is black. All tibiae white. Antennae shorter than abdomen with seven segments.

1639. ICHNEUMON *cynipedis* [*Pteromalus cyniphidis* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], gold-coloured, green; abdomen fuscous with a pale belt at base; legs whitish yellow.

Tenthredo, thorax green, shining; abdomen fuscous, with a pale belt at base; legs whitish yellow. *Fn.* 942.

Lives on bay willow, where irregular branches end in glabrous galls; the galls are composed internally of layers and the insect lies between these layers.[1074] It appears at the end of April; also emerges from the pupae of the moth, which has been fed on the leaves of oak.

DESCR. Barely the size of a flea. Head and thorax bright green, silky. Abdomen ovate, fuscous, girdled by a pale belt at base. Legs pale. Antennae less pale, shorter than body.

1640. ICHNEUMON *coccorum* [*Pachyneuron coccorum* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], bronze black; abdomen bluish; legs dark bluish grey.

De Geer. Ins. 1. t. 35. f. 17.

Lives in scale insects.

1641. ICHNEUMON *secalis* [*Lestricus secalis* (Linnaeus, 1758). Braconidae subfam. Cenocoeliinae, Eng. Cenocoeliine wasps, Sw. Lyftbaksteklar], black; head red-brown; eyes green.

Lives in the spikes of the common rustic.[1075]

[1072] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

[1073] See no. 1523.

[1074] Misprint as to interpunction. See *Fn. Su.* (1746), no. 942.

[1075] Lat. *Phalaena secalis. Syst. nat.* (1758).

DESCR. The size of a louse. Head red-brown. Eyes a beautifully green. Thorax entirely black. Antennae black, filiform, barely the length of the body. Wings with a marginal, roundish, jet-black spot. Abdomen ovate, smooth, black, with a scabrous petiole. Sting the length of the abdomen.

1642. ICHNEUMON *subcutaneus* [*Nomen dubium*], black; wings hirsute, with a lunate, black macula; antennae almost filiform.

De Geer. Ins. 1. t. 30. f. 21.

Lives in the subcutaneous larvae in leaves.

1643. ICHNEUMON *aphidum* [*Nomen dubium*], black; abdomen, base, forelegs, and hind knees light yellow.

Ichneumon Aphidum. It. Gotl. 307. *Fn.* 953.

Frisch. Ins. 11. p. 19.

Lives on aphids of the field thistle.

DESCR. It walks around here upon the aphids; the size of a flea; similar to the preceding species; entirely black; abdomen at base, as also legs, light yellow, but hindlegs light yellow only at the knees. Antennae jet-black. It bends its anus towards the thorax and curves it like a plough when it lays eggs; thus it stings either the anus of the aphid or the tip of the small appendage.

1644. ICHNEUMON *ovulorum* [*Polynema ovulorum* (Linnaeus, 1758). Fam. Mymaridae, Eng. Mymarid wasps, Sw. Dvärgsteklar], black; legs red-brown; antennae filiform, long.

De Geer. Ins. 1. t. 35. f. 11–13.

Lives in the eggs of lepidopterans.

DESCR. I have seen another somewhat different species from eggs of moths that is smaller than any flea and with an entirely jet-black body.

1645. ICHNEUMON *globatus* [*Glyptapanteles globatus* (Linnaeus, 1758). Braconidae subfam. Microgastrinae, Eng. Microgastrine wasps, Sw. Kokonghopsteklar], black; legs rusty brown.

Ichneumon, silky, conglobate, white. *Fn.* 951.

Journal des scavant. 1713. p. 474. Mouche a cotton.

Derrh. physico-theol. l. 8. c. 6. n. 21.

Raj. Ins. 295. n. 13.

Frisch. Germ. 6. p. 24. t. 10.

Reaum. Gall. 2. t. 35. f. 6.

Act. Ups. 1736. p. 29. n. 10. Ichneumon tophos sericeos exstruens.

Lives on the stems of grass. In autumn the silky sac, not uncommon in the meadows, is the size of a pigeon egg, solitary, white, from which numerous ichneumon wasps emerge.

1646. ICHNEUMON *glomeratus* [*Cotesia glomerata* (Linnaeus, 1758). Braconidae subfam. Microgastrinae, Eng. Microgastrine wasps, Sw. Kokonghopsteklar], black; legs light yellow.

Ichneumon, silky, conglomerate, and light yellow. *Fn.* 952.
Goed. Lat. 1. p. 59. n. 11.
List. Goed. 17. n. 7. *Alterum experimentum.*
Wagn. Helvet. 226. Vermiculi ex crambide.
Raj. Cantabr. p. 35.
Ins. 254. n. 12. & p. 260. Musca brassicariae erucae.
Derrh. Physico-Theol. l. 8. c. 6. n. 21.
Reaum. Gall. 2. t. 33. f. 2. 7. 8.
Mer. Europ. t. 45.
De Geer. Ins. 1. t. 16. f. 6.
Act. Ups. 1736. p. 29. n. 11. Ichneumon parasiticus erucarum minimus.

Lives in the larvae of the large white.[1076] When this larva prepares itself for the metamorphosis, it dies and many of its larvae emerge from the body. Earlier the mother has buried them in the body of a rather large larva. Each of these larvae then floats in a silky sac of its own, not white, but light yellow; hence there are many sacs gathered into a mass.

DESCR. Body black, the size a flea. Antennae black, longer than body. Legs light yellow.

1647. ICHNEUMON *pectinicornis* [*Pnigalio pectinicornis* (Linnaeus, 1758). Fam. Eulophidae, Eng. Eulophid wasps, Sw. Finglanssteklar], jet-black; antennae branched.

De Geer. Ins. 1. t. 16. f. 6.
Act. Stockh. 1740. p. 464. t. 1. f. 4–6.

Lives in the subcutaneous larvae of oak.

Sphex

1648. SPHEX *sabulosa* [*Ammophila sabulosa* (Linnaeus, 1758). Eng. Red-banded sand-wasp or Red-belted sandwasp, Sw. Spenslig sandstekel; Fam. Sphecidae, Eng. Thread-waisted wasps, Sw. Rovsteklar], black, hirtous; abdominal petiole with two segments; second and third segments rusty brown.

Frisch. Germ. 2. t. 1. f. 6. 7.

Lives in the sandy soil into which it digs, and in this sand it buries the spider.

DESCR. Rather large. Body entirely black. Thorax somewhat pubescent. First abdominal segment or the filiform petiole black; in some the second and third segments are rusty brown, in others rusty brown with a black dorsum.

[1076] See no. 1035.

1649. SPHEX *clavipes* [*Rhopalum clavipes* (Linnaeus, 1758). Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], black; abdominal petiole rusty brown, with one clavate segment; legs clavate.

Inhabits fields.

DESCR. Small. Body black, glabrous. Lowest segment of the antennae deep yellow. Jaws deep yellow. The four anterior tibiae light yellow. Posterior tibiae clavate, light yellow at base. Abdomen rusty brown, posteriorly darkish; petiole clavate, blackish.

1650. SPHEX *figulus* [*Trypoxylon figulus* (Linnaeus, 1758). Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], jet-black; abdomen slightly petiolate, with bright segmental margins.

Lives in the holes of wooden walls of houses, which it closes and blocks up having deposited the spider.

DESCR. In size it is barely larger than a mosquito;[1077] oblong, narrow, entirely black. Wings darkish without a marginal spot.

1651. SPHEX *viatica* [*Anoplius viaticus* (Linnaeus, 1758). Eng. Black-banded spider wasp, Sw. Vargvägstekel; Fam. Pompilidae, Eng. Spider wasps, Sw. Vägsteklar],[1078] black, pubescent; wings fuscous; abdomen anteriorly rusty brown, with black belts.

Ichneumon, jet-black; abdomen sessile with anterior segments, red-brown; wings fuscous. *Fn.* 977.

Frisch. Germ. 2. p. 11. t. 1. f. 13.

Raj. Ins. 254. n. 9. Vespa ichneumon major, capite, thorace & pedibus nigris, abdominis anteriore parte rubra, posteriore nigra.

Act. Ups. 1736. p. 50. n. 25. Ichneumon ater, alis nigricantibus, abdomine medio superiore testaceo.

Occurs in Uppsala; fairly abundant.

DESCR. It falls among the largest species, entirely jet-black including antennae, head, thorax, legs, and wings. Abdomen ovate, barely petiolate, rusty brown tending to red-brown or dusky red-brown, except for the three last black segments. Antennae short, arcuate, and with ten segments.

1652. SPHEX *fusca* [*Anoplius viaticus* (Linnaeus, 1758). Eng. Black-banded spider wasp, Sw. Vargvägstekel; Fam. Pompilidae, Eng. Spider wasps, Sw. Vägsteklar],[1079] jet-black, smooth; first three abdominal segments weakly rusty brown.

Lives ubiquitously on sandy paths and in sandy fields.

[1077] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1078] See no. 1652.

[1079] See no. 1651.

DESCR. Very similar to the black-banded spider wasp,[1080] but thorax smooth. The first three abdominal segments rusty brown, black-margined. Jaws smaller than those of the black-banded spider wasp.

1653. SPHEX *mystacea* [*Argogorytes mystaceus* (Linnaeus, 1761). Eng. Two-girdled digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar],[1081] black; scutellum light yellow; three abdominal segments light yellow at margin, the first one interrupted; tibiae rusty brown.

Occurs in Kalmar. *A Modéer.*

DESCR. Appearance as that of a hornet.[1082] Antennae black. Head black with a transverse, deep yellow, interrupted line above mouth. Thorax with anterior deep yellow margin and spot in front of wings; scutellum also deep yellow. Abdomen sessile, jet-black, pointed; 1st segment with two deep yellow maculae above; 2nd, 3rd, and almost all of the 4th deep yellow at margin. Femora black. Tibiae and tarsi rusty brown. Wings flat; hence it cannot be a hornet.

1654. SPHEX *pectinipes* [*Evagetes pectinipes* (Linnaeus, 1758). Eng. Long-combed spider thief, Sw. Kamgökstekel; Fam. Pompilidae, Eng. Spider wasps, Sw. Vägsteklar], black, glabrous; abdomen anteriorly rusty brown; forelegs ciliate.

Inhabits sandy hills.

DESCR. Rather small. Body entirely black, smooth. Forelegs with markedly ciliate tibiae outwardly. Wings darkish without a marginal spot. Anterior three abdominal segments rusty brown.

1655. SPHEX *variegata* [*Dipogon variegatus* (Linnaeus, 1758). Eng. Rough-saddled bandwing, Sw. Aspvägstekel; Fam. Pompilidae, Eng. Spider wasps, Sw. Vägsteklar], entirely black; wings maculate with white.

Tenthredo, jet-black; wings maculate with black and white; antennae with eleven segments. *Fn.* 932.

DESCR. Middle-sized or rather small, entirely jet-black. Upper wings with a narrow, black fascia in the middle, and another that is broad, black, and positioned posteriorly; round white macula at tip. Abdomen posteriorly somewhat pubescent.

1656. SPHEX *colon* [*Dinotiscus colon* (Linnaeus, 1758). Fam. Pteromalidae, Eng. Pteromalid wasps, Sw. Puppglanssteklar], black; legs and antennae red-brown; thorax green; wings with two black maculae.

Occurs around us; rather rare.

DESCR. Slightly larger than a louse. Head and thorax bronze green. Antennae brick-red. Legs brick-red. Abdomen weakly bluish. Upper wings with two fuscous, round maculae, anterior one smaller.

[1080] See no. 1651.

[1081] See no. 1677.

[1082] Linnaeus only refers to *Vespa*, see nos. 1670–1683.

1657. SPHEX *sispes* [*Chalcis sispes* (Linnaeus, 1761). Fam. Chalcididae, Eng. Chalcidid wasps, Sw. Bredlårsteklar], jet-black; abdomen petiolate; hind femora clavate, denticulate, red-brown.

Occurs in Skåne. *Mr* C. *Solander.*

DESCR. The size of an ant.[1083] Head jet-black. Posterior tibiae almost as large as abdomen, rusty brown, with many denticles beneath. Abdomen ovate, very short, with a single-segmented petiole.

1658. SPHEX *gibba* [*Sphecodes gibbus* (Linnaeus, 1758). Eng. Dark-winged blood bee, Sw. Skogsblodbi; Fam. Halictidae, Eng. Sweat bees, Sw. Vägbin], black; abdomen rusty brown with a fuscous tip; forewings apically blackish.

Occurs ubiquitously.

DESCR. Middle-sized. Body black, except for[1084] the two last black abdominal segments. Alar extremities darkish.

1659. SPHEX *rufipes* [*Episyron rufipes* (Linnaeus, 1758). Eng. Red-legged spider wasp, Sw. Strandriddarstekel; Fam. Pompilidae, Eng. Spider wasps, Sw. Vägsteklar], jet-black, abdominal segments with a bilateral white macula; wings apically fuscous; hindlegs red.

Occurs ubiquitously.

DESCR. Middle-sized. Body entirely jet-black, glabrous. 2nd and 3rd abdominal segments with a white spot on each side. But 6th or last one with a white spot above. The posterior 4 legs with flesh-coloured tibiae and half of femora flesh-coloured. All wings blackish at the outermost part.

1660. SPHEX *arenaria* [*Cerceris arenaria* (Linnaeus, 1758). Eng. Sand tailed digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], four abdominal light yellow fasciae; first segment with two light yellow spots.

Apis, black; abdomen with four entirely light yellow fasciae. *Fn*. 994.

Occurs at the chapel, "capellet", in Falun, near the public road, digging burrows in the sand and living gregariously.

DESCR. Almost as large as the western honey bee.[1085] Body black; frons with three deep yellow maculae; light yellow spot behind eyes. The thorax has two separated spots in the anterior part, two approximated at the position of the scutellum and a separate spot bilaterally near thoracic tip. Four abdominal segments with a light yellow belt that is placed near the margin, but first segment narrowed on both sides and marked with a light yellow spot. Tibiae weakly rusty brown.

[1083] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[1084] Before Latin *exceptis*, Linnaeus has lost three important words, i.e. *abdomen rusty brown*. Cf. the description above! Thus the abdomen is rusty brown with the exception of the two last segments!

[1085] *Apis mellifica*. The honey bee species is called *Apis mellifera* in *Syst. nat*. (1758). Apparently Linnaeus has misquoted himself in *Fn. Su*. See also no. 1697.

1661. SPHEX *semiaurata* [*Cleptes semiauratus* (Linnaeus, 1761). Sw. Brynguldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], green, shining; abdomen rusty brown, black-tipped.

Occurs in Skåne. *Mr* C. *Solander.*

DESCR. The size of an ant.[1086] Antennae black. Head, thorax, and femora bronze green. Tibiae rusty brown. Abdomen rusty brown, ovate, with tip or the two posterior segments black.

1662. SPHEX *fossoria* [*Ectemnius fossorius* (Linnaeus, 1758). Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], thorax without maculae; mouth silvery; abdomen with five deep yellowish maculae on each side.

Inhabits sandy hills.[1087]

DESCR. Rather large. Body black. Mouth silvery, with deep yellow jaws. Lowest segment of antennae deep yellow. Thorax somewhat pubescent with an indurated rusty brown spot in front of wings. Abdomen ovate, black; five segments with a bilateral rusty brown or deep yellowish macula on each side, but a whitish macula on the others. Tibiae, especially posterior ones, light yellow. Head is large.

1663. SPHEX *leucostoma* [*Crossocerus leucostoma* (Linnaeus, 1758). Eng. Pinewood box-head wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], jet-black, glabrous; lip silvery; tarsi fuscous.

Lives in sandy soil.

DESCR. Rather small; appearance as that of a bee, entirely black. Femora and tibiae subclavate.

1664. SPHEX *vaga* [*Nomen dubium*], thorax with two spots; abdomen with three light yellow fasciae, first ones interrupted; tibiae light yellow.

Occurs ubiquitously.

Chrysis

1665. CHRYSIS *ignita* [*Chrysis ignita* (Linnaeus, 1758).[1088] Eng. Ruby-tailed wasp, Sw. Gnistguldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], glabrous, shining; thorax green; abdomen golden with anus exhibiting four toothlike projections.

Apis, shining; thorax green-blue; abdomen gilded. *Fn.* 1004.

Act. Ups. 1736. p. 28. n. 5. Apis parietina nitida, collari caeruleo, abdomine aureo.

Frisch. Germ. 9. p. 19. t. 10. f. 1. Vespa argillacea variegata sive superbe colorata.

Lives in houses and city walls, especially those of clay.

[1086] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[1087] Regionally extinct in Sweden. Last record 1957.

[1088] See the com. to no. 1669.

DESCR. Smaller than the western honey bee.[1089] It is truly the most beautiful species of its genus. Head and thorax strongly shining cyaneous. Abdomen of a fiery colour shining with gold. Stings and hurts as a bee. Wings fuscous. Last abdominal segment (except for that of anus) is dentate, just as thorax posteriorly in some measure. Antennae black, with 12 segments.

1666. CHRYSIS *aurata* [*Pseudomalus auratus* (Linnaeus, 1758). Sw. Mindre kulguldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], glabrous, shining; thorax green; abdomen golden; anus with two toothlike projections.

Lives at the walls of houses.

DESCR. A quarter of the size of the preceding species. Antennae black. Thorax green-blue, shining. Abdomen gold-coloured, strongly glistening. Wings darkish.

1667. CHRYSIS *cyanea* [*Trichrysis cyanea* (Linnaeus, 1758). Sw. Tretandad guldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], glabrous, shining; thorax and abdomen blue; anus with three toothlike projections.

Lives in wooden walls of houses.

DESCR. Very similar to the ruby-tailed wasp,[1090] but slightly smaller, unicoloured, entirely shining blue.

1668. CHRYSIS *viridula* [*Chrysis viridula* Linnaeus, 1761. Eng. Green-tipped rubytail, Sw. Rödryggad guldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], glabrous, shining green; thorax and the two primary abdominal segments golden on the back; anus with four toothlike projections.

Lives in walls of houses. *Mr* C. *Solander.*

DESCR. Similar to the ruby-tailed wasp,[1091] but entirely green except for the first and second abdominal segments that are of a red-golden hue and the golden thoracic dorsum.

1669. CHRYSIS *fulgida* [*Chrysis fulgida* Linnaeus, 1761. Eng. Aspen rubytail, Sw. Blåröd guldstekel; Fam. Chrysididae, Eng. Cuckoo wasps, Sw. Guldsteklar], glabrous, shining; thorax and the first abdominal segment blue, the others golden; anus with four toothlike projections.

Occurs in Uppsala.

DESCR. Similar to *Sphex ignita*,[1092] but abdomen golden except for the first and second segments, which are blue, the others golden and strongly glistening.

[1089] Lat. *Apis domestica* [*sic!*]. See the com. to no. 1660 and also to no. 1697.

[1090] See no. 1665.

[1091] See no. 1665.

[1092] *Sphex ignita* = *Chrysis ignita* no. 1665. Linnaeus gave this species the genus name *Sphex* in *Syst. nat.* (1758), but *Chrysis* above in no. 1665, which he obviously had forgotten when he came to no. 1669.

Vespa

1670. VESPA *crabro* [*Vespa crabro* Linnaeus, 1758. Eng. Hornet, Sw. Bålgeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thorax black, anteriorly red-brown, without maculae; abdominal segments with a contiguous black double spot.

Apis, thorax black; anteriorly red-brown, without maculae; abdominal segments with a contiguous black double spot. *Fn.* 988.

Mouff. Lat. 50. Crabro.

Merr. Pin. 196. Crabro.

Raj. Ins. 250. Crabro vulgaris.

Frisch. Germ. 9. p. 21. t. 11. f. 1. Crabro.

Swamm. Bibl. t. 26. f. 9.

In Sweden: Bolgetting.

Lives in trees, under tree roots, and in empty houses; preys by snatching other insects, even western honey bees.[1093]

DESCR. Upper lip deep yellow. Head red-brown. Thorax black, anteriorly red-brown. Legs grey. Abdominal segments outwardly deep yellow, inwardly black, with two spots on the 3rd, 4th, and 5th segments, but at base connate with the inner blackness of the segments.

1671. VESPA *vulgaris* [*Vespula vulgaris* (Linnaeus, 1758). Eng. Common wasp, Sw. Vanlig geting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thorax with a thin, interrupted line on each side; scutellum with four deep yellow maculae; abdominal segments with four distinct, black spots.

Apis, thorax with three different, whitish yellow pairs of thin lines; the black spots of the segments separate. *Fn.* 989.

Mouff. Lat. 52. Vespa.

Merr. Pin. 196. Vespa flava major.

Raj. Ins. 250. Vespa vulgaris.

Frisch. Germ. 9. p. 23. t. 12. f. 2.

Swamm. Bibl. t. 26. f. 8.

In Sweden: Wespa, Getting.

Lives under roofs; abundant around us; preys on flies.

DESCR. Antennae blackish. Frons of various deep yellow colours. Thorax jet-black, with a bilateral, interrupted light yellow line in front of wings; posteriorly 4 light yellow, transverse spots. Abdominal segments black, all light yellow at margin; on each segment two black spots, the blackness is joined on the anterior segments but distinct on the posterior. Tibiae light yellow.

[1093] See the com. to no. 1660.

1672. VESPA *rufa* [*Vespula rufa* (Linnaeus, 1758). Eng. Red wasp, Sw. Rödbandad geting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thorax with a bilateral thin line; scutellum bimaculate; abdomen light yellow, anteriorly rusty brown.

Apis, thorax black, with thin, light yellow lines; abdominal segments black with light yellow margins, first and second segments rusty brown. *Fn.* 998.

Inhabits gardens; rather rare.

DESCR. In size and appearance very similar to the common wasp.[1094] Head black with a light yellow frons, which has a spear-shaped macula; jaws light yellow. Light yellow spot between antennae. Head laterally light yellow, with a thin line on each side. Thorax black with a thin, light yellow line in front of each wing and with two transverse light yellow spots at the position of the scutellum. Abdominal segments black with light yellow margins, but the first segment entirely rusty brown with a light yellow margin; the second segment black medially at base. Femora mostly black, but tibiae rusty brown. Antennae black.

1673. VESPA *parietum* [*Ancistrocerus parietum* (Linnaeus, 1758). Eng. Notched mason wasp, Sw. Kilmurargeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thorax with a thin line and two spots; scutellum with two spots; abdomen with five light yellow fasciae, the first one most spaced.

Apis, black; abdomen with five light yellow fasciae, the first one most spaced. *Fn.* 990.

Frisch. Germ. 9. t. 12. f. 1.

Occurs ubiquitously.

DESCR. Antennae clavate, black; lowest segment light yellow beneath; light yellow spots laterally at maxillary base: 2 near tip of upper lip, 2 on frons, 1 between antennae, 2 medially on the thoracic back, and 1 at each wing. Thoracic base with a light yellow line. All tibiae light yellow. All five abdominal segments light yellow at margin, of which the first is rather spaced and fairly broad with a thin, semi-bifid line. Wings not quite unfolded.

1674. VESPA *muraria* [*Symmorphus murarius* (Linnaeus, 1758). Eng. Symmorphus wasp, Sw. Större vedgeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], black; thorax with two rusty brown spots; abdomen with four light yellow fasciae, of which the anterior one is very spaced.

Apis, black; thorax whitish yellow at base; abdomen with four light yellow fasciae, of which the first is very spaced. *Fn.* 991.

Frisch. Germ. 9. t. 24. t. 12. f. 8. 9.

Occurs in the countryside.

DESCR. It is entirely black. Antennae almost clavate; from the back to the thoracic base two rusty brown maculae; no macula at thoracic tip. Abdomen is surrounded by four light yellow fasciae, of which the first one is very remote from the others. Tibiae are also light yellow.

[1094] See no. 1671.

1675. VESPA *cribraria* [*Crabro cribrarius* (Linnaeus, 1758). Eng. Slender bodied digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], black; abdomen with six light yellow fasciae, of which the three in the middle are interrupted; anterior tibiae with cribriform shields.

α *Apis*, glabrous, black; tibiae light yellow; abdomen with three light yellow fasciae, first ones interrupted. *Fn.* 997.

Act. Stockh. 1751. p. 56. t. 3. f. 1. Apis nigra, abdomine fasciis sex flavis: intermediis interruptis, tibiis anticis lamellis perforatis.

Raj. Ins. 255. Vespa ichneumon antennis reflexis, pedibus anterioribus velut clypeatis.

DESCR. Head jet-black. Antennae jet-black, awl-shaped. Mouth silvery. Thorax black, pubescent. Abdomen glabrous, jet-black: 1st segment without maculae, with a light yellow margin; 2nd with an ovate macula on each side; 3rd with a deep yellow macula on each side; 4th with a light yellow line, interrupted on the back; 5th with a contiguous, light yellow line; 6th the same as the previous one. Abdomen is entirely jet-black beneath. Tibiae red-yellow. Femora black. Anterior tibiae black, equipped with a convex, hornlike lamina, scattered with pellucid spots.

β[1095] *Apis*, black; abdomen with four light yellow fasciae, with the first three interrupted. *Fn.* 993.[1096]

Lives ubiquitously among flowers, just as if it sieved the pollen, though its sieves apparently are not perforated.

DESCR. Body black, smaller than a bee. All tibiae light yellow. Thorax without maculae. The abdomen is decorated on each side with three thin transverse, light yellow lines, and behind these there is a thin, transverse, light yellow line. Antennae short, black, at base light yellow.

1676. VESPA *coarctata* [*Eumenes coarctatus* (Linnaeus, 1758). Eng. Heath potter wasp, Sw. Östlig krukmakargeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], first abdominal segment funnel-shaped, second one bell-shaped, very large, with two spots.

Apis, black; first abdominal segment funnel-shaped, second one bell-shaped, very large. *Fn.* 1002.

Frisch. Germ. 9. p. 17. t. 9.

Inhabits willow thickets.

DESCR. Middle-sized, entirely jet-black. Abdomen strongly glabrous; all margins of abdominal segments light yellow; first segment slender, slightly swollen, second one very large so that it can hide all the others that are retracted into themselves, and which segment has a linear, oblique, light yellow macula on each side (in my specimen, not in that of *Frisch*). Thorax black. A single linear, interrupted, light yellow macula at base; another single macula on each wing; a single linear macula at tip, but this one is bifid. The description by *Frisch* is excellent.

[1095] It should be noted that two "species" are described in no. 1675.

[1096] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Addenda*, p. 559.

1677. VESPA *campestris*[1097] [*Argogorytes mystaceus* (Linnaeus, 1761). Eng. Two-girdled digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar],[1098] abdomen with four light yellow fasciae, first one interrupted.

Occurs ubiquitously.

DESCR. Middle-sized. Body black. Mouth above with a transverse, light yellow line. Thorax anteriorly with a light yellow, transverse line at base. Light yellow spot in front of wings. Transverse, light yellow spot at the position of the scutellum. First abdominal segment with two transverse, light yellow maculae; the three following segments light yellow at margins. Tibiae rusty brown.

1678. VESPA *arvensis* [*Mellinus arvensis* (Linnaeus, 1758). Eng. Field digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], with four abdominal light yellow fasciae, third one interrupted.

α *Apis*, black; thorax whitish yellow at base and tip; abdomen with four light yellow fasciae, third one interrupted. *Fn.* 992.

β *Apis*, glabrous, black; abdomen with three light yellow fasciae, third one most spaced; first segment funnel-shaped. *Fn.* 996.

Inhabits fields and ploughed land.

DESCR. Smaller than the common wasp.[1099] Antennae black. Body black; light yellow, thin line at anterior thoracic margin and medially on thorax a light yellow spot at the position of the scutellum. Abdomen is marked with three transverse, light yellow fasciae on the back, of which the second and third ones most spaced; between these two there is a bilateral, oblong, light yellow spot; first abdominal segment narrow and clavate. Legs except for the red-brown femora are black.

1679. VESPA *parietina* [*Ancistrocerus parietinus* (Linnaeus, 1761). Eng. Wall mason wasp, Sw. Väggmurargeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], abdomen with five light yellow fasciae, first one rather spaced.

Vespa, glabrous, black; abdomen with three light yellow fasciae, first rather spaced. *Fn.* 995.

Lives in walls of houses.

DESCR. Middle-sized. Body black. Four light yellow spots at mouth and a single one between antennae; these spots are light yellow beneath at base. Thorax with a thin, light yellow line at base and a deep yellow spot above each wing, in addition a twin spot at the position of the scutellum. Abdomen with 5 or 6 light yellow fasciae, of which the first one rather spaced.

[1097] I.e. *Sphex mystacea*, see no. 1653.

[1098] See no. 1653.

[1099] See no. 1671.

1680. VESPA *biglumis* [*Polistes biglumis* (Linnaeus, 1758). Sw. Stenpappersgeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thoracic scutellum with two spines; abdominal segments white-margined, second one with two white spots. *Syst. nat.* 10. n. 8. & 12.

Lives on the south sides of stones; makes a nest of aggregated tubes. *Rolander.*

DESCR. Stature as that of a common wasp.[1100] Body black. Frons whitish. Antennae light yellow beneath. Light yellow spot behind eyes. Thorax with some white spots; two white spots at the position of the scutellum; at tip of each side a small, reflexed, acuminate, white lamina. Abdomen with white-margined segments, second one with two white spots. Legs rusty brown.

1681. VESPA *uniglumis* [*Oxybelus uniglumis* (Linnaeus, 1758). Eng. Common spiny digger wasp; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], thorax without maculae, with mucronate scutellum; three abdominal segments with a lateral, white spot.

Apis, black; tibiae rusty brown; abdomen with four whitish yellow spots on each side. *Fn.* 1011.

Occurs ubiquitously in gardens. Although it is very small, it often drags along a house fly[1101] which it has killed and which is three or four times larger than itself, just as *Sphex*[1102] does.

DESCR. Head and thorax black, without maculae. Abdomen black, the first four segments of which are marked on the back with a pair of starkly white maculae. The pair close to thorax consists of ovate maculae on both sides, other pairs of linear maculae. Femora black, but tibiae rusty brown. Antennae not longer than the head, black, bent downwards and indistinct at tips. Scutellum with a prominent acute edge.

1682. VESPA *spinipes* [*Odynerus spinipes* (Linnaeus, 1758). Eng. Spiny mason wasp, Sw. Mörk lergeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], lip light yellow, marginate; abdomen with five light yellow fasciae.

Occurs around us; rather rare.

DESCR. Rather small. Body black. Head lacking maculae, lip light yellow, bidentate or emarginate. Light yellow spot between antennae, which are light yellow antero-laterally. Thorax lacking maculae with anterior margin light yellow. Abdomen with five light yellow fasciae, first one most spaced. Tibiae light yellow. Second pair of femora equipped with three teeth.

The other sex lacks femoral teeth and enjoys a light yellow spot in front of the wings and the antennae are light yellow only anteriorly at base.

[1100] See no. 1671.

[1101] See no. 1833.

[1102] Linnaeus only refers to *Sphex*, see nos. 1648–1664.

1683. VESPA *bifasciata* [*Symmorphus bifasciatus* (Linnaeus, 1761). Eng. Willow mason wasp, Sw. Husvedgeting; Fam. Vespidae, Eng. Yellow jackets, hornets and paper wasps, Sw. Getingar], thorax without maculae; abdomen with two light yellow fasciae.

Occurs ubiquitously.

DESCR. Resembles the preceding species. Antennae clavate. Head black, without maculae also including thorax. Abdomen black; first two segments light yellow at margin; posterior fascia also surrounds abdomen beneath. Tibiae palish at base.

Apis

1684. APIS *longicornis* [*Eucera longicornis* (Linnaeus, 1758). Eng. Long-horned bee, Sw. Långhornsbi; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees, Sw. Långtungebin], antennae filiform, the length of the hirsute, red-yellow body.

Swamm. Bibl. t. 26. f. 6.

Occurs ubiquitously; not uncommon.

DESCR. Appearance as that of the western honey bee.[1103] Body black with a rather rare, red-yellowish hirsuteness; hairs on abdomen darker. Frons pale. Antennae jet-black, filiform, the length of the body.

1685. APIS *tumulorum* [*Halictus tumulorum* (Linnaeus, 1758). Eng. Bronze furrow-bee, Sw. Ängsbandbi; Fam. Halictidae, Eng. Sweat bees, Sw. Vägbin], antennae filiform, the length of the body, which is black; legs and jaws whitish yellow.

Apis, black; legs and jaws light yellow. *It. Gotl.* 336. *Fn.* 1000.

Occurs on the ancient grave-mounds themselves of Visingsö, an island in Lake Vättern.

DESCR. Half as large as a house fly.[1104] Whole body black except for the pale deep yellow legs and jaws. Antennae filiform, almost the length of the body, paler beneath.

1686. APIS *clavicornis* [*Sapyga clavicornis* (Linnaeus, 1758). Eng. Yellow-spotted sapyga wasp, Sw. Gul plankstekel; Fam. Sapygidae, Eng. Sapygid wasps, Sw. Plank-steklar], antennae clavate, the length of the black body; abdomen with two, interrupted, light yellow fasciae.

Occurs in Uppsala; rather rare. *P. Kalm.*

DESCR. Rather small. Antennae clavate, the length of the body, black; on the anterior side deep yellow, except for the tip. Body black. Frons with a rounded, white macula. Thorax without maculae. Abdomen narrow with two interrupted, light yellow fasciae.

[1103] See the com. to no. 1660 and also no. 1697.

[1104] See no. 1833.

1687. APIS *centuncularis* [*Megachile centuncularis* (Linnaeus, 1758). Eng. Patchwork leaf-cutter bee, Sw. Rosentapetserarbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], black; abdomen with red-yellow wool beneath.

Apis, black; abdomen with four white lines above and red-yellow wool beneath. *Fn.* 1010.

Raj. Ins. 242. Apis sylvestris corpore longo angusto, parva nigra, dorso lanugine rara fulva obsito, abdomine supino nigro glabro splendente, prono lanugine rufa densa vestito.

DESCR. Smaller than the western honey bee.[1105] Head black. Frons ash-grey. Thorax black, with a palish ash-grey hirsuteness. Abdomen ovate, black, pointed, with white margins of segments; beneath with red-brown or rusty brown wool, strongly pilose. Legs black.

1688. APIS *cineraria* [*Andrena cineraria* (Linnaeus, 1758). Eng. Ashy mining bee or Grey mining bee, Sw. Sobersandbi; Fam. Andrenidae, Eng. Mining bees, Sw. Grävbin], thorax hirsute, verging on white with a black fascia; abdomen bluish.

Occurs ubiquitously; less abundant.

DESCR. Middle-sized. Body black. Thorax hirsute, whitish ash-grey, with a black fascia between wings. Abdomen jet-black, bluish, and glabrous above. Frons pilose, whitish ash-grey.

1689. APIS *retusa* [*Anthophora retusa* (Linnaeus, 1758). Eng. Potter flower bee, Sw. Svartpälsbi; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], black, somewhat hirsute; abominal base apically notched; posterior tibiae outwardly woolly.

Occurs ubiquitously.

DESCR. The size of the western honey bee.[1106] Body entirely black, pubescent. Tibiae dilated, outwardly with short, dense, light yellow wool.

1690. APIS *rufa* [*Osmia bicornis* (Linnaeus, 1758). Eng. Red mason bee, Sw. Rödmurarbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin],[1107] fuscous; abdomen red-brownish; frons white.

Apis, hirsute; head black; abdomen red-brown; frons white. *Fn.* 1009.

Act. Ups. 1736. p. 28. n. Apis fusca, fronte alba, collari testaceo.

Raj. Ins. 242. Apis sylvestris parva, abdomine breviore, toto supina parte lanugine rufa vestito, thorace lanugine albicante.

Occurs ubiquitously.

DESCR. Rather small. Body hirsute, honey-yellow above. Head black; frons with a whitish hirsuteness. Thorax with whitish hairs beneath. Abdomen almost entirely black beneath. Antennae filiform, half the length of the body.

[1105] See the com. to no. 1660 and also no. 1697.

[1106] See the com. to no. 1660 and also no. 1697.

[1107] See no. 1691.

1691. APIS *bicornis* [*Osmia bicornis* (Linnaeus, 1758). Eng. Red mason bee, Sw. Rödmurarbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin],[1108] frons bicornate; head black; abdomen hirsute.

Apis, hirsute; head and thorax black; abdomen red-brown; frons bicornate. *Fn.* 1008.

DESCR. Thorax, head, eyes, and antennae black. Abdomen red-brown. Legs red-brownish, at least hindlegs. Frons black, slightly white; frontally, at the base of the jaws, there are two curved, rigid, immobile, and slightly prominent cornicles that are black and barely longer than the hirsuteness, but beneath tip at outer exterior aspect marked with a denticle; appearance and size as those of the western honey bee.[1109]

1692. APIS *truncorum* [*Heriades truncorum* (Linnaeus, 1758). Eng. Large-headed resin bee, Sw. Väggbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], black, glabrous; frons whitish, pubescent; abdomen with whitish segments at margin and yellowish beneath.

Lives in wooden walls of houses.

DESCR. Body larger than that of an ant,[1110] jet-black, glabrous. Frons with whitish beard. Antennae filiform, the length of the thorax. Abdominal segments barely white at margin, but rather towards sides; beneath it is pubescent and yellowing.

1693. APIS *helvola* [*Andrena helvola* (Linnaeus, 1758). Eng. Coppice mining bee, Sw. Äppelsandbi; Fam. Andrenidae, Eng. Mining bees, Sw. Grävbin], red-brown, villous, oblong, beneath whitish.

Occurs around us; abundant.

DESCR. Head black. Thorax villous, rusty brown. Abdomen blackish, less villous. Posterior tibiae with rusty brown wool.

1694. APIS *succincta* [*Colletes succinctus* (Linnaeus, 1758). Eng. Common colletes or Heather colletes, Sw. Ljungsidenbi; Fam. Colletidae, Eng. Cellophane, plasterer, masked and allied bees, Sw. Korttungebin], thorax whitish yellow, slightly villous; abdomen black, with four white belts.

Apis, somewhat hirsute, ash-grey; abdomen black with whitish segments; frons whitish yellow. *Fn.* 1007.

Occurs around us; very rare. I have only seen a single specimen, which was given to me by *P. Kalm.*

DESCR. Middle-sized. Body black. Frons with wool verging on white. Thorax villous, whitish. Abdomen jet-black, naked, with four villous, snow-white margins of the segments. Legs black. Tibiae outwardly covered with white hairs.

[1108] See no. 1690.

[1109] See the com. to no. 1660 and also no. 1697.

[1110] Linnaeus only refers to *Formica*, see nos. 1720–1726.

1695. APIS *aenea* [*Nomen dubium*], bronze greyish, pubescent.
Occurs ubiquitously.
DESCR. Middle-sized or half the size of the western honey bee.[1111] Body entirely bronze green, but thorax covered with whitish yellow wool. Antennae black.

1696. APIS *caerulescens* [*Osmia caerulescens* (Linnaeus, 1758). Eng. Blue mason bee, Sw. Blåmurarbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], fuscous, weakly villous; abdomen bluish, with margins of segments verging on white.
Occurs ubiquitously.
DESCR. Rather small. Head entirely jet-black, bluish, without maculae; the barely visible villosity verges on white.

1697. APIS *mellifica*[1112] [*Apis mellifera* Linnaeus, 1758. Eng. Western honey bee or European honey bee, Sw. Honungsbi; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], pubescent; thorax palish grey; abdomen fuscous; hindlegs glabrous on each side, ciliate at margin.
Apis, gregarious. *Fn.* 1003.
Mouff. Lat. 2. Apis.
Merr. Eur. 2. p. 19. t. 1.
Aldr. Ins. 20.
Jonst. Ins. 1. t. 2.
Charl. Exerc. 6.
Merr. Pin. 106. Apis domestica sive vulgaris alvearium.
Raj. Ins. 240. Apis.
Dal. Pharm. 386. n. 15. Apes.
α *Mouff. Lat.* 37. Fucus.
Merr. Pin. 196. Fucus.
In Sweden: Bi.
Lives around us in hollow trees in the forests; rather rare; it is commonly tended by the peasants.
The food of these bees is honey from the nectaries of flowers, especially from heather flowers in the autumn, but the honey then turns red-brownish. Therefore, provinces like Öland lacking heather provide honey from aloe, but beeswax from the pollen of anthers.

[1111] See the com. to no. 1660 and also no. 1697.
[1112] See the com. to no. 1660.

1698. APIS *cunicularia* [*Colletes cunicularius* (Linnaeus, 1761). Eng. Vernal colletes or Spring mining bee, Sw. Vårsidenbi; Fam. Colletidae, Eng. Cellophane, plasterer, masked and allied bees, Sw. Korttungebin], pubescent; thorax rusty brown; abdomen fuscous and legs villous all over.

They live in sandy soil with many well spaced openings and here most of them build nests with their dwellings clearly visible.

DESCR. Very similar to the western honey bee.[1113]

1699. APIS *variegata* [*Epeolus variegatus* (Linnaeus, 1758). Eng. Black-thighed epeolus, Sw. Ängsfiltbi; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], thorax and abdomen variegated with white; tibiae rusty brown.

Occurs ubiquitously.

DESCR. Rather small. Body narrow, black, variegated with white without order, especially on abdominal sides. Tibiae and tarsi rusty brown.

1700. APIS *rostrata* [*Bembix rostrata* (Linnaeus, 1758). Sw. Läppstekel; Fam. Crabronidae, Eng. Square-headed wasps, Sand wasps, Digger wasps or Hunting wasps, Sw. Rovsteklar], upper lip conical, curved; abdominal fasciae greyish blue, repand.

Apis, legs and jaws light yellow, apically black; abdominal segments greyish blue, black-margined. *Fn.* 999.

It. Gotl. 246. Jord-bij.

Lives in the small sandy hills of Gotland, where there is one youngster in each nest.

DESCR. Eyes, mouth, and legs light yellow. Thorax black. Abdomen black, with each abdominal segment light yellow in front of margin, because the margin of base and the outermost margin are black; first segment marked with a single macula on each side. Wings greyish blue, venose. Thorax somewhat hirsute with a light yellow macula behind each wing and a light yellow line, interrupted at thoracic tip. Upper oral lip corneous, curved, large, acuminate. Solitary light yellow teeth on each side, apically black. The size as that of the common wasp.[1114]

It differs as to sex. Some have a deep yellow, maculate abdomen (as above). Antennae black above, light yellow beneath. Sting corneous, very short and rigid. Others are embellished with white, where the previous one is deep yellow. Antennae almost entirely black. Sting pungent, long and flexous, as in bees.

1701. APIS *manicata* [*Anthidium manicatum* (Linnaeus, 1758). Eng. European wool carder bee, Sw. Storullbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], black, forelegs strongly hirsute; abdomen with lateral light yellow maculae; anus with three toothlike projections.

Occurs ubiquitously.

[1113] See the com. to no. 1660.

[1114] See no. 1671.

DESCR. The size of the common wasp.[1115] Body darkish. Abdomen with a bilateral, light yellow macula or six pairs. Forelegs strongly barbate and ciliate, whitish yellow. Anus with three fixed, divaricate spines, and an additional single spine more anteriorly on the sides.

1702. APIS *lagopoda* [*Megachile lagopoda* (Linnaeus, 1761). Eng. Hairy-footed leaf-cutter, Sw. Stortapetserarbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], greyish; forelegs dilated and ciliate; posterior tibiae clavate; anus emarginate.

Occurs ubiquitously.

DESCR. The size of the preceding species, fuscous with palish grey wool. Frons hirsute, lip blunt. Fore tarsi hirsute, dilated and white, with ciliate and dilated outer spurs. Posterior tibiae swollen.

1703. APIS *quadridentata* [*Coelioxys conicus* (Linnaeus, 1758). Eng. Grooved sharp-tail bee, Sw. Konkägelbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin],[1116] fuscous; abdomen with five whitish belts; anus with four tooth-like projections, the middle ones bifid.

Inhabits fields full of flowers; abundant.

DESCR. It is similar to a heather colletes,[1117] but it is only one third of the size of the other bees. Head and thorax with pale ash-greyish wool. Abdomen conical, jet-black, with five white segmental margins: first one indistinct, except for the sides. Anus prominent with four teeth, the middle ones longer.

1704. APIS *florisomnis* [*Chelostoma florisomne* (Linnaeus, 1758). Eng. Large scissor-bee, Sw. Smörblommebi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin], black; abdomen cylindrical, curved; anus bidentate; posterior tibiae apically spinose.

Occurs ubiquitously, clinging at night to flowers and not willing to leave.

DESCR. Small, narrow, oblong, black. Frons ash grey and pubescent. Thorax pale, somewhat pubescent. Abdomen semi-cylindrical, almost glabrous, with seven segments, mostly curved inwards. Anus bifid, blunt.

1705. APIS *conica* [*Coelioxys conicus* (Linnaeus, 1758). Eng. Grooved sharp-tail bee, Sw. Konkägelbi; Fam. Megachilidae, Eng. Leaf-cutter, mason and resin bees, Sw. Buksamlarbin],[1118] fuscous; abdomen conical, strongly pointed, with white segmental margins.

Apis, somewhat hirsute, ash-grey; abdomen conical; segmental margins white. *Fn.* 1006.

Raj. Ins. 262. Vespa sylvestris caudata, abdomine nigro: annulis flavis distincto?

[1115] See no. 1671.

[1116] See no. 1705.

[1117] See no. 1694. Linnaeus writes *Apis succenturiata* which is an unknown species name, not occurring in either *Syst. nat.* or *Fn. Su.* Probably, he by mistake wrote *succenturiata* instead of *succincta*.

[1118] See no. 1703.

Lives on land and in subterraneous ducts.

DESCR. It is slightly smaller than the western honey bee.[1119] Antennae black, subclavate. Head and thorax with ash-grey hairs. Abdomen conical, strongly pointed, with whitish segmental margins, and thus 5 thin, white lines on the back, and 4 or 3 beneath. Frons black.

1706. APIS *annulata* [*Hylaeus annulatus* (Linnaeus, 1758). Eng. Annulate masked bee, Sw. Ringcitronbi; Fam. Colletidae, Eng. Cellophane, plasterer, masked and allied bees, Sw. Korttungebin], black; frons and rings of legs white.

Occurs around us; abundant.

DESCR. The size of an ant.[1120] Body entirely jet-black. Frons of one sex with a thin white line in front of each eye; the other sex has an entirely white frons with a white macula at antennal base. Thorax naked with a white convex spot in front of wings. The four posterior tibiae white at bases.

1707. APIS *ruficornis* [*Nomada ruficornis* (Linnaeus, 1758). Eng. Fork-jawed nomad bee, Sw. Trädgårdsgökbi; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], antennae, legs, and two thoracic spots rusty brown.

Occurs ubiquitously.

DESCR. Middle-sized. Head black. Mouth rusty brown. Antennae rusty brown. Thorax black. Some with four longitudinal rusty brown lines, others with a light yellow spot in front of wings and two light yellow ones at the position of the scutellum. Abdomen rusty brown, glabrous, with lateral light yellow maculae, posteriorly with light yellow fasciae. Legs rusty brown. Wings apically whitish yellow.

1708. APIS *cariosa* [*Nomen dubium*], fuscous, slightly villous; frons and legs light yellow. *Apis*, black; legs and frons light yellow. *Fn.* 1001.

Lives in water pumps[1121] and rotten wooden water pipes in Skåne. *Mr Leche.*[1122]

DESCR. The size of the preceding species. Entirely black, but light yellow between antennae. Legs (except for the femora) pale red-brown, especially the four posterior ones. Antennae almost half as long as body, straight.

1709. APIS *terrestris* [*Bombus terrestris* (Linnaeus, 1758). Eng. Buff-tailed bumble bee or Large earth bumble bee, Sw. Mörk jordhumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, black; thoracic belt light yellow; anus white. *Fn.* 1012.

Jung. Verm. 51. Bombylius.

Mouff. Lat. 53. f. 2. Bombylius.

[1119] See the com. to no. 1665.

[1120] Linnaeus only refers to *Formica*, see nos. 1720–1726.

[1121] Lat. *antilis* is a misprint for *antliis*, see *Fn. Su.* (1746), no. 1001.

[1122] This surprising statement by Linnaeus is also found in *Fn. Su.* (1746), but was corrected by him in *Syst. nat.* (1758) to "Lives in Europe in rotten wood". In *Fn. Su.* (1761) he seems to have quoted himself from the older source.

Goed. Belg. 2. p. 174. f. 46.
List. Goed. 233. f. 105.
Frisch. Germ. 9. p. 24. t. 13. f. 1.
Raj. Ins. 247. n. 5. Bombylius.
Act. Ups. 1736. p. 28. n. 12. Apis hirsuta nigra, collari abdominisque cingulo nigro, apice albo.
Reaum. Gall. 6. t. 3. f. 1.
In Sweden: Jord-Humbla. In Uppland: Mömus.
Lives in the actual soil, where it gathers honey in large amounts.
DESCR. This species is the largest among all those called bumble bees.[1123] Whole body hirsute all over and black. Abdomen anteriorly black, then light yellow, medially black, posteriorly white. Thorax surrounded anteriorly by a light yellow colour.

1710. APIS *hortorum* [*Bombus hortorum* (Linnaeus, 1761). Eng. Garden bumble bee or Small garden bumble bee, Sw. Trädgårdshumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, black; thorax and anterior part of abdomen light yellow; anus white.
Lives underground.
DESCR. Very similar to the preceding species, from which it differs by the light yellow fascia covering the abdominal base and by having no bilateral distinct, black fascia.

1711. APIS *pratorum* [*Bombus pratorum* (Linnaeus, 1761). Eng. Early bumble bee, Sw. Ängshumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, black; thorax anteriorly light yellow; anus red.
Inhabits meadows.
DESCR. Rather small. Body blackish. Thorax anteriorly sulphur-coloured. Abdomen with a red anus.

1712. APIS *lapidaria* [*Bombus lapidarius* (Linnaeus, 1758). Eng. Red-tailed bumble bee, Sw. Stenhumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, jet-black, with a red-yellow anus. *Fn.* 1015.
Reaum. Gall. 6. t. 11. f. 1. 2.
Act. Ups. 1736. p. 28. n. 13. Apis hirsuta nigra, abdominis apice rubro.
Frisch. Germ. 9. p. 25. n. 2. (*sed nostra minor*).
In Sweden: Sten-Humbla.
Lives in heaps of stones; makes lots of honey.
DESCR. It is entirely jet-black except for the abdominal tip that has three red-brown segments tending to red-yellow.

[1123] See the com. to no. 839.

1713. APIS *sylvarum* [*Bombus sylvarum* (Linnaeus, 1761). Eng. Shrill carder-bee or Knapweed carder-bee, Sw. Haghumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, pale; thorax with a black fascia; anus red.

Inhabits forests.

DESCR. Resembles the following species, but it has pale wool. Thorax with a black fascia between wings. Abdomen pale, with a translucent blackness of the body forming dark quasi fasciae. Anus red.

1714. APIS *muscorum* [*Bombus muscorum* (Linnaeus, 1758). Eng. Moss carder bee or Large carder bee, Sw. Mosshumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, red-yellow; abdomen light yellow. *Fn.* 1017.

Frisch. Germ. 9. p. 26. n. 8.

Act. Ups. 1736. p. 28. n. 18. Apis hirsuta, collari fulvo, abdomine flavo.

In Sweden: Moss-Humbla.

Lives under sheet mosses and other mosses; abundant in meadows, not making much honey.

DESCR. Thorax red-yellow. Abdomen deep yellow or paler red-yellow, with a concolorous anus.

1715. APIS *hypnorum* [*Bombus hypnorum* (Linnaeus, 1758). Eng. Tree bumble bee or New garden bumble bee, Sw. Hushumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, red-yellow, with a black abdominal fascia; anus white.

Apis, hirsute, red-yellow; abdomen medially black, with a white anus. *Fn.* 1018.

Act. Ups. 1736. p. 28. n. 17. Apis hirsuta, collari fulvo, abdominis basi fulva: medio nigro, ano albo.

Lives under mosses.

DESCR. Thorax red-yellow. Abdomen black, at base red-yellow; anus white.

1716. APIS *lucorum* [*Bombus lucorum* (Linnaeus, 1761). Eng. White-tailed bumble bee, Sw. Ljus jordhumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute, light yellow, with a whitish anus.

Inhabits groves.

DESCR. Middle-sized. Whole body whitish yellow with a whitish anus; the blackness of the body is translucent on the abdomen, with indistinct quasi fasciae.

1717. APIS *acervorum* [*Bombus subterraneus* (Linnaeus, 1758). Eng. Short-haired bumble bee, Sw. Vallhumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin],[1124] hirsute, jet-black. *Fn.* 1013.
Act. Ups. 1736. p. 28. n. 15. Apis hirsuta, tota nigra.
Lives in the soil; less abundant.
DESCR. Similar to the preceding species, but smaller; whole body black, without maculae except for some sulphur-coloured small setae around the neck.

1718. APIS *subterranea* [*Bombus subterraneus* (Linnaeus, 1758). Eng. Short-haired bumble bee, Sw. Vallhumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin],[1125] hirsute, jet-black, with a fuscous anus. *Fn.* 1014.
Act. Ups. 1736. p. 28. n. 14. Apis hirsuta, nigra, abdominis apice fusco.
Lives in the soil; less abundant.
DESCR. Similar to the preceding species, except that the abdominal tip is less black.

1719. APIS *alpina* [*Bombus alpinus* (Linnaeus, 1758). Eng. Alpine bumble bee, Sw. Alphumla; Fam. Apidae, Eng. Euglossines, honey bees, bumble bees, stingless bees. Sw. Långtungebin], hirsute; thorax black; abdomen deep yellow. *Fn.* 1016.
Act. Ups. 1736. p. 28. n. 12. Apis hirsuta, maxima alpino-lapponica, collari nigro, abdomine luteo.
Occurs in the mountains of Lapland, where I have collected only one specimen.
DESCR. In size it resembles the European stag beetle;[1126] entirely hirsute, and jet-black except for the entirely deep yellow or rusty brown abdomen, and only the abdominal base is black.

Formica

1720. FORMICA *herculeana* [C*amponotus herculeanus* (Linnaeus, 1758). Eng. Hercules ant, Sw. Hushästmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], black; abdomen ovate; femora rusty brown.
Formica, large. *It. Gotl.* 232. *Fn.* 1019.
Raj. Ins. 69. Formica maxima hippomyrmex.
Act. Stock. 1741. p. 39. Haest-Myror.
In Sweden: Hästmyra. In Uppland: Björnmyra.
Lives in the hollows of decayed trunks.
DESCR. Body blackish; on occiput three dots. Thorax rusty brown, the back blackish. Legs rusty brown. The petiole is ovate, entire, and sharply rounded. Abdomen fuscous and consisting of 5 segments.

[1124] See no. 1718.
[1125] See no. 1717.
[1126] Lat. *Scarabaeus cervus* [*sic!*]. See no. 405.

1721. FORMICA *rufa* [*Formica rufa* Linnaeus, 1761. Eng. Red wood ant, Southern wood ant or Horse ant, Sw. Röd skogsmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], thorax compressed, entirely rusty brown, with black head and abdomen.

Formica, red-brown. *Fn.* 1020.

Raj. Ins. 69. Formica media rubra.

Act. Stockh. 1741. p. 39. Piss-Myror.

In Sweden: Stack-Myra. In Uppland: Biörn-Myra.

Lives ubiquitously in forests and builds chaffy piles of needles.

DESCR. Body fuscous. Thorax rusty brown, compressed. Legs rusty brown. Petiole rusty brown, acuminate.

Male: Body blackish. Abdomen with six segments. Legs rusty brown.

Female: Body blackish. Head rusty brown beneath. Thorax rusty brown with a fuscous dorsum. Abdomen with four segments, first one anteriorly rusty brown.

1722. FORMICA *fusca* [*Formica fusca* Linnaeus, 1758. Eng. Silky ant or Dusky ant, Sw. Svart slavmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], dusky ash-grey; tibiae pale.

Formica, fuscous. *Fn.* 1021.

Raj. Ins. 69. Formica media, nigro colore splendens.

Act. Stockh. 1741. p. 40. Swart-Myror.

In Sweden: Swart-Myra.

Lives in gravelly soil.

DESCR. Body dusky ash-grey, clothed with most minute, ash-greyish hairs, so when observed in daylight it most certainly appears to be black, otherwise ash-grey. Head almost narrower than thorax. Thorax rather smoothly rounded. Petiole quadrate, emarginate. Lowest antennal segment longest, red-brown. Femora fuscous. Tibiae pale. *P. Forsskål.*

1723. FORMICA *nigra* [*Lasius niger* (Linnaeus, 1758). Eng. Black garden ant or Common black ant, Sw. Trädgårdsmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], entirely black, shining; tibiae ash-greyish.

Formica, jet-black. *Fn.* 1023.

Raj. Ins. 69. Formica minor e fusco nigricans.

Act. Stockh. 1741. p. 41. Små-Myror.

Lives in the soil.

1724. FORMICA *obsoleta* [*Nomen dubium*], black above; brick-red tending to red-brown beneath; abdomen subglobose.

Occurs ubiquitously.

DESCR. Head scarcely as coarse as thorax. Thorax rather smoothly rounded. Petiole low, truncated. Abdomen ovate, acuminate, the length of the thorax, with tiny red-brownish hairs. Tibiae and tarsi ash-greyish. The rest of the body shining with black. Abdomen of this ant is only the length of the thorax, but in the preceding species the abdomen is the length of the thorax and the head. *P. Forsskål.*

1725. FORMICA *rubra* [*Myrmica rubra* (Linnaeus, 1758). Eng. European fire ant or Common red ant, Sw. Trädgårdsrödmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], brick-red; eyes and spot beneath abdomen black.

Formica, red. *Fn.* 1022.

Raj. Ins. 69. Formica minima rubra.

Act. Stockh. 1741. p. 40. Etter-Myror.

It. Gotl. 246. Etter-Myror.

Lewenh. Epist. 1687. p. 97. f. 8.

Swam. Quart. p. 181. t. 9.

In Sweden: Ettermyra. In Uppland: Rödgiöter.

Lives in turfs.

DESCR. Head broader than thorax, brick-red. Antennae brick-red. Thorax pale, slightly compressed. Abdomen ovate-oblong, with hairs verging on white; black spot beneath abdomen.

1726. FORMICA *caespitum* [*Tetramorium caespitum* (Linnaeus, 1758). Eng. European pavement ant, Sw. Grästorvsmyra; Fam. Formicidae, Eng. Ants, Sw. Myror], petiole with two alternate nodes, posterior one larger.

Lives in turf mounds.

DESCR. Head broader than thorax. Lowest antennal segment is only one third of the whole body. Thorax rather smoothly rounded. At the position of the petiole, there are two globose nodes, posterior one larger. Abdomen barely the length of the thorax, ovate and acuminate, pubescent. Femora and tibiae fairly long. Wings pale, more fuscous at body. *P. Forsskål.*

Mutilla

1727. MUTILLA *europaea* [*Mutilla europaea* Linnaeus, 1758. Eng. Large velvet ant, Sw. Röd sammetsstekel; Fam. Mutillidae, Eng. Velvet ants, Sw. Sammetssteklar], black; abdomen with three interrupted, white fasciae; thorax posteriorly red-brown.

Udd. Diss. 98. t. 17. Apis aptera.

Inhabits sandy forests; most rare.

DESCR. The size of the slender bodied digger wasp.[1127] Head and antennae black and shorter than thorax. Thorax red-brown, anteriorly black. Abdomen black, hirtous, with three white fasciae, of which the two posterior ones are interrupted. Legs black.

1728. MUTILLA *formicaria* [*Gelis formicarius* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], glabrous, red-brown; head and the pubescent abdomen black.

Lives around us; most rare.

[1127] See no. 1675.

1729. MUTILLA *acarorum* [*Gelis acarorum* (Linnaeus, 1758). Ichneumonidae subfam. Cryptinae, Eng. Cryptine wasps, Sw. Kokongparasitsteklar], glabrous, red-brown; head and abdomen posteriorly black.

Lives among mites,[1128] on which it feeds.

DESCR. Small. Antennae black, almost the length of the body. Head black. Thorax black. Abdomen black, with the first segment rusty brown. Legs rusty brown, posterior tibiae black. Female is very similar with a sting that is stretched out and shorter than body.

VI. DIPTERA

Oestrus

1730. OESTRUS *bovis* [*Hypoderma bovis* (Linnaeus, 1758). Eng. Northern cattle grub or Ox warble fly, Sw. Stort oxstyng; Fam. Hypodermatidae, Eng. Warble flies or Bot flies, Sw. Hudstyng], wings maculate; thorax light yellow with a fuscous fascia; abdomen light yellow, black-tipped.

Oestrus, thorax light yellow, with a black belt; wings with a black fascia; legs pale. *Fn.* 1024.

Raj. Ins. 271. Musca bipennis Oestrum dicta est, alis membranaceis punctis crebris nigrioribus velut adpersis.

Derrh. Physico-Theol. l. 8. c. 6. n. 11. Wormils.

Frisch. Germ. 5. p. 21 t. 7. Vermis in stercore vaccino.

Reaum. Gall. 4. t. 38. 37. 36.

In Sweden: Styng. Brömskula.

Lives on the dorsum of bovine animals during the whole winter, emerges in June.

β[1129] In the ventricles of horses, to which it is lethal around the summer solstice.

DESCR.[1130] The size of a rather large fly. Mouth absent; fissure lacking teeth and proboscis. Eyes black. Antennae with a lentiform segment with a seta. Thorax light yellow with a black belt, visible between wings. Scutellum with black hairs, intermediate ones red-yellow, curved. Abdomen light yellow, with segments that are fuscous at margin; last abdominal segment black. Legs pale. White halteres beneath wings. Cauda extended, unequipped, much curved beneath abdomen. Wings white, incumbent, medially with a broad, transverse, fuscous fascia; a fuscous twin spot at alar tip and a third spot between fascia and body, at the thinner margin.

β[1131] Variety with frons also hirsute beneath eyes. Abdomen and pectus blackish beneath; whole abdomen light yellow; wings with a single spot at tip; lives inside the ventricles of horses.

[1128] See nos. 1966–1991.

[1129] *Gasterophilus intestinalis* (De Geer, 1776).

[1130] This description is a mixture between the two species *Hypoderma bovis* and *Gasterophilus intestinalis*.

[1131] *Gasterophilus intestinalis* (De Geer, 1776).

1731. OESTRUS *tarandi* [*Hypoderma tarandi* (Linnaeus, 1758). Eng. Reindeer warble fly or Reindeer botfly, Sw. Renstyng; Fam. Hypodermatidae, Eng. Warble flies or Bot flies, Sw. Hudstyng], wings without maculae; thorax light yellow with a black fascia; abdomen red-yellow with a light yellow tip.

O*estrus*, thorax light yellow with a black belt; wings without maculae; legs black. *Fn.* 1025.

Fl. Lapp. 360. n. 517. Oestrum Rhangiferinum Lapponicum, ventre fulvo.

Act. Ups. 1736. p. 31. n. 23. Oestrum idem.

Act. Stockh. 1739. p. 121. t. (*ad paginam* 84.) 3. f. 5. 6.

In Lapland: Curbma.

Lives on the dorsum of reindeer,[1132] which is especially true of the domestic ones.

DESCR. Twice as large as the preceding species. Wings without maculae. Abdomen more hirsute; the tunic itself is black, but the wool red-yellow except for the abdominal base, where the wool is light yellow. Thorax light yellow with a jet-black fascia between wings. Legs black.

Throughout the whole winter the larva hides under the dorsal skin of the reindeer causing those well known open wounds and scars, through which the reindeer becomes emaciated, and which spoils the hides.

1732. OESTRUS *nasalis* [*Gasterophilus nasalis* (Linnaeus, 1758). Eng. Throat bot fly or Horse nasal bot fly; Fam. Gasterophilidae, Eng. Warble flies or Bot flies, Sw. Magstyng], wings without maculae; thorax rusty brown; abdomen black with light yellow hairs.

O*estrus*, black; thorax light yellow. *Fn.* 1026.

Fl. Lapp. 363. n. 517. Oestrum Rhangiferinum Lapponicum, ventre nigro.

Act. Ups. 1736. p. 31. n. 24. Oestrum idem.

In Lapland: Trompe.

Occurs in Lapland.

DESCR. Eyes large, black. Frons deep yellow. Thorax rusty brown, villous. Abdomen longer than wings, black, clothed with sparse light yellow and silky hairs. Femora black. Tibiae light yellow. Antennae clavate, black, with a triple segment, aristate.

1733. OESTRUS *haemorrhoidalis* [*Gasterophilus haemorrhoidalis* (Linnaeus, 1758). Eng. Nose bot fly or Lip bot fly; Fam. Gasterophilidae, Eng. Warble flies or Bot flies, Sw. Magstyng], wings without maculae; thorax black, with pale scutellum and black abdomen, the base of which is white and the tip red-yellow.

O*estrus*, of the anus of horses. *Fn.* 1028.

Reaum. Gall. 4. t. 35. f. 1–7.

It. Gotl. 277. Vermes haemorrhoidum caecarum facie.

Lives in the anal rectum of horses, to which it adheres like invisible haemorrhoids.

[1132] See no. 41.

DESCR. Head white. Eyes black. Thorax black, with a pale scutellum. Abdomen with a black belt and white at base, apically red-yellow. Wings without maculae. I believe this species to be the same as the previous one.

1734. OESTRUS *ovis* [*Oestrus ovis* Linnaeus, 1758. Eng. Sheep bot fly or Sheep nasal bot fly, Sw. Fårstyng; Fam. Oestridae, Eng. Eng. Warble flies or Bot flies, Sw. Näsbstyng], wings sparsely dotted; abdomen tomentose, slightly tesselate with whitish and black.

Oestrus abdomine albo nigroque versicolore. *Schreber. Ins.* 15. n. 12.

Oestrus, in the frontal sinus of ruminant animals. *Fn.* 1027.

Reaum. Gall. 4. t. 35. f. 21. 22. 23. 24.

In Sweden: Nosmasken.

Lives in the nose or frontal sinus of ruminant animals, especially sheep.[1133] *It. Scan.* 128.

DESCR. Body entirely fuscous, irrorated all over with white and black spots. Cheek white, inflated. Frons ash-grey with scattered punctations.

Tipula

1735. TIPULA *pectinicornis* [*Ctenophora pectinicornis* (Linnaeus, 1758). Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], antennae pectinate; wings with a black macula; thorax whitish yellow.

Inhabits grassy areas.

DESCR. Rather large. Antennae black, plumose, deep yellow at base. Head black with a light yellow collar. Thorax blackish, laterally light yellow. Abdomen light yellow with blackish dorsal line and sides. Legs whitish yellow.

1736. TIPULA *quadrimaculata* [*Metalimnobia quadrimaculata* (Linnaeus, 1761). Sw. Fyrfläckig småharkrank; Fam. Limoniidae, Eng. Limoniidae craneflies, Sw. Småharkrankar],[1134] wings outspread, with fuscous veins; four light yellow maculae at margin; abdomen light yellow above.

Occurs around us; rather rare.

DESCR. It falls among our largest species. Thorax whitish yellow, with black maculae. Abdomen whitish yellow, with a fuscous margin; first segment with a large, black macula above, second segment with a thin line. Femora pale-tipped and with a black ring near tip. Wings with fuscous veins and indistinctly fuscous maculae; at the costa two fuscous rather saturated maculae.

[1133] See no. 45. OVIS *aries*.

[1134] See no. 1737.

1737. TIPULA *calmariensis* [*Metalimnobia quadrimaculata* (Linnaeus, 1761). Sw. Fyrfläckig småharkrank; Fam. Limoniidae, Eng. Limoniidae craneflies, Sw. Småharkrankar],[1135] wings with four marginal fuscous maculae and fuscous veins; abdomen deep yellowish, with first segment black above.

Occurs in Kalmar.

DESCR. It should be numbered among the largest species. Wings with 4 fuscous maculae at the rather thick costa. Thorax whitish yellow with fuscous maculae. Abdomen deep yellowish, at margins more fuscous, first segment covered by a quadrate, jet-black macula.

1738. TIPULA *rivosa* [*Pedicia rivosa* (Linnaeus, 1758). Fam. Pediciidae, Eng. Hairy-eyed craneflies, Sw. Hårögonharkrankar], wings hyaline with fuscous rivulets and a snow-white macula.

Tipula, wings whitish, with a snow-white macula and small fuscous rivulets. *Fn.* 1121.

Raj. Ins. 72. n. 2. Tipula maxima, alis majoribus ex fusco & albo variegatis.

Act. Ups. 1736. p. 50. n. 1. Tipula lapponica cinerea, alis albis: rivulis fuscis.

Act. Stockh. 1739. t. 3. f. 8. *ubi hanc delineavi.*

Occurs in Umeå in Västerbotten, where I once found it abundant; rarer in Uppsala.

DESCR. It is very large. Body and abdomen dusky ash-grey with a bifid cauda. Wings hyaline or whitish, with a fuscous rivulet that is extended longitudinally along the outer margin, from which a branch extends obliquely towards the inner margin, and then it becomes outwardly oblique, where it merges with the same branch from which it originated. A large, snow-white macula occupies the area beneath the ramification of the fuscous macula. And thus it is the most spectacular of all our species.

1739. TIPULA *crocata* [*Nephrotoma crocata* (Linnaeus, 1758). Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings with a fuscous macula; abdomen jet-black with red-yellow fasciae.

Tipula, body variegated with black and red-yellow. *Fn.* 1123.

Raj. Ins. 72. n. 4. Tipula elegans, dorso & scapulis nigris, ventre croceo, alis macula fusca notatis, laevis & splendens.

Act. Ups. 1736. p. 30. n. 2. Tipula abdomine annulis luteis nigrisque alternantibus.

Occurs in Roslagen.

DESCR. Body is jet-black and strongly saturated black; abdominal segments saffron yellow or red-yellow except for the outer margin; various red-yellow blotches on the very thorax. Wings weakly red-yellowish with fuscous veins and a marginal dark spot. Femora deep yellowish at base.

[1135] See no. 1736.

1740. TIPULA *oleracea* [*Tipula oleracea* Linnaeus, 1758]. Eng. Marsh cranefly, Sw. Kålharkrank; Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings hyaline, margin of costa fuscous. *Fn.* 1124.

Goed. Belg. 2. p. 165. t. 44.

List. Goed. 331. f. 139.

Bradl. Natur. p. 25. f. 3.

Frisch. Germ. 5. t. 3. f. 1, 2.

Reaum. Gall. 4. t. 11. f. 7.

Leuwenh. Epist. 1693. *dec.* 20. f. 4. 5. & 1714. *oct.* 26. f. 4.

Act. Ups. 1736. p. 31. n. 6. Tipula cinerea, alis cinereis margine exteriore fusco.

The larva itself lives in the soil among the roots of vegetables.

DESCR. Entirely ash-grey. Wings of a membranous appearance; outer margin longitudinally (but nevertheless not all the way to the outermost part of the tip) with a broad, long line, decorated with fuscous, and this line consists as if of folds; beneath this line the wing is more whitish.

1741. TIPULA *hortorum* [*Tipula hortorum* Linnaeus, 1758. Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings hyaline with scattered, indistinct white maculae. *Fn.* 1125.

Act. Ups. 1736. p. 30. n. 3. Tipula cinerea, alis cinereis: vasis fuscis maculisque albis.

Raj. Ins. 72. n. 6. Tipula vulgari similis, sed multo minor, alis fuscis: maculis albidioribus & nervis magis opacis.

Alb. Ins. t. 61. f. F. *mas.* G. *faemina.*

In Sweden: Harkrank.

Occurs ubiquitously; common.

DESCR. Entirely ash-grey. Wings ash-greyish, with some white, scarcely visible, scattered maculae; the alar vessels are fuscous without any dark, marginal macula.

1742. TIPULA *variegata* [*Tipula vernalis* Meigen, 1804. Eng. Black-striped cranefly; Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings hyaline with a pale, indistinct macula; body variegated with black and deep yellow. *Fn.* 1131.

Act. Ups. 1736. p. 31. n. 8. Tipula cinerea, alis cinereis immaculatis.

Lives along with the other species.

DESCR. Wings hyaline, with pale vessels, a marginal rather dark spot, and a pale macula. Body variegated with green and black, especially pectus, which is very beautifully decorated. Middle-sized or of the same size as the immediately preceding species. Cauda of male blunt, apically almost filamentous, very long. Female with a pointed cauda, as in the other species.

1743. TIPULA *contaminata* [*Ptychoptera contaminata* (Linnaeus, 1758). Sw. Glansmygga; Fam. Ptychopteridae, Eng. Phantom craneflies or Fold-winged craneflies, Sw. Glansmyggor], wings black and without maculae; body black. *Fn.* 1134.

Inhabits gardens; ubiquitous.

DESCR. It falls among the middle-sized species. Wings hyaline and veined, with three fasciae of aggregated black spots; a black spot is situated between each fascia next to the larger alar margin. Whole body black, also the eyes. Legs dark bluish grey. Antennae with fifteen segments.

1744. TIPULA *lunata* [*Tipula lunata* Linnaeus, 1758. Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings ash-greyish, with a marginal white crescent. *Fn.* 1126.

Act. Ups. 1736. p. 30. n. 4. Tipula cinerea, alis fuscis, macula lunata alba.

Raj. Ins. 73. n. 10. Tipula septimae similis, paulo tamen major, oculis viridiscentibus.

Lives along with the previous craneflies in cultivated land.

DESCR. Easily separated from the other species. Colour of wings ash-grey including the unicoloured veins; at the place where the marginal spot is usually placed, this species has a white crescent. Abdominal dorsum fuscous.

1745. TIPULA *pratensis* [*Nephrotoma pratensis* (Linnaeus, 1758). Fam. Tipulidae, Eng. Craneflies, Sw. Storharkrankar], wings palish ash-grey, with fuscous vessels and a marginal dark spot; frons red-yellow. *Fn.* 1128.

Act. Ups. 1736. p. 31. n. 5. Tipula cinerea, alis fuscis: vasis nigris, macula lunata nigra.

Frisch. Germ. 4. p. 24. t. 12. Tipula terrestris major.

Ubiquitous in Sweden.

DESCR. Body dark or black; sides light yellow. Thorax with deep yellow blotches. Wings palish ash-grey with dusky blackish vessels, and a marginal, blackish macula or spot. Halteres pale, white-tipped. Antennae jet-black. Legs black, with rusty brown femora.

1746. TIPULA *terrestris* [*Nomen dubium*], wings hyaline with a marginal fuscous spot; abdominal dorsum ash-grey. *Fn.* 1129.

Act. Ups. 1736. p. 31. n. 7. Tipula incarnata, alis cinereis puncto nigro.

Frisch. Germ. 7. p. 30. t. 22. Tipula terrestris media.

Occurs along with the preceding craneflies.

DESCR. Differs from the preceding craneflies in that both male and female are only half as large. Knees of legs black. Body somewhat maculate. Wings hyaline with ash-greyish veins and a marginal rusty brown or fuscous spot.

1747. TIPULA *cornicina* [*Nephrotoma cornicina* (Linnaeus, 1758). Fam. Tipulidae, Eng. Large craneflies, Sw. Storharkrankar], wings hyaline with a marginal fuscous spot; abdomen light yellow, with three fuscous lines. *Fn.* 1130.

Occurs ubiquitously in parks.

DESCR. It should be numbered among the larger species but not the largest. Wings hyaline with a fuscous spot. Abdomen light yellow, with three longitudinal fuscous lines, one on dorsum and one on each side; abdominal tip fuscous. Thorax light yellow, on the back three fuscous lines.

1748. TIPULA *nigra* [*Nigrotipula nigra* (Linnaeus, 1758). Fam. Tipulidae, Eng. Large craneflies, Sw. Storharkrankar], wings fuscous; body jet-black. *Fn.* 1132.

In Småland: Polsa.

Occurs in Uppsala; rather rare. The larvae hide in fertile, damp soil, and consume roots.

DESCR. It is middle-sized. Wings fuscous, with blackish vessels and a marginal spot. Thorax and abdomen jet-black. Legs fuscous. Female enjoys her awl-shaped anus, but male his blunt one.

1749. TIPULA *atrata* [*Tanyptera atrata* (Linnaeus, 1758). Eng. Giant sabre comb cranefly; Fam. Tipulidae, Eng. Large craneflies, Sw. Storharkrankar], wings greyish blue, with a marginal spot; body black; legs red-brown. *Fn.* 1127.

Lives on the larvae of moths.[1136]

DESCR.[1137] It falls among the largest species of its genus. Head, thorax, and abdomen jet-black, shining. All legs rusty brown. Antennae jet-black, nodose, with twelve segments, the length of the thorax. Wings greyish blue, especially between the marginal spot and body; alar vessels blackish; marginal spot rather large and jet-black. Abdominal base a little red. Anus of female ends in a trivalve stylus.

1750. TIPULA *bimaculata* [*Dictenidia bimaculata* (Linnaeus, 1761). Fam. Tipulidae, Eng. Large craneflies, Sw. Storharkrankar], wings hyaline, with two fuscous maculae; abdomen with rusty brown maculae in the middle; antennae plumose.

Occurs along with the previous craneflies.

DESCR. Middle-sized. Head, antennae, and thorax black. Abdomen black, both in the middle and beneath, rusty brown or dark bluish grey. Wings medially with a black macula and fuscous alar tips. Legs dark bluish grey and whitish yellow, with black-tipped segments.

1751. TIPULA *ocellaris* [*Epiphragma ocellare* (Linnaeus, 1761). Fam. Limoniidae, Eng. Limoniid craneflies, Sw. Småharkrankar], wings whitish, with many small eye-shaped, blackish maculae.

Gadd. Satag. 87. Tipula alis albidis; punctis 12 nigris ocello fusco cinctis, dorso abdomineque cinereo.

Occurs in Europe.

DESCR. Middle-sized. Wings expanded, whitish, with a double row of small fuscous eyespots and at the outer margin of wings there are adjacent, darker ones.

1752. TIPULA *annulata* [*Discobola annulata* (Linnaeus, 1758). Fam. Limoniidae, Eng. Limoniid craneflies, Sw. Småharkrankar], wings variegated with fuscous; femora with a white ring. *Fn.* 1122.

Occurs ubiquitously.

DESCR. It is middle-sized. Body entirely dusky ash-grey. Wings palish ash-grey, at anterior margin four or five fuscous fasciae, at posterior margin three fuscous circles, with a fuscous spot in the

[1136] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

[1137] Description of the female only.

middle. Legs grey. Femora surrounded by a black ring at tips. Antennae with 14 segments, of which the 1st one is straight, oblong, black; 2nd globose, gibbous; 3rd to 13th roundish; 14th acuminate.

1753. TIPULA *flavescens* [*Nephrotoma flavescens* (Linnaeus, 1758). Eng. Tiger cranefly; Fam. Tipulidae, Eng. Large craneflies, Sw. Storharkrankar], wings without maculae; body light yellow with a fuscous dorsum. *Fn.* 1133.

Occurs ubiquitously.

DESCR. Middle-sized or slightly larger than the common mosquito.[1138] Wings hyaline, without maculae. Body light yellow, but head, thorax, and abdomen fuscous on the back. Legs long.

1754. TIPULA *regelationis* [*Trichocera regelationis* (Linnaeus, 1758). Fam. Trichoceridae, Eng. Winter craneflies, Sw. Vintermyggor], wings hyaline and shining; body dusky ash-grey.

Lives in early spring in fertile soil; performs dances in circles in the air.

DESCR. The size of a mosquito.[1139] Body smooth, dusky ash-grey. Antennae slightly longer than thorax. Wings hyaline with fuscous veins and shining greyish blue tending to ash-grey, extended or outspread, with a single spot or an anastomosis in the middle. Abdomen slender.

1755. TIPULA *replicata* [*Phalacrocera replicata* (Linnaeus, 1758). Fam. Cylindrotomidae, Eng. Long-bodied craneflies, Sw. Mellanharkrankar], wings hyaline; the thinner margin recurved; body fuscous; antennae simple. *De Geer. Act. Upsal.*

Occurs at Leufsta.

DESCR. It will soon be described in the place quoted above.

1756. TIPULA *monoptera* [*Nomen dubium* in Cecidomyiidae], black; legs and palps pale.

Occurs ubiquitously.

DESCR. Half the size of a mosquito.[1140] Body blackish. Wings hyaline. Antennae half the length of the body. All legs pale or dark bluish grey as are also the palps. Antennae half the length of the body. Stature of a cranefly with outspread wings, but it bears one wing incumbent on the other.

1757. TIPULA *arundineti* [*Nomen dubium* in Chironomidae], whitish; antennae villous; eyes jet-black.

Lives in reed areas, where it performs dances in circles.

DESCR. The size of a mosquito.[1141] Wings hyaline, incumbent; inner margin weakly ciliate. Antennae weakly ciliate, shorter than thorax. Eyes large, jet-black. Body pale whitish yellow. Anus of female mucronate, rising upwards, brick-red. Fork of male blunt.

[1138] Linnaeus only refers to *Culex*, see nos. 1890–1894.
[1139] Linnaeus only refers to *Culex*, see nos. 1890–1894.
[1140] Linnaeus only refers to *Culex*, see nos. 1890–1894.
[1141] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1758. TIPULA *plumosa* [*Chironomus plumosus* (Linnaeus, 1758). Eng. Buzzer midge; Fam. Chironomidae, Eng. Chironomids, nonbiting midges, or lake flies, Sw. Fjädermyggor], thorax greenish; wings hyaline, with a black spot. *Fn.* 1135.

It. Oeland. 40. 41. 86. 160.

Frisch. Ins. 11. t. 12.

Reaum. Gall. 5. t. 5. *f. omnes.*

Goed. Belg. 3. p. 35. f. X. *quoad figuram.*

List. Goed. 336. f. 140. *quoad iconem.*

Its larva lives in the sea; hides often inside filiform, soft, argillaceous, and gravelly tubes, which it builds very long. We have never seen this cranefly more numerous than in the groves of Öland and in Skåne 223.

DESCR. This mosquito[1142] is twice as large as the common house mosquito.[1143] Wings incumbent, membranous, in the middle of the wing a black spot, which originates from the anastomosis of the two alar vessels at the outer margin. Body fuscous, but when recently hatched entirely green, especially on thoracic sides towards abdomen; scarcely any hirsuteness at all on the whole body; margins of segments paler. Bump or small sac beneath thorax. Forelegs longer than the others, but still not elevated. Mouth not biting and with curved palps. Male with plumose antennae consisting of pale hairs facing all sides; anus or tail elevated, bifid. Female with only villous antennae; tail not elevated and no longer than wings. Larva filiform, long, bright red, soft, composed of 12 segments, tail bifid. Two legs behind head and equally many in front of cauda, all without claws, blunt, ciliate with hairs at tip. On the last but one segment, two pairs of curl-like tufts longer than the actual legs.

1759. TIPULA *litoralis* [*Nomen dubium* in Chironomidae], greenish; wings without maculae; forelegs longest.

α *Tipula*, green; wings whitish, without maculae. *Fn.* 1140.

Occurs in great numbers on the very high hills of Norrtälje.

DESCR. Smaller than a common mosquito.[1144] Whole body pale light yellow. Legs long, green, anterior pair longest. Antennae very short, those of male pectinate. Eyes black. Wings incumbent, striate.

β *Tipula*, fuscous; anterior abdominal part green. *Fn.* 1136.

Inhabits small woods.

DESCR. Head, thorax, and the three posterior abdominal segments fuscous or blackish. Abdomen smoothly rounded, green except for the last segment. Wings whitish, without maculae. Legs long, partly white. Antennae of male plumose, fuscous. The size of a common mosquito.[1145] Knees of legs blackish. Forelegs the longest.

[1142] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1143] See no. 1890.

[1144] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1145] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1760. TIPULA *motitatrix* [*Nomen dubium* in Chironomidae], forelegs the largest, in perpetual vibratory motion, with a white ring.

Tipula, forelegs the greatest movers, formed like antennae, with a white ring. *Fn.* 1137.

Frisch. Germ. 11. p. 7. t. 13. Culex luteo viridis, pedibus antenniformibus.

Inhabits grassy meadows and groves, and lives in grass close to the ground, but the larva in water.

DESCR. Body watery green in some, variegated with black and pink in others. Three lines on the thoracic back, of which the intermediate in the middle is shorter. Forelegs of double length. When sedentary it holds these forelegs erect and moves them constantly like antennae, which are short; plumose in male, but not in female. All legs are surrounded by a black ring.

1761. TIPULA *vibratrix* [*Nomen dubium* in Chironomidae], forelegs the largest, in perpetual vibratory motion, white-tipped.

It. Oel. 160. Nomen idem.

DESCR. Twice as large as the previous species. Abdomen smooth, green. Thorax jet-black. Legs whitish, but anteriorly at base black. Antennae fuscous, in male plumose.

1762. TIPULA *tremula* [*Cricotopus tremulus* (Linnaeus, 1758). Fam. Chironomidae, Eng. Chironomids, nonbiting midges, or lake flies, Sw. Fjädermyggor], forelegs the longest, in perpetual vibratory motion, black, with whitish rings.

Occurs ubiquitously. *T. Bergman.*

DESCR. Eyes black. Antennae pilose. Thorax pale, with three longitudinal, black maculae. Wings hyaline, without maculae. Abdomen light yellow tending to red.

1763. TIPULA *monilis* [*Ablabesmyia monilis* (Linnaeus, 1758). Fam. Chironomidae, Eng. Chironomids, nonbiting midges, or lake flies, Sw. Fjädermyggor], legs white, with nine black rings; wings variegated with white and ash-grey.

Tipula, legs white, with nine blackish rings; wings maculate with white and ash-grey. *Fn.* 1139.

Occurs in Skåne. *Mr Leche.*

DESCR. The size of a common mosquito.[1146] Wings strongly maculate with white and ash-grey. Legs long, snow-white, each with around nine fuscous rings; beautifully variegated, by which it is easily distinguished from all others.

1764. TIPULA *macrocephala* [*Nomen dubium*], body greenish; eyes and thoracic back black. *Fn.* 1141.

Lives on damp shores.

DESCR. Scarcely larger than a louse. One wing is incumbent on the other, as if the wings were but one, shining. Body weakly light yellow, on the thoracic back black. Eyes large, black as if constituting a black head. Antennae black, with ten globose segments. Wings hyaline with three nerves, of

[1146] Linnaeus only refers to *Culex*, see nos. 1890–1894.

which the marginal one merges with the middle part of the tip, but the lowest vein is bifid at the marginal base.

1765. TIPULA *marci* [*Bibio marci* (Linnaeus, 1758). Eng. St Mark's fly or Hawthorn fly, Sw. Skogshårmygga; Fam. Bibionidae, Eng. March flies, Sw. Hårmyggor],[1147] black, glabrous; wings blackish; anterior femora inwardly furrowed. *Fn.* 1143. *Reaum. Gall.* 5. t. 7. f. 17. 18.

Lives in dung-heaps and hotbeds[1148] in gardens in early spring; abundant.

DESCR. The length of a house fly,[1149] but much more slender; whole body and all segments black. Antennae almost shorter than head, curved, resembling bovine horns, black; each consisting of seven segments, as if they were perfoliate; hence very short; two inwardly curved palps beneath mouth. Mouth is a proboscis, not a sting. Abdomen of male linear and jet-black, but of female whitish yellow and thick beneath. Wings blackish, at outer margin medially black, with a dark or at least more jet-black macula at the very margin. Thorax is glabrous, posteriorly carinate. Wings incumbent. Anterior femora thicker, on the inner side exarate with a longitudinal grove.

1766. TIPULA *brevicornis* [*Bibio marci* (Linnaeus, 1758). Eng. St Mark's fly or Hawthorn fly, Sw. Skogshårmygga; Fam. Bibionidae, Eng. March flies, Sw. Hårmyggor],[1150] black, glabrous; wings blackish at margin; anterior tibiae ending in a spine.

Inhabits shady places; often found clinging to the sticky catchfly.[1151]

DESCR. Appearance as that of the St. Mark's fly,[1152] but size as that of the common house mosquito.[1153] Body black, somewhat glabrous. Antennae very short, filiform. Palps longer than cauda. Abdomen linear. Wings incumbent; outer margin blackish consisting of two rather thick lines, which form a macula in the middle. Hindlegs slightly longer than abdomen. Anterior tibiae ending in a stiff double spine, the outer spine larger.

1767. TIPULA *putris* [*Nomen dubium* in Sciaridae], fuscous; alar base ash-grey. *Fn.* 1144. *Frisch Germ.* 4. p. 37. t. 22. Musca vermis rerum putridarum.

Lives in the soil; in early spring abundant in hotbeds,[1154] where it sits in vessels and pots.

DESCR. The size of a louse; entirely fuscous. Abdomen weakly greyish blue. Antennae filiform, long, consisting of 14 segments. Thorax gibbous. Halteres whitish.

[1147] See no. 1766.

[1148] See the com. to no. 378.

[1149] See no. 1833.

[1150] See no. 1765.

[1151] I.e. *Viscaria vulgaris*.

[1152] See no. 1765.

[1153] See no. 1890.

[1154] See the com. to no. 378.

1768. TIPULA *febrilis* [*Dilophus febrilis* (Linnaeus, 1758). Eng. Fever fly, Sw. Gräshårmygga; Fam. Bibionidae, Eng. March flies, Sw. Hårmyggor], jet-black, oblong, hirtous; wings blackish. *Fn.* 1145.[1155]

Act. Ups. 1736. p. 33. n. 61. Musca oblonga atra hirsuta, alis fuscis incumbentibus, pedibus nigris.

Pet. Gaz. 22. t. 14. f. 4. Musca oblonga nostras nigra.

Goed. Belg. 1. p. 31. t. 6.

List. Goed. 260. t. 108.

Reaum. Gall. 5. t. 7. f. 7. 12.

Lives rather often among sick people suffering from an intermittent fever.

DESCR. The size of a house fly,[1156] but more oblong; whole body and legs black, hirsute. Wings reciprocally incumbent upon dorsum, as if there were only one wing; they are also of a membranous or watery colour turning to blackness; the outer alar margin is definitely entirely black.

1769. TIPULA *florilega* [*Nomen dubium*], jet-black, covered entirely with silky hairs. *Fn.* 1146.

Lives on tree branches, especially those of apple-trees after rain; very abundant in Holland, rarer in Sweden.

DESCR. It is a small fly, strongly jet-black; seems entirely silken on the surface, soft. If examined through a lens, it appears clothed entirely with very fine, dense hairs.

1770. TIPULA *hortulana* [*Bibio hortulanus* (Linnaeus, 1758). Eng. March fly, Sw. Trädgårdshårmygga; Fam. Bibionidae, Eng. March flies, Sw. Hårmyggor], wings white, with black outer margin; thorax and abdomen red. *Fn.* 1147.

Act. Ups. 1736. p. 33. n. 62. Musca corpore rubro, capite pedibusque nigris, alis albidis: margine exteriori nigro cum puncto.

Lives on asparagus and tree flowers, which it destoys.

DESCR. The size of a house fly.[1157] Head small, black. Thorax and abdomen red, somewhat glabrous. The blackness appears on the back, where the abdomen is attached to the thorax. Wings white, but the thicker, longitudinal margin is jet-black. Legs black. Femora long. Varies as to sex; the male is entirely jet-black, but femora long, rather thick.

1771. TIPULA *phalaenoides* [*Psychoda phalaenoides* (Linnaeus, 1758). Fam. Psychodidae, Eng. Moth flies, Sw. Fjärilsmyggor], wings deflexed, ash-grey, ovate-lanceolate and ciliate. *Fn.* 1148.

Act. Ups. 1736. p. 31. n. 13. Culex alis depressis margine villosis.

Frisch. Germ. 11. p. 6. t. 11. Culex parvus cinereus, alis pendulis.

Leuwenh. Epist. 1692. *jun.* 24. p. 473. f. 2. 3.

Lives in walls of houses facing manure piles and where the winds are silent.

[1155] See *Fn. Su.* (1761), *Addenda*, p. 559.

[1156] See no. 1833.

[1157] See no. 1833.

DESCR. It is tiny. Wings very large in size, laterally deflexed as in moths,[1158] lanceolate-ovate, entirely ciliate, striate, and pointed. Antennae filiform, ash-grey, consisting of 11 blackish, globose segments.

1772. TIPULA *hirta* [*Nomen dubium* in Psychodidae], hirsute; wings deflexed, ovate, ciliate, tesselated with white and black.

Lives on greater burdock. C. *Alströmer.*

DESCR. Stature as that of *T. phalenoides,*[1159] but entirely hirsute; very beautifully tesselated with white and black. Alar margin entirely hirsute or ciliate. Antennae filiform, almost the length of the body, vertiginously villous.

1773. TIPULA *notata* [*Scatopse notata* (Linnaeus, 1758). Eng. Black compost fly; Fam. Scatopsidae, Eng. Minute black scavenger flies or Dung midges, Sw. Dyngmyggor], jet-black; wings white; anterior abdominal side with a white macula. *Fn.* 1149.

Lives on plant leaves.

DESCR. Smaller than a house fly.[1160] Thorax glabrous, jet-black as is the whole body. Antennae with 11 quasi-perfoliate segments. A single white spot on each side of venter close to pectus. Thoracic margin is sometimes white with a quasi-arcuate thin line, otherwise entirely jet-black.

1774. TIPULA *juniperina* [*Oligotrophus juniperinus* (Linnaeus, 1758). Eng. Juniper gallmidge, Sw. Allmän engallmygga; Fam. Cecidomyiidae, Eng. Gall midges or Gall gnats, Sw. Gallmyggor], wings incumbent, greyish blue, villous at the thinner margin. *Fn.* 1150.

In Småland: Kikbär. In Västergötland: Orkorn. *It. W:goth.* 63.

Lives on juniper. At the tips of the juniper branches, an egg is deposited, from which a tricuspid arises during summer (in Småland it is used against whooping cough[1161]). It consists of three, rather thick leaves that are connivent, ventricose, and outspread at mouth, inside which there are three other very small leaves, exactly connivent so that they do not admit air; these enclose a red larva, which during May is transformed into a small red pupa with black wings and white legs, and this in turn develops into a *Tipula*, which is often consumed by the ichneumon wasp of the juniper. The red galls found on leaves and petioles of aspen and with the size of a pea also produce a fly that strongly resembles those of the juniper and willow, and perhaps these produce the same *Tipula*. But I have not examined this fly sufficiently.

[1158] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

[1159] See no. 1771.

[1160] See no. 1833.

[1161] Lat. *tussis ferina*.

DESCR. Appearance as that of a mosquito.[1162] Legs longer than the tiny creature. Antennae setaceous or necklace-shaped, with around 14 segments that are globose, well spaced, and decorated with some scattered hairs. Head very small. Eyes black. Thorax and abdomen dusky red-brownish; shoulders gibbous. Wings membranous, with outer margin blackish, except for the two veins, whereas outer alar margin is villous. Halteres beneath wings, as in the others.
OBS. *Frisch. Germ.* 4. p. 38. t. 21. The fly of the red worm in the willow buds has much in common with ours so that we doubt it is a different species, since much the same is attributed to the larva, small pupa, and the actual *Tipula*, and furthermore the inner alar margin is hirsute.

1775. TIPULA *palustris* [*Cecidomyia palustris* (Linnaeus, 1758). Fam. Cecidomyiidae, Eng. Gall midges or Gall gnats, Sw. Gallmyggor], jet-black; abdomen red-brownish. *Fn.* 1151.

Often lives on the flowers of the yellow flag; abundant.
DESCR. This is the smallest of all; scarcely as large as a flea; flies about during summer resembling a big hailstorm over water bodies, lakes, and swamps. Wings incumbent in this species. Abdomen ovate.

1776. TIPULA *longicornis* [*Nomen dubium*], antennae longer than the flesh-coloured body. *Fn.* 1152.

Occurs among marsh thistles[1163] in the middle of the summer, especially near Östunaberg.
DESCR. It is very small and almost smaller than a flea. Head black with whitish frons. Thorax fuscous on the back. Antennae and legs black, long. Wings longer than abdomen, membranous, incumbent. Antennae one and a half times as long as body and wings.

1777. TIPULA *pennicornis* [*Nomen dubium*], antennae bipectinate; body jet-black; halteres white.

Lives here; less abundant.
DESCR. Smaller than a flea, narrow. Body strongly jet-black.

1778. TIPULA *rufipes* [*Demeijerea rufipes* (Linnaeus, 1761). Fam. Chironomidae, Eng. Chironomids, nonbiting midges, or lake flies, Sw. Fjädermyggor], jet-black; legs red-brown; wings black in the middle, whitish yellow at base.

Occurs ubiquitously. *Uddman.*
DESCR. The size of a flea. Body jet-black. Antennae pale, villous. Wings incumbent, whitish yellow at base, otherwise fuscous tending to hyaline, medially with an entirely black macula or fascia. Legs, except for the first tarsi, red-brown; anterior pair longer.

[1162] Linnaeus only refers to *Culex*, see nos. 1890–1894.
[1163] Lat. *Cardui palustres*.

Musca

1779. MUSCA *plebeja* [*Thereva plebeja* (Linnaeus, 1758). Eng. Crochet-hooked stiletto; Fam. Therevidae, Eng. Stiletto flies, Sw. Stilettflugor], antennae filiform, awl-shaped; body ash-grey, hirtous; abdomen with whitish segments at margin.

Occurs ubiquitously; less abundant.

DESCR. Middle-sized. Body black, hirtous. Eyes dark brown. Wings and tibiae weakly brick-red. Abdomen conical, hirtous, with pale segmental margins.

1780. MUSCA *chamaeleon* [*Stratiomys chamaeleon* (Linnaeus, 1758). Eng. Clubbed general, Sw. Gulbukig jättevapenfluga; Fam. Stratiomyidae, Eng. Soldier flies, Sw. Vapenflugor], filiform, clavate; scutellum bidentate, deep yellow; abdomen black with lateral, deep yellow fasciae.

Oestrus aquae. Fn. 1029.

Musca, somewhat hirsute; abdominal margin pointed with three light yellow lines on each side, fourth one triangular. *Fn.* 1083.

Hoffn. Ins. 3. t. 7.

Goed. Belg. 1. p. 128. t. 70. Chamaeleo.

List. Goed. 355. t. 144.

Frisch. Germ. 5. p. 28. t. 10. Tabanus aquaticus.

Swamm. Quart. 138. t. 4. Tabanus.

Inhabits swamps and fishponds; abundant.

DESCR. Larger than a house fly.[1164] Thorax dusky ash-grey, villous, light yellow at tip. Eyes fuscous with a transverse rather dark thin line. Wings weakly rusty brown. Abdomen ovate, blackish; each segment, on both sides (but not medially), light yellow at tip except for the 4th one ending in a light yellow triangle. Halteres white. Antennae black, clavate and awl-shaped. Femora black; tibiae distally light yellow.

1781. MUSCA *microleon* [*Odontomyia microleon* (Linnaeus, 1758). Fam. Stratiomyidae, Eng. Soldier flies, Sw. Vapenflugor], antennae filiform, clavate; scutellum bidentate, black; abdomen jet-black with lateral, white streaks.

Occurs around us; rather rare.

DESCR. Similar to the preceding species, but half as large. Body black. Teeth of scutellum rusty brown. Abdominal segments with a transverse, light yellow, narrow line on the sides.

1782. MUSCA *hydroleon* [*Odontomyia hydroleon* (Linnaeus, 1758). Eng. Barred green colonel; Fam. Stratiomyidae, Eng. Soldier flies, Sw. Vapenflugor], antennae filiform and clavate; scutellum bidentate, black; abdomen green, medially annulated with black.

Occurs around us; rather rare.

[1164] See no. 1833.

DESCR. Smaller than the clubbed general.[1165] Head and thorax black. Scutellum bidentate, black, with pale teeth. Halteres green. Abdomen entirely green; dorsum with three black maculae placed close together (the anterior ones becoming gradually smaller); anteriorly with angular sides. Legs brick-red.

1783. MUSCA *pantheriana*[1166] [*Nemotelus pantherinus* (Linnaeus, 1758). Eng. Fen snout; Fam. Stratiomyidae, Eng. Soldierflies, Sw. Vapenflugor], antennae filiform; body jet-black; abdominal dorsum with three white maculae, placed close together at just as many margins.

Lives here; rather rare.

DESCR. Rather small. Head black; occiput with a light yellow spot. Antennae whitish yellow. Thorax with three broad, light yellow lines, connected apically. Scutellum light yellow. Halteres light yellow. Abdomen light yellow with black segments at margin, the three anterior ones with a transverse, black macula. Wings hyaline.

1784. MUSCA *morio* [*Hemipenthes morio* (Linnaeus, 1758). Eng. Black-banded bee-fly; Fam. Bombyliidae, Bee-flies, Sw. Svävflugor],[1167] antennae filiform, awl-shaped; body hirtous, black; wings half black.

Musca, jet-black; wings with a rather thin, sinuate margin verging on white. *Fn.* 1067.

Act. Ups. 1736. p. 32. n. 35. Musca atra, alarum margine inferiore albescente lacerato.

Aldr. Ins. 348. t. 2. f. 13.

Jonst. Ins. t. 8. *muscarum aldrovandi* t. 2. f. 13.

Inhabits gardens ubiquitously.

DESCR. Entirely jet-black including head, thorax, abdomen, legs, and wings, but the thinner alar margin is white or rather whitish and this whiteness forms a curve and makes the wing appear as if bluntly serrate; on the abdominal back there are two or even four snow-white spots at the segmental margins.

1785. MUSCA *maura* [*Hemipenthes maura* (Linnaeus, 1758). Fam. Bombyliidae, Bee-flies, Sw. Svävflugor], antennae filiform, awl-shaped; body hirtous, jet-black, fasciated with white; wings varied with black.

Lives on estates.

DESCR. Head black. Eyes fuscous. Antennae very short, cylindrical, ending in a seta. Thorax black, villous; both sides with a longitudinal, whitish line. Abdomen ovate, hirsute, black, with a linear,

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[1165] See no. 1780.

[1166] *Musca pantheriana* is a misspelling of *Musca pantherina* in *Syst. nat.* (1758), valid as *Nemotelus pantherinus* (Linnaeus, 1758). The description in the first few lines here is identical to that in *Syst. nat.* and fits well with the type specimen in the Linnean collections at the Linnean Society, London. However, in the section DESCR. below Linnaeus describes quite another fly quite incompatible with *Nemotelus pantherinus*.

[1167] See no. 1917.

whitish fascia in the middle, but at base and abdominal tip there are whitish hairs. Halteres whitish, with snow-white knobs. Legs blackish.

1786. MUSCA *tarda* [*Scenopinus fenestralis* (Linnaeus, 1758). Fam. Scenopinidae, Eng. Window flies, Sw. Fönsterflugor],[1168] antennae filiform, awl-shaped; body smooth; thorax bronze black; abdomen jet-black; legs weakly brick-red.

Occurs infrequently.

DESCR. Half as large as the house fly.[1169] Antennae rather short. Eyes fuscous. Thorax black, weakly shining with a copper-colour, not smooth. Halteres white. Abdomen somewhat oblong, jet-black. Femora dirt brown or dark bluish grey tending to brick-red, as are also the tibiae, but posterior ones blacker. The incumbent wings cover the abdomen in a remarkable way, as if there were no wings. Eyes with a fuscous fascia.

1787. MUSCA *hottentotta* [*Villa hottentotta* (Linnaeus, 1758). Eng. Hottentot bee-fly; Fam. Bombyliidae, Eng. Bee-flies, Sw. Svävflugor], antennae filiform, awl-shaped, body hirtous, deep yellowish; wings fuscous at the costa.

Lives around villages.

DESCR. Middle-sized. Body blackish, hirtous, with brick-red wool. Eyes dark brown. Abdominal segments of equal breadth, last one shortest; hence posteriorly markedly blunt.

1788. MUSCA *scolopacea* [*Rhagio scolopaceus* (Linnaeus, 1758). Eng. Downlooker snipe-fly; Fam. Rhagionidae, Eng. Snipe flies, Sw. Snäppflugor], antennae filiform, apically with setae; abdomen whitish yellow, with black spots arranged in three rows; wings cloudy.

Musca, membranous wings, with black maculae; abdomen with three rows of black spots. *Fn.* 1066.

Inhabits small woods.

DESCR. Longer than the house fly.[1170] Head and thorax ash-grey; on thorax three fuscous striae. Wings darkish with black and whitish maculae. Abdomen whitish yellow with a longitudinal row of black maculae on the back, and likewise one on each lateral face. Legs pale. Eyes fuscous. Anus blackish. Appearance as that of a robber fly,[1171] but mouth of a fly.

1789. MUSCA *tringaria* [*Rhagio tringarius* (Linnaeus, 1758). Eng. Marsh snipefly; Fam. Rhagionidae, Eng. Snipe flies, Sw. Snäppflugor], antennae filiform, apically with setae at tip; abdomen with three rows of black spots; thorax unicoloured; wings without maculae.

Inhabits small woods; rather rare.

[1168] See no. 1845.

[1169] See no. 1833.

[1170] See no. 1833.

[1171] Linnaeus only refers to *Asilus*, see nos. 1908–1917.

DESCR. Similar to the preceding species, but smaller. Thorax ash-grey. Scutellum yellowish. Abdomen oblong, light yellow, with three rows of black spots; the last two segments are black. Legs brick-red. Wings pale, without maculae.

1790. MUSCA *conopsoides* [*Ceriana conopsoides* (Linnaeus, 1758). Sw. Griffelblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], antennae clavate, mucronate, closely joined at base; body jet-black; abdomen with three light yellow belts.

Occurs around us; less abundant.

DESCR. Body black. Frons light yellow on each side. Occiput light yellow at margin. Antennae jet-black, clavate, pointed, fused from middle to base. Thorax jet-black with a thin, lateral line in front of each wing; thin light yellow line near scutellum. Wings with outer margin fuscous. Abdomen clavate, with three entire light yellow segments and the fourth one interrupted at base by the light yellow colour. Halteres whitish.

1791. MUSCA *anilis* [*Dialineura anilis* (Linnaeus, 1761). Eng. Swollen silver-stiletto; Fam. Therevidae, Eng. Stiletto flies, Sw. Stilettflugor], antennae filiform, hirtous, without spines; body villous, white tending to greyish white.

Occurs around us; rather rare. *J. Alströmer.* In Skåne *Mr* C. *Solander.*

DESCR. Almost as large as a house fly,[1172] but abdomen oblong, acuminate, conical, entirely white tending to grey-white. Thorax ash-grey, villous, and tibiae pale. Halteres whitish. Antennae filiform, truncated, blunt, at base spersed with hairs, but without a seta or arista. Wings with fuscous veins having anastomoses. Eyes dark brown.

1792. MUSCA *bombylans* [*Volucella bombylans* (Linnaeus, 1758). Eng. Bumble bee hoverfly, Sw. Humleblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, black; antennae plumose; abdomen hirsute, posteriorly red-brown.

Inhabits meadows.

DESCR. Appearance as that of a bumble bee.[1173] Frons pale. Eyes black. Antennae with a black plume. Thorax hirsute, light yellow. Abdomen hirsute at base, light yellow, medially partially naked, jet-black, at tip hirsute, red-yellow, beneath jet-black. Wings variegated with a burnt colour. Legs black.

1793. MUSCA *mystacea* [*Mesembrina mystacea* (Linnaeus, 1758). Eng. Bumble bee noon fly; Fam. Muscidae, Eng. House flies, Sw. Husflugor], tomentose, black; antennae plumose; thorax, abdominal tip, and alar base red-yellow.

Musca, hirsute; thorax, abdominal tip, and alar bases red-yellow. *Fn.* 1069 (*male*).

DESCR. Holds its position among the largest flies. Abdomen ovate, black; posteriorly hirsute with red-yellow hairs. Thorax similarly clothed with red-yellow hairs. Head and legs black. Wings hyaline, especially towards their outer margin, and marked with a large, rusty brown macula at base.

β *Musca*, pilose; thorax grey; abdominal tip white; wings with a rusty brown macula. *Fn.* 1071 (*female*).

[1172] See no. 1833.

[1173] See the com. to no. 839.

Act. Ups. 1736. p. 32. n. 32. Musca fusca, abdominis apice villis albo, alis pallidis macula lunata ferruginea.

Inhabits gardens and small woods; rather rare.

DESCR. This species falls among the largest flies. Body entirely black, but frons with light yellow hairs. Thorax with grey hairs tending to light yellow, but abdomen black and naked at base, whereas at tip or posterior part clothed with white hairs. Tibiae whitish at knees, to which the femora are joined. Wings whitish with fuscous veins, medially marked with a transverse, rusty brown macula.

1794. MUSCA *lappona* [*Sericomyia lappona* (Linnaeus, 1758). Eng. White-barred peat hoverfly, Sw. Lapptorvblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], somewhat tomentose, black; antennae plumose; scutellum rusty brown; abdomen with three belts.

Musca, black; wings rusty brown; abdomen with three interrupted white belts on the back. *Fn.* 1087.

Occurs in Lapland and abundantly in Västerbotten.

DESCR. Middle-sized. Frons whitish. Antennae short. Thorax pubescent, fuscous, in front of wings whitish yellow. Scutellum weakly rusty brown. Abdomen jet-black, tomentose, with three interrupted white fasciae. Legs rusty brown with apically black tarsi. Anterior femora somewhat fuscous. Wings outwardly weakly rusty brown.

1795. MUSCA *pendula* [*Helophilus pendulus* (Linnaeus, 1758). Eng. Sunfly or Tiger hoverfly, Sw. Pendelblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, with setarious antennae; thorax with four lines; abdomen with three interrupted light yellow fasciae.

Musca, thorax with four light yellow striae and three abdominal segments, interrupted by light yellow. *Fn.* 1081.

Reaum. Gall. 4. t. 31. f. 1–11.

Frisch. Germ. 4. p. 20. t. 13.

Inhabits still water bodies, in which the larva hangs down with the help of a long thread.

DESCR. Eyes fuscous. Thorax with 4 light yellow striae on the back alternating with 3 rather broad ones. Abdominal segments fuscous; each single fascia light yellow, large, interrupted (posterior ones smaller); the entire first and largest segment is mostly light yellow beneath. Hind femora thick.

1796. MUSCA *florea* [*Myathropa florea* (Linnaeus, 1758). Eng. Deadhead hoverfly, Sw. Dödskallefluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, with setarious antennae; thorax with two unequal, black fasciae; abdomen with two deep yellow somewhat interrupted fasciae.

Musca, thorax light yellow; abdomen with four deep yellow transverse fasciae, with the first, larger one, interrupted. *Fn.* 1080.

Act. Ups. 1736. p. 32. n. 36. Musca subhirsuta, abdomine annulis luteis nigrisque variegato.

Albin. Angl. 17. f. 1.

Occurs ubiquitously on the flowers in the Academical Garden.[1174]

DESCR. Appearance almost as that of the bumble bee.[1175] Thorax with light yellow hairs and clothed with two broad, black fasciae, posterior one thicker. Eyes fuscous. Antennae obovate. Tibiae white and deep yellow. Abdomen ovate; on the 1st segment a pair of rather large maculae, which almost meet on the back; on the 2nd segment a pair of rather narrow maculae, which meet on the back; margin of this segment medially light yellow; 3rd segment at base is light yellow across including the margin; hence on the abdominal back, first a pair of rather large deep yellow maculae appears, then three transverse, rather narrow fasciae; all composed of deep yellow hairs.

1797. MUSCA *nemorum* [*Eristalis arbustorum* (Linnaeus, 1758). Eng. European drone fly or Plain-faced dronefly, Sw. Lillslamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor],[1176] tomentose, with setarious antennae, and on abdomen a deep yellow segment and three white belts; first segment laterally deep yellow.

Musca, thorax grey; deep yellow and an interrupted fascia at abdominal base; margins of segments whitish. *Fn.* 1078.

Act. Ups. 1736. p. 32. n. 37. Musca abdomine fusco, annulis luteis, lateribus flavis.

Alb. Angl. f. M. L.

Reaum. Gall. 3. t. 31. f. 8.

Merian. Eur. t. 2.

Occurs ubiquitously on the flowers in the Academical Garden.[1177]

DESCR. It is larger than a house fly.[1178] Thorax adspersed with deep yellow fine hairs. Abdomen black, on each side near the base or on the first and second segments deep yellow, then marked with three transverse, very narrow lines verging on white, which originate from the whitish margin of all the abdominal segments. Femora black. Tibiae whitish above. Frons pale. Eyes fuscous. Black spot at margin and a very small spot medially on the wing. Scutellum of the same colour as thorax.

1798. MUSCA *arbustorum* [*Eristalis arbustorum* (Linnaeus, 1758). Eng. European drone fly or Plain-faced dronefly, Sw. Lillslamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor],[1179] tomentose, with setarious antennae; thorax grey; abdomen weakly fuscous with the first and second segments laterally rusty brown.

Inhabits blooming meadows along with the previous species.

DESCR. Similar to *M. nemorum*,[1180] but the thoracic maculae are not indistinct. In the latter, two abdominal segments laterally light yellow, in the former only one. In the latter, margins of segments light yellow, in the former white. In the latter, frons not light yellow above antennae, as in the former.[1181]

1174 See the com. to no. 484.

1175 See the com. to no. 839.

1176 See no. 1798.

1177 See the com. to no. 484.

1178 See no. 1833.

1179 See no. 1797.

1180 See no. 1797.

1181 The transl. reflects Linnaeus's use of *haec*, "the latter" (*M. nemorum*) and *illa*, "the former" (*M. arbustorum*).

1799. MUSCA *tenax* [*Eristalis tenax* (Linnaeus, 1758). Eng. Common drone fly or Rat-tailed maggot, Sw. Storslamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, with setarious antennae; thorax grey; abdomen weakly fuscous, unicoloured; posterior tibiae compressed and gibbous.

Musca, pilose; thorax grey; abdomen black; wings with an indistinctly rusty brown macula. *Fn.* 1072.

Lives in stagnant water bodies, sewers, and bookbinders' paper; the larva can hardly be destroyed through the pressure of the press.[1182]

DESCR. It falls among the largest flies. It is black, but frons and thorax covered with grey hairs. Abdomen black, not very pubescent. Wings membranous with a rusty brown anastomosis of veins close to the middle of the anterior margin. Eyes black with a double perpendicular, fuscous line. The posterior pair of legs is black regarding femur and the nearest segment or tibia; this tibia is also observed to be gibbous posteriorly. Appearance as that of the honey bee.[1183]

1800. MUSCA *intricaria* [*Eristalis intricaria* (Linnaeus, 1758). Eng. Furry dronefly, Sw. Mörk slamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, deep yellowish, with setarious antennae; abdominal tip whitish; knees white.

Inhabits meadows.

DESCR. Habitus as that of the orange-tailed drone fly;[1184] body fuscous. Thorax and scutellum clothed with rusty brown wool. Abdomen villous, black, posteriorly white. Legs black. Tibiae whitish at base. Wings with an indistinct rusty brown fascia.

1801. MUSCA *oestracea* [*Eristalis oestracea* (Linnaeus, 1758). Eng. Orange-tailed drone fly, Sw. Praktslamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, black, with setarious antennae; scutellum whitish; abdominal tip deep yellowish.

Musca, pilose, blackish; abdominal base white; tip red-yellow. *Fn.* 1070.

Inhabits forests.

DESCR. Appearance as that of a bumble bee;[1185] the size of a house fly,[1186] but more slender. Head black. Thorax black; apically whitish. Abdomen black in the middle part with white hairs at base, but tip clothed with red-yellow hairs. Legs black. Wings membranous with rusty brown, very tenuous veins and medially on the wing an indistinctly rusty brown macula, this being fairly large.

1802. MUSCA *fallax* [*Blera fallax* (Linnaeus, 1758). Eng. Pine hoverfly, Sw. Röd stubblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], fuscous with setarious antennae; frons light yellow; abdomen with a tomentose, light yellow tip; squama of halteres lacteous.

Inhabits small woods.

[1182] Remarkable and unexplainable statement by Linnaeus.

[1183] See the com. to no. 1665.

[1184] See no. 1801.

[1185] See the com. to no. 839.

[1186] See no. 1833.

DESCR. Smaller than the previous species. Body fuscous, slightly pubescent. Face whitish light yellow. Antennae rusty brown. Scutellum concolorous with thorax. Last abdominal segment red-yellow. Halteres white. Femora black. Anterior tibiae whitish yellow, posterior tibiae only at base. Tarsi light yellow, black-tipped. Wings weakly maculate.

1803. MUSCA *lucorum* [*Leucozona lucorum* (Linnaeus, 1758). Eng. Blotch-winged hoverfly, Sw. Ljushårig lyktblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], somewhat tomentose, with setarious antennae; thorax palish grey; abdomen black with first segment entirely light yellow.

Inhabits groves.

DESCR. Stature as that of the preceding species. Appearance whitish. Body clothed with grey or weakly rusty brown wool. Half of abdomen or the posterior part jet-black. Legs black. Anterior tibiae light yellow on outer side. Wings with a transverse, broad, fuscous macula.

1804. MUSCA *sylvarum* [*Xylota sylvarum* (Linnaeus, 1758). Eng. Golden-tailed hoverfly or Golden-tailed leaf licker, Sw. Guldvedblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, black, with setarious antennae; last abdominal segment tomentose, light yellow.

Inhabits forests.

DESCR. Middle-sized, oblong. Head black with a silvery frons. Thorax not distinctly tomentose, shining with whitish yellow or fuscous depending on the various angles. Scutellum concolorous. Abdomen oblong, black; 2nd segment laterally golden light yellow; 3rd segment strongly light yellow in its entirety and almost golden; 4th segment or anus very small, black. Femora black. Tibiae mostly light yellow. Tarsi light yellow, black-tipped.

1805. MUSCA *bicincta* [*Chrysotoxum bicinctum* (Linnaeus, 1758). Eng. Two-banded wasp hoverfly or Two-banded spearhorn, Sw. Tvåbandad getingfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], black, with setarious extended antennae; thorax with lateral spots and abdomen with two light yellow belts.

Musca, jet-black; abdomen with two light yellow belts on the back. *Fn.* 1086.

Occurs among flowers.

DESCR. The size of a house fly[1187] or slightly larger. Body entirely jet-black, glabrous. Abdomen above with two transverse, very well spaced, light yellow fasciae; first fascia almost interrupted, but beneath there is a single transverse, light yellow one, which corresponds to the dorsal fasciae. Frons with two light yellow lines; at thoracic base on each side, a small, deep yellow macula. Legs at tip light yellow. Wings fuscous, at thicker margin darkish. Halteres light yellow.

1806. MUSCA *arcuata* [*Chrysotoxum arcuatum* (Linnaeus, 1758). Eng. Northern spearhorn, Sw. Välvd getingfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], black, with setarious, elongated antennae; thorax laterally maculate; abdomen with four arcuate, light yellow belts.

Inhabits flowery meadows.

[1187] See no. 1833.

DESCR. Middle-sized. Head with a deep yellowish frons. Antennae black, the length of the head. Thorax pubescent, blackish; sides maculate with deep yellow. Scutellum deep yellow, medially black. Abdomen ovate, black, with four deep yellow medially interrupted arches, the stems of which face posteriorly; abdomen glabrous beneath, also with four deep yellow interrupted fasciae tending to rusty brown. Legs entirely rusty brown.

1807. MUSCA *mutabilis* [*Microdon mutabilis* (Linnaeus, 1758). Eng. Limestone ant fly, Sw. Slavmyreblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], tomentose, with setarious, elongated antennae; abdomen alternates with black and grey; scutellum rusty brown; thorax without maculae.

Inhabits meadows.

DESCR. Middle-sized, pubescent. Thorax fuscous, covered with weakly brick-red wool. Scutellum slightly rusty brown. Abdomen ovate, blackish, shining with brick-red wool when viewed from different angles. Legs brick-red with black femora. Wings reticulate with rusty brown veins.

1808. MUSCA *devia* [*Microdon devius* (Linnaeus, 1761). Eng. Downland microdon or Downland ant fly, Sw. Tuvmyreblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], slightly tomentose, with setarious, elongate antennae; thorax blue with violet abdomen.

Inhabits meadows; rather rare.

DESCR. The size of a house fly.[1188] Antennae black, clavate, pointed with a seta laterally. Frons blue, shining. Eyes fuscous. Thorax bluish, shining, shrouded with grey hairs. Abdomen purplish jet-black, shining, almost covered with very short, grey hairs. Wings hyaline with black veins. All tibiae brick-red.

1809. MUSCA *ichneumonea* [*Loxocera aristata* (Panzer, 1801). Fam. Psilidae, Eng. Rust flies, Sw. Rotflugor], antennae setarious, elongate, cylindrical; thorax and legs longish, rusty brown; abdomen ash-grey.

Occurs among flowers; rather rare.

DESCR. Form of an ichneumon wasp,[1189] oblong, slender. Head black. Antennae pale, the length of the head. Thorax rusty brown, anteriorly black. Scutellum black; a pale edge beneath the scutellum on each side. Legs brick-red. Wings pale.

1810. MUSCA *diopthalma* [*Spilomyia diophthalma* (Linnaeus, 1758). Sw. Gulfotad trädblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], naked, with setarious antennae; thorax with maculae; abdomen with six light yellow belts; hind femora dentate.

Occurs among flowers.

DESCR. Middle-sized. Frons light yellow. Eyes purplish at margin and with a perpendicular, black fascia. Thorax black with three or four light yellow spots. Scutellum black, with a rusty brown tip. Abdomen black, six segments with light yellow margins, of which the last but one yellow margin is interrupted. Legs rusty brown. Hind femora marked beneath with a tooth.

[1188] See no. 1833.

[1189] Linnaeus only refers to *Ichneumon*, see nos. 1578–1647.

1811. MUSCA *vespiformis* [*Temnostoma vespiforme* (Linnaeus, 1758). Sw. Getinglik tigerfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], naked with setarious antennae; thorax with maculae; abdomen with six light yellow belts; forelegs black.

Inhabits meadows.

DESCR. Resembles *M. diopthalma*.[1190] Antennae light yellow. Thorax with nine maculae verging on white. Scutellum glabrous, bluish jet-black. Three abdominal segments each surrounded by a double light yellow fascia, which on a single segment merges in the middle, also at margins and sides. Halteres white. Legs rusty brown, but anterior ones mostly black. Frons light yellow. Antennae rusty brown.

1812. MUSCA *festiva* [*Xanthogramma citrofasciatum* (De Geer, 1776). Eng. Barred ant-hill hoverfly, Sw. Ängsgetingfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], naked, with setarious antennae; thorax with lateral lines; abdomen with four interrupted light yellow belts.

Inhabits meadows; rather rare.

DESCR. Body larger than a house fly,[1191] jet-black. Frons with two perpendicular, light yellow lines. Antennae black, longer than head, subclavate with a lateral arista. Thoracic sides with a longitudinal, light yellow interrupted line, beneath which there is a macula resembling a light yellow V with two spots. Scutellum inscribed with a light yellow delta. Abdomen with four light yellow, interrupted arches, the fifth, terminal one, entire. A light yellow fascia beneath and more posteriorly two light yellow spots. Legs rusty brown. Tibiae light yellow. Wings with rusty brown veins.

1813. MUSCA *glaucia* [*Leucozona glaucia* (Linnaeus, 1758). Eng. Pale-saddled leucozona, Sw. Ljus lyktblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], somewhat tomentose, with setarious antennae; thorax without maculae; scutellum greyish blue; abdomen with three interrupted whitish belts.

Inhabits meadows; rather rare.

DESCR. Head light yellow. Eyes purplish. Antennae black. Thorax darkish grey. Scutellum light yellow. Abdomen black, at base three ash-grey segments tending to greyish blue; hence three greyish blue interrupted fasciae. Legs rusty brown. Femora black, apically rusty brown.

1814. MUSCA *noctiluca* [*Pipiza noctiluca* (Linnaeus, 1758). Eng. Common pipiza, Sw. Stjärngallblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], somewhat tomentose, jet-black with setarious antennae, first abdominal segment with two pellucid maculae.

Inhabits forests.

DESCR. Middle-sized. Head black with a somewhat pilose frons. Eyes dark brown. Antennae black. Thorax black, hirsute if viewed anteriorly; posteriorly it appears glabrous. Abdomen glabrous, first segment with two hyaline, ovate, diaphanous maculae, more widely spaced at tip, above and beneath transparent.

[1190] See no. 1810.

[1191] See no. 1833.

1815. MUSCA *gibbosa* [*Ogcodes gibbosus* (Linnaeus, 1758). Eng. Smart-banded hunchback; Fam. Acroceridae, Eng. Small-headed flies, Hunch-back flies or Spider flies, Sw. Kulflugor], somewhat tomentose, jet-black, with setarious antennae; abdomen subglobose, with four white belts; squamae of halteres distended.

Occurs around us; rather rare.

DESCR. Rather small. Head black. Eyes purplish. Thorax black with greyish white fine hairs. Scutellum concolorous. Squamae of halteres white and vaulted, large. Abdomen subglobose, jet-black, with segmental margins broadly snow-white. Femora black, apically weakly rusty brown. Tibiae weakly brick-red.

1816. MUSCA *ribesii* [*Syrphus ribesii* (Linnaeus, 1758). Eng. Common banded hoverfly or Humming syrphus, Sw. Gul solblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], partially naked, black, with setarious antennae; thorax without maculae; abdomen with four light yellow belts, first one interrupted.

Musca, abdomen ovate, black, with a pair of crescents and three whitish yellow-belts. *Fn.* 1089.

Act. Ups. 1736. p. 32. n. 41. Musca nigra glabra, abdomine cingulis luteis: superioribus dimidiatis cincto.

Goed. Belg. 1. p. 111. t. 41.

List. Goed. 315. f. 133.

Inhabits gardens; the larva feeds on aphids, especially those on red currant.

DESCR. In appearance, size, and form it very closely resembles the following species. Differs only regarding abdomen, which on the back has two crescents on the first segment, and then three transverse, whitish yellow belts, which are almost narrower medially on dorsum. Scutellum also whitish yellow. Mouth, legs, and abdomen beneath whitish yellow; at outer alar margin an indistinct, fuscous line.

1817. MUSCA *pyrastri* [*Scaeva pyrastri* (Linnaeus, 1758). Eng. Pied hoverfly or White-clubbed glasswing, Sw. Vit glasvingefluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], partially naked, black, with setarious antennae; thorax without maculae; abdomen with six clavate crescents, light yellow.

Musca, abdomen ovate, with three pairs of crescents verging on white. *Fn.* 1090.

Act. Ups. 1736. p. 32. n. 39. Musca fusca glabra, dorso abdominis tribus paribus albarum lunularum notato.

Goed. Belg. 1. p. 99. t. 47. Proboscis elephantis.

List. Goed. 319. f. 134.

Alb. Angl. 66.

Mer. Eur. t. 89.

Blank. Belg. t. 10. f. P.

Reaum. Gall. 3. t. 31. f. 9.

Frisch. Germ. 11. p. 17. t. 22. f. t.

The larva lives on the leaves of trees, especially those of the common pear; feeds on aphids.

DESCR. Frons whitish greyish blue. Eyes fuscous. Thorax dusky bronze; sides and the villous pectus grey. Scutellum dark bluish grey. Abdomen jet-black with three pairs of white, curved crescents, and two thin white lines behind these crescents. Abdomen beneath verging on white. Halteres white. Antennae blackish. Femora black. Tibiae whitish yellow.

1818. MUSCA *transfuga* [*Anasimyia transfuga* (Linnaeus, 1758). Eng. Golf-club duckfly, Sw. Jämnbred dammblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], black; antennae setarious; abdomen cylindrical, tomentose, with six curved, whitish crescents.

Musca, abdomen subcylindrical; three pairs of crescents verging on white on the back. *Fn.* 1094.

Act. Ups. 1736. p. 32. n. 40. Musca fusca, abdomine oblongo pubescente, dorso tribus paribus alarum lunularum notato.

Occurs among flowers.

DESCR. Body quite grey-white. Abdomen pubescent with rather small crescents with their cavity facing the thorax; posterior pair of these crescents is closely connected with the whiteness, with which abdomen is tinged beneath.

1819. MUSCA *menthastri* [*Sphaerophoria scripta* (Linnaeus, 1758). Eng. Long hoverfly or Common twist-tail, Sw. Taggsländfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor],[1192] naked, black, with setarious antennae; thorax maculate; the four belted abdomen and scutellum of a light yellow colour.

Musca, abdomen, with three deep yellow arches bent backwards. *Fn.* 1097.

Act. Ups. 1736. p. 32. n. 42. Musca fusca, abdomine acuminato: circulis luteis retrorsum flexis cincto.

Occurs among flowers.

DESCR. It is small and only half as large as a house fly,[1193] slender, and shaped like a wasp.[1194] Legs light yellow. Frons light yellow. Thorax blackish, with lateral deep yellow lines and a light yellow tip. Abdominal back with three light yellow, arcuate, pointed lines and arches, the shanks of which face posteriorly; first arch is light yellow and medially interrupted, but second one entire; third one semi-interrupted, but fourth is interrupted; fifth abdominal segment is light yellow with three black spots. Abdomen light yellow beneath.

1820. MUSCA *scripta* [*Sphaerophoria scripta* (Linnaeus, 1758). Eng. Long hoverfly or Common twist-tail, Sw. Taggsländfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor],[1195] partially naked; antennae setarious; thorax with lines; scutellum and linear abdomen with light yellow fasciae.

Musca, oblong; abdomen light yellow, with black, transverse markings. *Fn.* 1091.

Act. Ups. 1736. p. 33. n. 45. Nomen idem.

[1192] See no. 1820.

[1193] See no. 1833.

[1194] Linnaeus only refers to *Vespa*, see nos. 1670–1683.

[1195] See no. 1819.

Occurs among flowers; the larva feeds on aphids.

DESCR. It is longer and more slender than the others, entirely glabrous. Legs light yellow. Wings white, shining. Abdomen narrow, light yellow, with the first two segments fuscous at tip and base; the others have three pointed, fuscous spots at outer and posterior margins, marked as if with figures. Differs scarcely from the following two except for the abdominal colour.

1821. MUSCA *mellina* [*Melanostoma mellinum* (Linnaeus, 1758). Eng. Short melanostoma or Dumpy melanostoma, Sw. Kort gräsblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], naked, with setarious antennae; thorax weakly bronze coloured, darkish, without maculae; abdomen with eight deep yellowish maculae.

Musca, abdomen oblong, with three pairs of deep yellowish tetragons. *Fn.* 1092.

DESCR. So similar to the following β that it could be taken for the same. Eyes dusky rusty brown. Thorax blackish bronze, somewhat shining. Wings watery, shining. Thoracic tip not light yellow, but concolorous with thorax. The 4 anterior legs are light yellow, the posterior 2 black, with deep yellow knees. Abdomen oblong, linear, black; a rather small pair of whitish yellow maculae on first segment; a larger pair of whitish yellow maculae exactly tetragonal on second segment; on third segment also a similar pair, but smaller than that of the second segment; on the others no macula. Is this species different from the following one only as to sex? Abdomen ivory-white or verging on white beneath.

β *Musca*, abdomen oblong, with three pairs of trigons[1196] inclining to deep yellow. *Fn.* 1093.

Act. Ups. 1736. p. 32. n. 43. Musca fusca, dorso tribus paribus trigonorum luteis notato.

Occurs frequently on the leaves of trees, where the larva lives among the aphids. Pupa light yellow, oblong; hence acuminate.

DESCR. It falls among the rather small and oblong species. Frons light yellow. Eyes dusky rusty brown. Thorax blackish bronze, somewhat bright, with a light yellow tip. Wings watery. Abdomen bluish black, linear. On the first segment, a pair of spots inclining to deep yellow; on each segment 2, 3, and 4 there is a pair of round maculae inclining to deep yellow, of which the posterior pair is more triangular with the angle facing backwards; last two segments light yellow, with a black spot in the middle. Abdomen light yellow beneath. Abdominal dorsum varies with 4, 3 or 2 pairs of rusty brown maculae with different shapes. Thorax with an irregular, light yellow macula on the sides. Legs light yellow.

1822. MUSCA *pipiens* [*Syritta pipiens* (Linnaeus, 1758). Eng. Thick-legged hoverfly or Compost hoverfly, Sw. Kompostblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], glabrous, black, with setarious antennae; abdomen maculate, whitish on each side; hind femora clavate, dentate.

Musca, oblong; hind femora rather large. *Fn.* 1096.

Act. Ups. 1736. p. 33. n. 45. Musca oblonga nigra, abdominis lateribus inaequaliter albis, pedibus posticis longis.

Occurs among flowers.

[1196] Lat. *trigonum* (from Gr. *trigonon*), common in botanical Latin, i.e. "triangle".

DESCR. Body entirely black, slender, long, glabrous. Wings whitish; the three abdominal segments are white towards base on each side. Hind femora denticulate beneath. Posterior tibiae encircled with a pale ring. Hind femora adapted for jumping, longer than the others, but also thicker and stronger with a bilateral white macula (but not always). Last abdominal segment is black beneath, the others pale beneath. Frons and thoracic sides whitish.

1823. MUSCA *segnis* [*Xylota segnis* (Linnaeus, 1758). Eng. Orange-belted hoverfly, Sw. Lövvedblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], glabrous, with setarious antennae; thorax weakly bronze coloured; abdomen rusty brown, black-tipped; hind femora clavate.

Musca, oblong; thorax bronze coloured; abdomen anteriorly light yellow, posteriorly black. *Fn.* 1104.

Act. Ups. 1736. p. 32. n. 33. Musca nigra, abdomine anterius fulvo, alis immaculatis.

Inhabits woody meadows.

DESCR. The size of a house fly,[1197] but of a more oblong form. Eyes fuscous. Thorax bronze green. Abdomen oblong, in some almost pale whitish, in others rusty brown, but posteriorly always black on one or two segments, yet in such a way that the deep yellow colour always predominates. Femora black; tibiae with white rings. Wings watery.

1824. MUSCA *femorata* [*Chalcosyrphus valgus* (Gmelin, 1790). Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor],[1198] glabrous, jet-black, oblong, with setarious antennae; hind femora clavate and forelegs red.

Inhabits meadows, very sluggish.

DESCR. Body oblong, jet-black, partially naked. Capitules of antennae, four forelegs, hind femora, except for the tips, and halteres are all rusty brown. Hind femora are large.

1825. MUSCA *inanis* [*Volucella inanis* (Linnaeus, 1758). Eng. Lesser hornet hoverfly or Wasp plumehorn, Sw. Bålgetingblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], antennae plumose, pilose, whitish yellow; abdomen pellucid, with two black belts.

Inhabits groves.

DESCR. Large. Rostrum on each side corneous, glabrous. Thorax slightly villous, blackish. Scutellum brick-red. Abdomen light yellow, pellucid, at base and tip black; the first three segments black marginally, first one bifid. Legs darkish; tibiae rather pale.

1826. MUSCA *pellucens* [*Volucella pellucens* (Linnaeus, 1758). Eng. Pellucid fly or Pied plumehorn, Sw. Fönsterblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], pilose, black, with plumose antennae; first abdominal segment white, pellucid.

Musca, abdomen anteriorly white, posteriorly black, with white wings having a black macula. *Fn.* 1073.

[1197] See no. 1833.

[1198] Originally described as *Musca valga* in *Syst. nat.* (1758).

Act. Ups. 1736. p. 32. n. 30. nomen idem.

Occurs in the Academical Garden[1199] and elsewhere; rather rare.

DESCR. Certainly this species, even if it is not the largest of our flies, nevertheless falls among the largest. It enjoys a white, light yellow, corneous frons. Wings white, especially at base; in the middle of the wings a large black macula; within this macula and on alar tips, there are fuscous veins. Abdomen divided in half; at base above and beneath of a pellucid white colour, at tip black. Legs black. It is less pilose than the preceding flies. Eyes fuscous. Antennae light yellow with a black, pilose seta.

1827. MUSCA *meridiana* [*Mesembrina meridiana* (Linnaeus, 1758). Eng. Noon fly or Noonday fly; Fam. Muscidae, Eng. House flies, Sw. Husflugor], pilose, black, with plumose antennae; frons gold-coloured; wings deep yellow at base.

Musca, jet-black; alar base rusty brown. *Fn.* 1077.

Reaum. Gall. 4. t. 26. f. 10.

Occurs ubiquitously.

DESCR. This species very closely resembles the previous fly and it is easily the largest of its genus. Entirely black, but there is a gilded macula on each side in front of the eyes. Black hairs or more precisely sparse setae all over the body. Legs black. Abdomen ovate. Wings hyaline, at base light yellow or rather rusty brown.

1828. MUSCA *caesar* [*Lucilia caesar* (Linnaeus, 1758). Eng. Common greenbottle, Sw. Grön guldfluga; Fam. Calliphoridae, Eng. Blowflies, Sw. Spyflugor], pilose, shining green, with plumose antennae; legs black.

Musca, thorax and abdomen shining green. *Fn.* 1098.

Act. Ups. 1736. p. 33. n. 54. Musca carnivora viridi-aenea, abdomine obtuso.

Mer. Eur. t. 49.

Reaum. Gall. 4. t. 8. f. 1. & t. 19. f. 8. t. 24. f. 13–15.

Raj. Ins. 272. Musca bipennis, carnariae vulgaris fere magnitudine, thorace & abdomine supino caeruleo colore pulchro nitente, capite nigro.

Lives ubiquitously in carcasses, meat, and decaying material.

DESCR. Twice as large as the house fly.[1200] Whole body, thorax, and abdomen concolorous, i.e. it is green, silky or bronze green, very bright and smooth. Legs jet-black. Eyes dusky red-brown, with a double line transversely inscribed on thorax. Abdomen ovate, with four segments.

1829. MUSCA *cadaverina* [*Pyrellia vivida* Robineau-Desvoidy, 1830. Eng. Least false-greenbottle; Fam. Muscidae, Eng. House flies, Sw. Husflugor], pilose, shining bronze coloured, with plumose antennae; thorax blue; abdomen green.

Musca, thorax shining blue; abdomen shining green. *Fn.* 1099.

Goed. Belg. 1. p. 233. f. 54.

List. Goed. 305. f. 123.

[1199] See the com. to no. 484.

[1200] See no. 1833.

Act. Ups. 1736. p. 33. n. 56. Musca carnivora, pectore caeruleo-aeneo, abdomine viridi-aeneo.

Lives in carcasses.

DESCR. Appearance as that of the preceding species, but smaller, equal to the house fly;[1201] differs also from the preceding species through the blue colour of the thorax.

1830. MUSCA *mortuorum* [*Cynomya mortuorum* (Linnaeus, 1761). Eng. Yellow-faced blowfly; Fam. Calliphoridae, Eng. Blowflies, Sw. Spyflugor], pilose, with plumose antennae; thorax black; abdomen green. *Fn.* 1101.

Lives in carcasses and decaying material.

DESCR. Appearance entirely as that of the following species, from which it only differs by the fact that it is slightly larger, that the abdomen shines blue-green like copper, and that the frons, between the eyes, including antennae and mouth, is of a golden white colour like a membrane, which is not the case in the following species.

1831. MUSCA *vomitoria* [*Calliphora vomitoria* (Linnaeus, 1758). Eng. Blue bottle fly, Orange-bearded blue bottle or Bottlebee; Fam. Calliphoridae, Eng. Blowflies, Sw. Spyflugor], pilose, with plumose antennae; thorax black; abdomen blue, shining.

Musca, thorax black; abdomen blue. *Fn.* 1102.

Goed. Belg. 1. p. 132. t. 53.

List. Goed. 304. f. 122.

Raj. Ins. 271. Musca carnivora, abdomine colore caeruleo nitente.

Act. Ups. 1736. p. 33. n. 57. Musca abdomine colore caeruleo obtuso.

In Sweden: Spy-Fluga.

Lives in carcasses and meat exposed to warmth. Whenever fresh meat is stored in a fairly warm place, the fly always lands on it and lays eggs; vermicles[1202] or larvae then consume the rotten meat.

DESCR. Twice as large as the house fly.[1203] Head and thorax black, only abdomen of a shining blue colour.

1832. MUSCA *carnaria* [*Sarcophaga carnaria* (Linnaeus, 1758). Eng. Common flesh fly or Greater worm flesh fly, Sw. Allmän köttfluga; Fam. Sarcophagidae, Eng. Flesh flies, Sw. Köttflugor], pilose, black, with plumose antennae; thorax with rather pale lines; abdomen somewhat shining, tesselate, rather large.

Musca, rather large, black; abdomen shining, tesselate; thorax with rather pale, longitudinal lines. *Fn.* 1105.

Aldr. Ins. 348. t. 2. f. 16.

Jonst. Ins. 70. t. 8. t. 2. f. 16. Musca decima sexta.

[1201] See no. 1833.

[1202] Lat. *vermiculus* means "little worm".

[1203] See no. 1833.

Frisch. Germ. 7. p. 21. t. 14.

Raj. Ins. 270. Musca carnaria vulgaris.

Lives in fresh meat.

DESCR. It is the same as the house fly[1204] except for the size. The house fly is smaller than the flesh fly. The flesh fly is twice as large and flies in a different manner.

1833. MUSCA *domestica* [*Musca domestica* Linnaeus, 1758. Eng. House fly, Sw. Husfluga; Fam. Muscidae, Eng. House flies, Sw. Husflugor], rather small, pilose, black; antennae plumose; thorax with indistinct lines; abdomen somewhat shining, tesselate.

Musca, rather small, black; abdomen shining, tesselate; thorax with longitudinal, rather pale lines. *Fn.* 1106.

Aldr. Ins. 348. t. 2. f. 23. Musca vulgaris domestica.

Fl. Lapp. 359. n. 517. Musca domestica.

Act. Ups. 1736. p. 33. n. 58. Musca domestica.

Raj. Ins. 270. Musca bipennis major, (minor,) thorace glabro striato, abdomine supino nigro toto: maculis albis punctato.

In Sweden: Fluga. Stugo-Fluga.

Occurs ubiquitously in all Sweden, very common in peasants' dwellings; a *rara avis*[1205] in Lapland, but it almost fills whole houses in the Norwegian Finnmark. The larva dwells in the dunghills of horses. *De Geer.*

DESCR. It is black. Eyes are red, beneath these a white line. Abdomen tesselate, of a black and quite grey-white colour. Thorax with three grey-white lines. Differs from the preceding species by the fact that it is only half as large, that it does not, as the previous one, buzz while flying, that it does not search out decaying material in the same way, and that it is conceived in another way. As to external appearance the very size makes it distinct, although, if one looks very closely, there will be various other marks.

1834. MUSCA *albifrons* [*Nomen dubium*], pilose, black, with plumose antennae; frons whitish. *Fn.* 1107.

Act. Ups. 1736. p. 33. n. 60. Musca atra obtusa, fronte alba.

Reaum. Ins. 4. t. 26. f. 5.

Inhabits meadows; rather rare.

DESCR. Size and appearance entirely as those of the house fly,[1206] but the colour is blacker. Abdominal sides slightly rusty brown. Frons white, with some black hairs. It is also more glabrous than the house fly.[1207]

[1204] See no. 1833.

[1205] Juvenal, *Satira* 6. 165: *rara avis in terris nigroque simillima cygno* ("a rare bird upon the earth and strongly similar to a black swan").

[1206] See no. 1833.

[1207] See no. 1833.

1835. MUSCA *sepulchralis* [*Eristalinus sepulchralis* (Linnaeus, 1758). Eng. Small spotty-eyed dronefly, Sw. Dyngslamfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], pilose, black, with plumose antennae; abdomen jet-black, somewhat shining, very glabrous above.

Lives ubiquitously at the butcher's and at meat markets.

DESCR. Almost the size of the house fly.[1208] Body black. Eyes purplish with scattered black spots. Antennae apically weakly rusty brown. Abdomen shining black above. Knees slightly rusty brown.

1836. MUSCA *fera* [*Tachina fera* (Linnaeus, 1761). Fam. Tachinidae, Eng. Parasitic flies or Tachinid flies, Sw. Parasitflugor], pilose, black, with setarious antennae; abdominal sides brick-red, diaphanous.

Inhabits ubiquitously forests and meadows.

DESCR. Very similar to the common flesh fly,[1209] but laterally red-brown tending to brick-red, diaphanous. Thorax not lineate.

1837. MUSCA *grossa* [*Tachina grossa* (Linnaeus, 1758). Eng. Giant tachinid fly; Fam. Tachinidae, Eng. Parasitic flies or Tachinid flies, Sw. Parasitflugor], pilose, black, with setarious antennae; wings rusty brown at base.

Musca, black, with abdominal rusty brown sides. *Fn.* 1076.

Reaum. Ins. 4. t. 26. f. 10.

Lives in cow's dung.

DESCR. Body the largest of all our flies, overall hirsute or pilose. Head strongly light yellow. Eyes black. Antennae rusty brown, apically black. Wings anteriorly rusty brown. Claws of feet light yellow.

1838. MUSCA *rotundata* [*Gymnosoma rotundatum* (Linnaeus, 1758). Eng. Ladybird balloon-belly; Fam. Tachinidae, Eng. Parasitic flies or Tachinid flies, Sw. Parasitflugor], pilose, with setarious antennae; thorax marked with indistinct lines; abdomen somewhat rounded, light yellow, with longitudinal, fuscous maculae crowded together.

Lives ubiquitously at the corners of hedges.

DESCR. The size of a house fly.[1210] Head with a white mouth; vertex between eyes silvery. Thorax ash-grey, with blackish lines. Abdomen rounded, light yellow, with five dorsal, rounded fuscous spots, longitudinally arranged; in one sex well spaced, in the other contiguous. Legs black.

[1208] See no. 1833.

[1209] See no. 1832.

[1210] See no. 1833.

1839. MUSCA *larvarum* [*Exorista larvarum* (Linnaeus, 1758). Eng. Red-saddled exorista; Fam. Tachinidae, Eng. Parasitic flies or Tachinid flies, Sw. Parasitflugor], pilose, blackish, with setarious antennae; thorax ash-grey; abdomen rather pale, tesselate.

De Geer. Ins. 1. t. 11. f. 23.

Lives in the larvae of Lepidoptera.

DESCR. Similar to the house fly,[1211] but thorax scarcely, indeed scarcely, lineate.

1840. MUSCA *radicum* [*Delia radicum* (Linnaeus, 1758). Eng. Cabbage maggot or Cabbage root fly, Sw. Liten kålfluga; Fam. Anthomyiidae, Eng. Root-maggot flies, Sw. Blomsterflugor], pilose, with setarious antennae; abdomen ash-grey with a dorsal line and four black belts.

Lives in the roots of radish. *P. Forsskål*. Fully developed it performs dances in circles along with all the following species. Is it therefore only different as to sex?

DESCR. Strongly resembles the house fly,[1212] but a quarter of its size. Abdomen black with four ash-grey, interrupted fasciae.

1841. MUSCA *canicularis* [*Fannia canicularis* (Linnaeus, 1761). Eng. Lesser house fly, Sw. Liten husfluga or Takdansfluga; Fam. Fanniidae, Sw. Takdansflugor], pilose, blackish, with setarious antennae; abdominal segments whitish yellow, with a blackish margin.

Musca lateralis. Syst. nat. 10. p. 597. n. 60. (*erronee*).

Occurs ubiquitously, during the dog days[1213] under shady tree foliage; performs dances in circles at midday and evening.

1842. MUSCA *coemiteriorum*[1214] [*Chrysogaster coemiteriorum* (Linnaeus, 1758). Eng. Grey-sided chrysogaster, Sw. Ängsblomfluga; Fam. Syrphidae, Eng. Hoverflies, Sw. Blomflugor], pilose, black, with setarious antennae; abdomen glabrous above.

Musca, black; abdomen glabrous, jet-black. *Fn.* 1108.

Lives around carcasses.

DESCR. Very similar to the smoky-winged woodlouse-fly[1215] but three times larger, from which fly it differs especially through the anterior slightly rusty brown tibiae and the white halteres.

1843. MUSCA *aestivationis* [*Nomen dubium*], pilose, black, with setarious antennae; wings with transverse, white spots.

Occurs in Uppsala.

[1211] See no. 1833.

[1212] See no. 1833.

[1213] I.e. the hot days of summer.

[1214] See Ch. *A small fauna of Sweden*, where Linnaeus spells the species name *cremiteriorum*.

[1215] See no. 1846.

DESCR. The size of a flea, black, but thorax with ash-grey maculae and abdominal segments greyish white marginally. Wings scattered with transverse, whitish maculae or rather spots.

1844. MUSCA *pluvialis* [*Anthomyia pluvialis* (Linnaeus, 1758). Eng. Split-spot anthomia; Fam. Anthomyiidae, Eng. Root-maggot flies, Sw. Blomsterflugor], pilose, ash-grey, with setarious antennae; thorax with five black maculae; abdomen with indistinct, tridentate maculae.

Musca, ash-grey; thorax with five black maculae; abdomen with tridentate maculae. *Fn.* 1112.

Lives abundantly at paths and is common on plants, very irksome when rain is imminent.

DESCR. Appearance entirely as that of a house fly[1216] but only half as large. Eyes red-brown. Thorax ash-grey, with two small maculae at base, medially with three longer, larger ones, and on thoracic tip a black, bipartite macula above. Abdomen ovate, grey-white, with 4 segments, of which the 1st without maculae; the 2nd near base with a tridentate fascia bent backwards; the 3rd similar to the second one; the 4th similar both to the second and third ones, but medially with a small, macular and scarcely visible tooth.

1845. MUSCA *fenestralis* [*Scenopinus fenestralis* (Linnaeus, 1758). Eng. House windowfly; Fam. Scenopinidae, Eng. Window flies, Sw. Fönsterflugor],[1217] glabrous, jet-black, with filiform, awl-shaped antennae; abdomen wrinkled above with white streaks; legs rusty brown.

Lives ubiquitously on windows.

DESCR. Small, jet-black. Abdomen, dehiscent[1218] with segments, and showing snow-white transverse streaks hardly touching the sides. Legs brick-red. Halteres white.

1846. MUSCA *roralis* [*Melanophora roralis* (Linnaeus, 1758). Eng. Smoky-winged woodlousefly; Fam. Rhinophoridae, Eng. Woodlouse flies, Sw. Gråsuggeflugor],[1219] pilose, strongly jet-black, with setarious antennae.

Lives among bushes.

DESCR. Rather small. Entirely jet-black, shining, although somewhat pilose. Halteres black. Eyes dark brown.

1847. MUSCA *serrata* [*Heleomyza serrata* (Linnaeus, 1758). Fam. Heleomyzidae, Eng. Spiny-winged flies, Sw. Myllflugor], pilose, fuscous, with setarious antennae; alar costa serrate with very short hairs; abdomen and legs rusty brown.

Often found entangled in spider webs.

DESCR. Rather small. Thorax ash-grey. Head, abdomen, and legs weakly brick-red. Outer alar margin has black ciliae.

[1216] See no. 1833.

[1217] See no. 1786.

[1218] See the com. to no. 554.

[1219] See no. 1865.

1848. MUSCA *cellaris* [*Drosophila melanogaster* Meigen, 1830. Eng. Common fruit fly or Vinegar fly, Sw. Bananfluga; Fam. Drosophilidae, Eng. Vinegar flies, Sw. Daggflugor], pilose, black, with setarious antennae; wings veined; eyes rusty brown.

Musca, black, somewhat pilose; eyes rusty brown; wings veined.

Lives in cellars that are full of beer and wine for drinking.

DESCR. Small, black fly, spersed with some winding hairs. Six rather pale abdominal segments, with blackish base. Eyes rusty brown. Wings white, with three longitudinal veins, the thicker margin more solid.

1849. MUSCA *meteorica* [*Hydrotaea meteorica* (Linnaeus, 1758). Fam. Muscidae, Eng. House flies, Sw. Husflugor], pilose, black, with setarious antennae; abdomen palish ash-grey; wings weakly light yellow at base; eyes dark brown.

It. W:goth. 37.

Lives like a cloud or swarm of bees flying around the mouths of horses when rain is imminent.

DESCR. Twice the size of *M. putris*.[1220] Eyes dark brown. Body black. Abdomen palish ash-grey. Wings weakly light yellow at base.

1850. MUSCA *putris* [*Themira putris* (Linnaeus, 1758). Fam. Sepsidae, Eng. Black scavenger flies or Ensign flies, Sw. Svängflugor], somewhat pilose, jet-black, with setarious antennae; alar costa black; eyes rusty brown.

α MUSCA *fimeti* [*Themira putris* (Linnaeus, 1758)], jet-black, glabrous; alar margin rather thick, black. *Fn.* 1110.

Lives in great numbers in dung hills and resembles hailstorms.

DESCR. This fly is small, the size of a mosquito.[1221] Entirely glabrous, shining. Eyes weakly rusty brown. Wings whitish, the thicker margin with a black line. Mouth black. Legs entirely jet-black. Only halteres white.

β MUSCA *casei* [*Piophila casei* (Linnaeus, 1758). Eng. Cheese-skipper, Sw. Ostfluga; Fam. Piophilidae, Eng. Cheese-skippers and kin, Sw. Ostflugor], jet-black, glabrous, with rusty brown eyes; femoral base pale. *Fn.* 1109.

Goed. Belg. 1. p. 132. t. 73.

List. Goed. 314. f. 132. Vermiculus casei.

Frisch. Germ. 1. p. 30. t. 7. Vermiculus casei.

Lives in cheese, which cheese the larva consumes; definitely the same as *M. putris* and *fimeti*.[1222]

DESCR. This fly is small, the size of a mosquito.[1223] Entirely glabrous, shining. Eyes rusty brown. Wings without maculae. Mouth pale. Legs black, pale at base.

[1220] See no. 1850.

[1221] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1222] See 1850 α.

[1223] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1851. MUSCA *frit* [*Oscinella frit* (Linnaeus, 1758). Eng. Frit fly, Sw. Fritfluga; Fam. Chloropidae, Eng. Frit flies, Sw. Fritflugor], pilose, black, with setarious antennae; halteres, posterior tarsi, and abdomen pale greenish.

Act. Stockh. 1750. p. 128, where I have given a description.

Lives inside the glumes of barley. Easily destroys every ten grains; thus the frit or grain of barley comes out rather worthless and small, which causes great loss to the peasants.

DESCR. The size of a flea. Body with the form of a house fly,[1224] very agile, as if dancing, black. Eyes fuscous. Posterior tarsi pale. Halteres pale. Abdomen fuscous, paler green beneath.

1852. MUSCA *viduata* [*Pipizella viduata* (Linnaeus, 1758). Sw. Lång rotlusblomfluga; Fam. Syrphidae, Eng, Hoverflies, Sw. Blomflugor], glabrous, naked, bronze black, with setarious antennae; abdomen bronze coloured, dorsum jet-black, squamae of halteres ciliated.

Inhabits shady places.

DESCR. Size almost as that of a house fly.[1225] Eyes and antennae rusty brown. Thorax glabrous, bronze black. Abdomen glabrous, gold-coloured, above jet-black, opaque.

1853. MUSCA *cupraria* [*Sargus cuprarius* (Linnaeus, 1758). Eng. Clouded centurion or Iridescent centurion; Fam. Stratiomyidae, Eng. Soldierflies, Sw. Vapenflugor], glabrous, bronze coloured, with setarious antennae; thorax green; abdomen oblong, copper-coloured, with naked halteres.

Musca oblong; head green; thorax golden; abdomen copper-coloured; wings with a fuscous macula. *Fn.* 1103.

Inhabits the meadows of Falun.

DESCR. The length of a house fly,[1226] but narrower. Body entirely shining like silk, glabrous. Head shining green. Thorax golden red. Abdomen of a copper- or bronze colour. Wings white, with a fuscous macula without the rusty brown colour.

1854. MUSCA *polita* [*Microchrysa polita* (Linnaeus, 1758). Eng. Black-horned gem; Fam. Stratiomyidae, Eng. Soldierflies, Sw. Vapenflugor], glabrous, bronze coloured; antennae setarious; head green; thorax and abdomen blue; halteres naked.

Occurs ubiquitously.

DESCR. Appearance of the common greenbottle,[1227] but not larger than a mosquito,[1228] entirely of a very bright bronze colour. Outer part of legs pale or whitish.

[1224] See no. 1833.

[1225] See no. 1833.

[1226] See no. 1833.

[1227] See no. 1828.

[1228] Linnaeus only refers to *Culex*, see nos. 1890–1894.

1855. MUSCA *pubera* [*Cordilura rufipes* (Meigen, 1826). Fam. Scatophagidae, Eng. Dung flies, Sw. Kolvflugor], pilose, black, with setarious antennae; last abdominal segment curved and covered with hairs bent down on each side.

Inhabits shady places.

DESCR. Smaller than the preceding species, narrower, entirely jet-black, shining, except for the halteres and their squamae. Abdomen almost clavate; near anus an awl-shaped seta, curved on each side.

1856. MUSCA *petronella* [*Calobata petronella* (Linnaeus, 1758). Fam. Micropezidae, Eng. Stilt-legged flies, Sw. Skridflugor], pilose, glabrous, dark bluish grey, with setarious antennae; frons red; cauda curved; legs elongate, brick-red.

It. W:goth. 55.*

Occurs ubiquitously running about above still water bodies.

1857. MUSCA *arrogans* [*Tachydromia arrogans* (Linnaeus, 1761). Fam. Hybotidae, Eng. Hybotid dance flies, Sw. Puckeldansflugor], black, with setarious antennae; wings fuscous, with three white fasciae. *Fn.* 1040.[1229]

Occurs ubiquitously.

DESCR. Minute. Body oblong. Thorax very smooth, globose, and ovate. Wings fuscous, with fasciae at base, and tips medially white. Femora pale. Legs white. Runs around constantly as in a haughty manner raising its head and almost dancing. Mouth not exactly that of a fly, but blunt; therefore, obviously not a robber fly.[1230]

1858. MUSCA *ungulata* [*Dolichopus ungulatus* (Linnaeus, 1758). Eng. Bristly-thighed dolichopus; Fam. Dolichopodidae, Eng. Long-legged flies, Sw. Styltflugor],[1231] pilose, glabrous, bronze green, with setarious antennae; cauda hooked; legs elongate, pale.

Musca, wings with two blackish spots. *Fn.* 1053.

Lives on the Sveden estate[1232] in Falun, running about above spring waters. *J. Moraeus*.

DESCR. Slightly smaller than a house fly,[1233] more oblong, blackish. Thorax black, scattered with setae, laterally golden, at base near legs grey-white. Abdomen oblong, yet shorter than the wings, shining laterally with gold. Legs long, black. Wings incumbent, around 4 black veins in each, and two jet-black spots at the thinner margin, of which the posterior spot is smaller, but more jet-black; the other spot, however, is broader and overlapping the corresponding spot of the other wing. Halteres dark bluish grey.

[1229] See *Fn. Su.* (1761), *Addenda*, p. 559.

[1230] Linnaeus only refers to *Asilus*, see nos. 1908–1917.

[1231] The specimens *Musca ungulata* in the Linnean collections at the Linnean Society of London are well compatible with *Dolichopus ungulatus*, but the description here by Linnaeus is not.

[1232] Linnaeus married Sara Elisabeth Moraea on the Sveden estate in Falun in Dalarna in 1739.

[1233] See no. 1833.

1859. MUSCA *cibaria* [*Neria cibaria* (Linnaeus, 1761). Fam. Micropezidae, Eng. Stilt-legged flies, Sw. Skridflugor], somewhat pilose, with setarious antennae; vertex with three elevated spots; abdomen hooked, ash-grey; legs elongate.

Lives in old and left over food.

DESCR. Appearance entirely as that of the petronella fly[1234] but not larger than a mosquito;[1235] frontal half of the head light yellow, occiput ash-grey; vertex dusky purplish, marked with three elevated spots. Thorax ash-grey, with some setae. Abdomen fuscous above, with six whitish yellow segments; the 7th or last segment the longest with a boat-shaped hook; all excavated below. Legs long, pale. Halteres white. Wings hyaline, veined, without maculae.

1860. MUSCA *scybalaria* [*Scathophaga scybalaria* (Linnaeus, 1758). Eng. Giant dung fly; Fam. Scatophagidae, Eng. Dung flies, Sw. Kolvflugor], pilose, red-brown tending to rusty brown, hirtous, with a rather dark alar spot; antennae setarious.

Lives in excrement.

DESCR. Very similar to the yellow dung fly,[1236] but entirely red-brown tending to rusty brown. Eyes black; some hairs black near mouth. Wings longer than body, pale rusty brown, with a single anastomosis.

1861. MUSCA *stercoraria* [*Scathophaga stercoraria* (Linnaeus, 1758). Eng. Yellow dung fly or Golden dung fly, Sw. Vanlig dyngfluga; Fam. Scatophagidae, Eng. Dung flies, Sw. Kolvflugor], pilose, hirtous, grey, with setarious antennae; wings with a dark spot. *Fn.* 1068.

Merr. Pin. 200. Musca stercoraria.

Charl. Onom. 42. Musca merdivora.

Reaum. Gall. 4. t. 27. f. 1. 2. 3.

Act. Ups. 1736. p. 32. n. 28. Musca stercoraria.

Lives ubiquitously in human, equine, and bovine excrement.

DESCR. Eyes red-brown. Frons whitish yellow. Antennae black. Thorax ash-grey. Abdomen hirtous, whitish yellow tending to dark bluish grey. Legs hirtous. Wings at base and the thicker margin whitish yellow, medially with a rather dark spot. Male is more hirsute and deeper yellow. Female more glabrous and more ash-grey.

1862. MUSCA *fimetaria* [*Psila fimetaria* (Linnaeus, 1761). Fam. Psilidae, Eng. Rust flies, Sw. Rotflugor], pilose, dark bluish grey, glabrate, with setarious antennae; wings with a rather dark spot.

Lives in dunghills.

DESCR. Body middle-sized, rather oblong, rusty brown, gleaming with smoothness; hairs rarer on thorax. Abdomen appears barely pubescent. Only eyes fuscous. The alar spot at the only anastomosis is scarcely visible.

[1234] See no. 1856.

[1235] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1236] See no. 1861.

1863. MUSCA *parietina* [*Oxyna parietina* (Linnaeus, 1758. Eng. Clouded wormwood fly; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings fuscous with whitish spots and maculae; frons brick-red.

Lives near walls of houses.

DESCR. Stature as that of the following species. Body ash-grey. Frons brick-red. Wings deflexed like those of moths,[1237] fuscous, with numerous, white spots, scattered closely together. Legs brick-red.

1864. MUSCA *umbrarum* [*Dictya umbrarum* (Linnaeus, 1758). Eng. Bog snailkiller; Fam. Sciomyzidae, Eng. Marsh flies or Snail-killing flies, Sw. Kärrflugor], antennae setarious; wings fuscous maculate with white; frons snow-white.

Inhabits shady places.

DESCR. Small. Body ash-grey. Frons snow-white; wings fuscous, with numerous white, closely arranged spots. Legs ash-grey, punctate with black.

1865. MUSCA *grossificationis* [*Melanophora roralis* (Linnaeus, 1758). Eng. Smoky-winged woodlousefly; Fam. Rhinophoridae, Eng. Woodlouse flies, Sw. Gråsugge-flugor],[1238] antennae setarious; wings black, white-tipped. *Fn.* 1051.

Act. Ups. 1736. p. 33. n. 50. Musca nigra, alis fuscis; apicibus albis.

Inhabits gardens; rather rare.

DESCR. This small fly is very rare, entirely black; wings blackish, outermost tip with a white macula.

1866. MUSCA *saltuum* [*Temnosira saltuum* (Linnaeus, 1758). Eng. Hogweed flutter-fly; Fam. Pallopteridae, Eng. Flutter-wing flies, Sw. Prickflugor], antennae setarious; wings white, with fuscous costa and terminal spot; body light yellow; occiput blackish.

Inhabits groves.

DESCR. Small. Body entirely brick-red. Eyes fuscous; black spot on vertex. Wings hyaline; thicker margin black terminating in a black macula at tip.

1867. MUSCA *vibrans* [*Seioptera vibrans* (Linnaeus, 1758). Eng. Dark-tipped wingwaver; Fam. Ulidiidae, Eng. Picture-winged flies, Sw. Fläckflugor], pilose, with setarious antennae; wings hyaline, black-tipped; head red.

Musca, with white wings, black-tipped. *Fn.* 1052.

Act. Ups. 1736. p. 33. n. 49. Musca nigra vibrans, alis albis apicibus nigris.

Lives frequently on leaves of trees and plants, especially in gardens.

DESCR. It is entirely black except for the white wings, marked with a rounded, black macula at the outermost tip. The body is black, not very long but blunt. The head is red. It continually raises, extends, and shakes its wings when resting. Varies especially in size. There are some individuals with wings that are three or four times as large.

[1237] Linnaeus only refers to *Phalaena*, see nos. 1099–1458.

[1238] See no. 1846.

1868. MUSCA *cynipsea* [*Sepsis cynipsea* (Linnaeus, 1758). Fam. Sepsidae, Eng. Black scavenger flies or Ensign flies, Sw. Svängflugor], antennae setarious; wings with a black spot at tip; first abdominal segment obovate.

Musca, with white wings; tip with a black spot. *Fn.* 1054.[1239]

Occurs ubiquitously.

DESCR. Barely as large as a louse. Entirely black. Wings marked with a black spot at the larger margin at tip. Anterior femora denticulate beneath. Abdomen oblong with the first segment pear-shaped. Legs long.

1869. MUSCA *flava* [*Chyromya flava* (Linnaeus, 1758). Fam. Chyromyidae, Eng. Golden flies, Sw. Gulflugor], light yellow, naked; antennae setarious; eyes strongly green.

Musca, light yellow; eyes black. *Fn.* 1114.

Occurs in Skåne. *Mr Leche.*

DESCR. This species is small, the size of a rice seed. Entirely light yellow. Abdomen ovate. Wings slightly whitish yellow. Only eyes are green.

1870. MUSCA *aestuans* [*Nomen dubium*], antennae setarious; wings unguiculate, white, with a blackish spot in the middle. *Fn.* 1055.

Lives solitarily among plants; rather rare in the Academical Garden.[1240]

DESCR. Size almost as that of a flea. Head and thorax blue. Abdomen black. Legs rusty brown or brick-red. Wings white; an indistinct, black spot on each alar disc, almost in the middle or slightly closer to the inner margin; outer margin is equipped with a tooth or claw. Halteres white. Wings do not vibrate. Eyes pale fuscous. Antennae brick-red, with a black seta.

1871. MUSCA *serratulae* [*Terellia serratulae* (Linnaeus, 1758). Eng. Clear-winged terellia; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings white; thorax greenish; abdomen ash-grey with four lines of black spots.

Lives on the flowers of thistle.

DESCR. Twice as large as a mosquito.[1241] Eyes green. Thorax green with a fuscous, posteriorly forked colour in front. Abdomen ash-grey with four lines of spots. Wings whitish. Female cauda with a conical, swordlike edge.

1872. MUSCA *arnicae* [*Tephritis arnicae* (Linnaeus, 1758). Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings unguiculate, grey, maculate with black. *Fn.* 1057.

Act. Ups. 1736. p. 33. n. 46. Musca alis griseis nigro maculatis.

Aldr. Ins. 346. t. 1. f. 5. Musca quinta.

Lives on the flowers of *Arnica*, inside the disc; abundant.

[1239] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

[1240] See the com. to no. 484.

[1241] Linnaeus only refers to *Culex*, see nos. 1890–1894.

DESCR. Smaller than the common house fly.[1242] Body palish grey or brick-red. Wings grey terminating in a marginal, black macula, and some individuals are scattered with rather large black maculae and many smaller, indistinct ones; denticle at the thicker alar margin.

1873. MUSCA *hyoscyami* [*Tephritis hyoscyami* (Linnaeus, 1758). Eng. Welted thistle tephritis; Fam. Tephritidae, Fruit flies, Sw. Borrflugor], ash-grey; antennae setarious; wings unguiculate, white, maculate with fuscous. *Fn.* 1058.

Act. Ups. 1736. p. 33. n. 47. Musca alis albicantibus nigro maculatis.

Lives on flowers, often those of henbane, and on the curly plumeless thistle.

DESCR. Wings white, not grey, but scattered with rather large, blackish grey or fuscous maculae that are rather uneven, and others very small and scarcely visible. Thorax and abdomen grey-white. Eyes green. Legs pale. Cauda with a stiff sting that is awl-shaped and blunt in female. At the thicker alar margin and in its middle, a denticle that is prominent resembling a seta.

1874. MUSCA *germinationis* [*Opomyza germinationis* (Linnaeus, 1758). Fam. Opomyzidae, Sw. Gräsflugor], antennae setarious; wings white with black margin and maculae. *Fn.* 1059.

Act. Ups. 1736. p. 33. n. 48. Musca alis albicantibus nigro punctatis.

Lives on leaves of trees at the beginning of spring.

DESCR. This fly is half as large as a house fly;[1243] in appearance it resembles the dark-tipped wingwaver,[1244] but alar margins outwardly and tip blackish; disc white with some vague, blackish spots.

1875. MUSCA *urticae* [*Ceroxys urticae* (Linnaeus, 1758). Eng. Band-winged ceroxys or Band-winged wingwaver; Fam. Ulidiidae, Eng. Picture-winged flies, Sw. Fläckflugor], antennae setarious; wings white, with a terminal spot and three distinct fuscous fasciae.

Lives on nettles.

DESCR. Body black. Barely as large as a house fly.[1245] Head rusty brown. Wings white with three black almost transverse fasciae and fuscous tips. Knees weakly rusty brown.

1876. MUSCA *cardui* [*Urophora cardui* (Linnaeus, 1758). Eng. Thistle gall fly or Canada thistle gall fly; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings white; with a doubled fuscous line forming a letter S; eyes green.

Musca, with white wings; a doubled fuscous line with a letter S; eyes green. *Fn.* 1063.

Blank. Belg. 189. t. 16. f. T.

Goed. Belg. 1. p. 102. t. 50.

[1242] See no. 1833.

[1243] See no. 1833.

[1244] See no. 1867.

[1245] See no. 1833.

List. Goed. 313. p. 102. t. 129.
Raeum. Ins. 3. t. 45. f. 12. 13. 14.
Lives on thistle galls. *Goedaert.*
DESCR. Almost the size of a house fly.[1246] Eyes green. Body red-yellow. Wings with two fuscous lines, bent like a snake (of which the outer one is thicker), formed as a letter S; the legs appear pellucid. Whole fly indistinctly light yellow beneath; anus with a white tip.

1877. MUSCA *heraclii* [*Euleia heraclei* (Linnaeus, 1758). Eng. Celery fly or Hogweed picture-wing fly, Sw. Sellerifluga; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings white with repand, fuscous fasciae; eyes green.
Lives on the leaves of cow parsnip, subcutaneous.
DESCR. Related to the preceding species. Frons light yellow. Eyes green. Thorax dark bluish grey, with a light yellow lateral line on each side. Scutellum light yellow. Abdomen ovate, dark bluish grey, apically fuscous. Wings white, with two longitudinal, flexuous, repand, fuscous fasciae. Legs pale.

1878. MUSCA *cerasi* [*Rhagoletis cerasi* (Linnaeus, 1758). Eng. European cherry fruit fly, Sw. Körsbärsfluga; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings white with unequal fuscous fasciae, the posterior of which are outwardly connected.
Musca, white wings, with four grey fasciae, and alternating with just as many smaller indistinct ones. *Fn.* 1061.
Rhed. 1671. p. 262. t. 264.
Blank. Belg. 185. t. 16. f. L.
Reaum. Gall. 2. t. 38. f. 22. 23.
Lives in the cores of sour cherry, especially in those called "bigarreau cherry".
DESCR. The size of the preceding species. Fine description by *Rhede.* Body black. Wings hyaline with two black maculae, anterior one outwardly, inner one inwardly, bifid.

1879. MUSCA *solstitialis* [*Urophora solstitialis* (Linnaeus, 1758). Eng. Nodding thistle gall fly or Musk thistle gall fly; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings unguiculate, white, with four fuscous fasciae; scutellum light yellow. *Fn.* 1064.
Lives abundantly on the flowers and leaves of curly plumeless thistle, rarer on the leaves of sour cherry in the month of June.
DESCR. It falls among the small flies. Thorax ash-grey, light yellow on the back at the tip. Legs brick-red. Wings white, near base at outer margin whitish yellow. A fourfold fascia decorates these wings transversely, of which the first is entirely straight or transverse; the 2nd, 3rd, and 4th slightly arcuate; of these the outermost fascia reaches the very tip of the wing.

[1246] See no. 1833.

Bears its wings like a house fly.[1247] Eyes green. Abdomen black, that of the female ending in an awl-shaped, sharp, and swordlike edge. Denticle at the thicker alar margin.

1880. MUSCA *florescentiae* [*Terellia ruficauda* (Fabricius, 1794). Eng. Red-tailed thistle fly or Spot-winged terellia; Fam. Tephritidae, Eng. Fruit flies, Sw. Borrflugor], antennae setarious; wings pale, with blackish veins; two undulating streaks, apically fuscous.

Musca, pale wings with blackish veins; two undulating transverse lines, apically fuscous. *Fn.* 1065.

Act. Ups. 1736. p. 34. n. 65. Musca oblonga flavescens, dorso longitudinaliter punctato, alis nigro-maculatis.

Inhabits gardens.

DESCR. It is larger than a house fly,[1248] oblong, similar to the rapacious species. Abdomen light yellow; a double row of jet-black spots on the abdominal back; a pair of jet-black spots on each segment. Wings pale, with longitudinal, blackish veins; alar tips ash-grey; in the middle of wings, a double undulating, transverse, blackish line.

1881. MUSCA *frondescentiae* [*Herina frondescentiae* (Linnaeus, 1758). Eng. Scribbled wingwaver; Fam. Ulidiidae, Eng. Picture-winged flies, Sw. Fläckflugor], antennae setarious; wings black with two white fasciae and two white spots; body black.

Lives on plants.

Tabanus

1882. TABANUS *bovinus* [*Tabanus bovinus* Linnaeus, 1758. Eng. Pale giant horsefly, Sw. Fäbroms; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], eyes greenish; abdominal dorsum with trigonal, longitudinal, white spots.

Tabanus, grey, each abdominal segment with a white triangle. *Fn.* 1045.

Jonst. Ins. t. 8. ord. 2. f. 22–21.

Reaum. Gall. 4. t. 17. f. 8.

Fl. Lapp. 363. Tabanus vulgaris griseus, incisuris dorsi macula trigona albicante notatis.

Act. Ups. 1736. p. 31. n. 17. Nomen idem.

In Sweden: Bröms.

Occurs abundantly in the south of Sweden; during summer troublesome for horses.

DESCR. This fly is the largest member of its genus. Wings diaphanous, with rusty brown veins. Body grey. Thorax ash-grey. Eyes blackish. Abdominal dorsum more whitish yellow under wings,

[1247] See no. 1833.

[1248] See no. 1833.

outside these more fuscous. Medially on dorsum, on each segment, a triangular, whitish macula with sharpened point facing thorax. Femora blackish. Tibiae deep yellow.

1883. TABANUS *autumnalis* [*Tabanus autumnalis* Linnaeus, 1761. Eng. Large marsh horsefly, Sw. Höstbroms; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], wings hyaline; abdomen fuscous, with three whitish rows of maculae.

Occurs around us; less abundant. *De Geer.*

DESCR. Slightly smaller than our largest species.

1884. TABANUS *tarandinus* [*Hybomitra tarandina* (Linnaeus, 1758). Sw. Renbroms; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], eyes green?; abdominal segments deep yellow marginally; legs red-brown.

Tabanus, black; abdominal segments deep yellow marginally; legs red-brown. *Fn.* 1046.

Fl. Lapp. 363. Tabanus flavus.

Act. Ups. 1736. p. 31. n. 18. Tabanus flavus.

Occurs abundantly in Lapland and Norway, which have a common border. Troublesome for reindeer.

DESCR. Size almost as that of the first species. Eyes, thorax, and abdomen black, but margins of segments surrounded by hairs or a light yellow margin, both on dorsum and on venter. Legs and antennae are red-brown or dark deep yellow. Wings palish grey.

1885. TABANUS *bromius* [*Tabanus bromius* Linnaeus, 1758. Eng. Band-eyed brown horsefly, Sw. Allmän gråbroms; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], eyes with a purplish fascia; body rather smooth, ash-greyish.

Tabanus, ash-grey; eyes with a transverse line. *Fn.* 1048.

Occurs around us; troublesome to horses and cattle; abundant.

DESCR. Wings white. Entire body ash-grey. A transverse line of a singular clour brands the eyes, through which it is unmistakenly distinguished from the others and especially from *pluvialis*,[1249] to which it is very closely related. Tibiae pale.

1886. TABANUS *tropicus* [*Hybomitra tropica* (Linnaeus, 1758). Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], eyes each with three fasciae; abdominal sides rusty brown.

Tabanus, fuscous; abdominal sides rusty brown; eyes each with three fuscous lines. *Fn.* 1047.

Act. Ups. 1736. p. 31. n. 19. Tabanus fuscus, abdominis lateribus testaceis.

Occurs abundantly among us during summer; troublesome to horses, especially when rain is imminent.

[1249] See no. 1887.

DESCR. The size of a bumble bee.[1250] This species is entirely glabrous. Abdominal sides rusty brown at base; margins of abdominal segments, especially on dorsum, whitish. Femora black. Tibiae red-brown. Wings whitish; the anterior three abdominal segments brick-red, the posterior three blackish. Eyes greenish, with three transverse, fuscous lines. Antennae crescent-shaped.

1887. TABANUS *pluvialis* [*Haematopota pluvialis* (Linnaeus, 1758). Eng. Notch-horned cleg, Sw. Regnbroms; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar], eyes each with four undulate fasciae; wings punctate with fuscous.

Tabanus, fuscous; wings ash-grey, with the most minute white spots; eyes green with four thin, undulate, fuscous lines. *Fn.* 1050.

Act. Ups. 1736. p. 31. n. 20. Tabanus fuscus, alis cinereis punctatis.

Occurs abundantly around us; troublesome to cattle.

DESCR. The size of the house fly;[1251] entirely dusky ash-grey. Wings ash-grey with the most minute white spots and a rather large marginal, blackish spot. Eyes greenish with thin, transverse, undulate lines. Thorax ash-grey, striated with longitudinal lines; two black spots between the eyes. Antennae filiform, black. Tibiae variegated.

1888. TABANUS *caecutiens* [*Chrysops caecutiens* (Linnaeus, 1758). Eng. Splayed deer fly; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar],[1252] eyes punctate with black; wings maculate.

Tabanus, fuscous; wings with various fuscous and white maculae; eyes red-yellow tending to green with black spots. *Fn.* 1049.

Act. Ups. 1736. p. 31. n. 21. Tabanus fuscus, alis cinereis: maculis albis nigrisque.
n. 22. Tabanus fuscus; alis fuscis: maculis nigris.

Raj. Ins. p. 272. Musca bipennis pulchra; alis maculis albis amplis pictis.

In Småland: Blind-knagg.

Occurs ubiquitously, especially in Småland; abundant.

DESCR. In size hardly larger than the house fly;[1253] entirely fuscous; abdominal sides, beside base, above wings, light yellow. Wings variegated with large, white and blackish maculae. Antennae awl-shaped or filiform, pilose at base, and by no means crescent-shaped. Eyes shining green and red-yellowish, with some distinct, black maculae.

1889. TABANUS *lugubris* [*Chrysops caecutiens* (Linnaeus, 1758). Eng. Splayed deer fly; Fam. Tabanidae, Eng. Horseflies, Sw. Bromsar],[1254] eyes and body black; wings fuscous with a white macula.

Occurs ubiquitously, but not abundantly.

[1250] See the com. to no. 839.

[1251] See no. 1833.

[1252] See no. 1889.

[1253] See no. 1833.

[1254] See no. 1888.

DESCR. Similar to the splayed deer fly,[1255] but slightly smaller. Wings fuscous with one or two whitish maculae at the thinner margin. Abdomen black, on anterior sides, especially beneath, slightly deep yellow.

Culex

1890. CULEX *pipiens* [*Culex pipiens* Linnaeus, 1758. Eng. Common house mosquito, Sw. Sydlig husmygga; Fam. Culicidae, Eng. Mosquitoes, Sw. Stickmyggor],[1256] ash-grey; abdomen with eight fuscous rings. *Fn.* 1116.

Act. Ups. 1736. p. 31. n. 10. Culex vulgaris.

Flor. Lapp. 363. Culex vulgaris.

Reaum. Gall. 4. t. 43 f. *omnes.* & t. 44. f. *omnes.*

Swamm. Quart. 95–99. t. 2. 3. Culex.

Blank. Belg. 171. t. 15. f. A. B. C. D. Culex.

Flor. Lapp. 364. Culex alpinus.

In Sweden: Mygg. In Österbotten: Kranck.

The larva lives in water bodies, the actual mosquito[1257] in forests, especially very abundant in Lapland, furthermore not particularly rare in mountains, where it is larger, but it is one and the same species. Very troublesome to people and animals through the sound of wings and the sucking of blood, especially at night. While inflicting a wound and sucking blood it raises the hindlegs.

DESCR. Body oblong, ash-grey. Abdomen, with eight fuscous belts. Beak erect, setaceous. Wings verging on white, strongly vascular, shining when exposed to light. Thorax hirsute beneath.

Male: Antennae with lower parts pectinate. Palps medially barbate. It does not puncture or suck blood.

1891. CULEX *bifurcatus* [*Culex pipiens* Linnaeus, 1758. Eng. Common house mosquito, Sw. Sydlig husmygga; Fam. Culicidae, Eng. Mosquitoes, Sw. Stickmyggor],[1258] fuscous; beak bifurcate. *Fn.* 1115.

Raj. Ins. 74. n. 4. Tipula domestica forte faemina; prima furcula e fronte.

Reaum. Gall. 4. t. 40. f. 1. 2.

Its larva lives in water bodies; this mosquito does not wound.

DESCR. Twice as large as the following species; colour ash-grey. Wings without a spot. Antennae less plumose in male. Beak prominent, as in the others, whereas the sheath is bifurcate and dilated into two small wide leaves, which are lanceolate and villous; the beak is setaceous medially.

[1255] See no. 1888.

[1256] See no. 1891.

[1257] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1258] See no. 1890.

1892. CULEX *pulicaris* [*Culicoides pulicaris* (Linnaeus, 1758). Fam. Ceratopogonidae, Eng. Biting midges, Sw. Svidknott], wings hyaline with three dark maculae. *Fn.* 1117.

Flor. Lapp. 365. Culex Lapponicus minimus.

Act. Ups. 1736. p. 31. n. 12. Culex Lapponicus minimus.

Derrham. Physico-Theol. l. 4. c. 11. n. 20. f. 5. 6. 7. Culex minimus nigricans maculatus. *an?*[1259]

In Sweden: Swidknott.

Inhabits woods; especially abundant in Norrland. Painful from its bite, which lasts for a considerable time and resembles the black mark of a flea.

DESCR. Body the size of a rather small flea, fuscous. Wings narrow, white, incumbent; outer margin marked with three dark spots. Therefore, when wings are closed and spots connivent, three transverse, fuscous fasciae on the wings may be observed.

1893. CULEX *reptans* [*Simulium reptans* (Linnaeus, 1758). Fam. Simuliidae, Eng. Black flies, Sw. Knott], black; wings hyaline; legs black with a white ring. *Fn.* 1118.

In Lapland: Mockere.

In Sweden: Knott.

Occurs in Lapland. Especially before evening it attacks in great numbers; less abundant in Sweden. When the sun sets, it attacks people in great numbers with a very tedious sound, crawling over the skin, searching for the mouth, eyes, and nose; it cannot be driven away, unlike the others, by blowing from your mouth or waving your hands.

DESCR. It is very small; appearance as that of a fly, the size of a flea. It is barely one line[1260] long and fairly narrow. Thorax bluish grey. Head black. Antennae filiform, pale. Eyes black. Abdomen ovate, fuscous. Halteres white. Legs medially black with a snow-white knee. Posterior thoracic region often verging on white. Wings hyaline, incumbent so that only a single wing can be seen, but wings not very dehiscent[1261] posteriorly.

1894. CULEX *equinus* [*Simulium equinum* (Linnaeus, 1758). Fam. Simuliidae, Eng. Black flies, Sw. Knott], abdomen fuscous; frons white. *Fn.* 1120.

Flor. Lapp. 359. Musca minima atra sanguifuga, alis albis.

Act. Ups. 1736. p. 33. n. 51. nomen idem.

Lives during summer on horses, especially in Norrland. It runs around in the hair boldly sucking blood and remarkably harassing horses but less so people; runs very fast, fearing nothing.

DESCR. Antennae filiform. It is similar to a flea in the way it sucks blood, although it has the appearance of a fly. Head, legs, and thorax jet-black, but thoracic sides become ash-grey; the area above and beneath the eyes is white. It is ovate and tiny.

[1259] See the com. to no. 130.

[1260] The length measurement "one line" (Lat. *linea*) is one twelfth of an inch.

[1261] See the com. to no. 554.

Empis

1895. EMPIS *borealis* [*Empis borealis* Linnaeus, 1758. Eng. Brown-winged dance fly or Boreal dance fly; Fam. Empididae, Eng. Dance flies or Dagger flies, Sw. Dansflugor], black with filiform antennae; wings roundish, dusky rusty brown.

Asilus, black; wings roundish. *Fn.* 1038.

Act. Ups. 1736. p. 31. n. 15. Culex fuscus; alis subrotundis.

Occurs abundantly in Ume and Lule Lapland, where at evenings it performs dances in circles in the air, as also do the craneflies,[1262] but it does not bite.

DESCR. Enjoys a rather long, black mouth resembling that of a mosquito.[1263] Body black. Legs black; femora rusty brown. Wing roundish, fuscous or rusty brown, markedly blunt. Wings larger than those of the house fly,[1264] but body is narrower.

1896. EMPIS *pennipes* [*Empis pennipes* Linnaeus, 1758. Fam. Empididae, Eng. Dance flies, Sw. Dansflugor], black with filiform antennae; hindlegs longer, pinnate in the other sex.

Asilus, black, glabrous; wings ash-grey. *Fn.* 1041.

Often occurs on flowers of woodland geranium and cuckooflower.

DESCR. Half as large as the house fly,[1265] entirely jet-black. Abdomen not ovate, but entirely attenuated. Hindlegs very long in relation to the animal. Wings neither fuscous nor ash-grey but somewhere between these two colours.

β *Tipula*[1266] jet-black; thorax gibbous; hindlegs large. *Fn.* 1142.

Act. Ups. 1736. p. 31. n. 16. Culex niger, pectore gibbo, abdomine cylindraceo, pedibus posticis maximis.

Inhabits woods, where it dances and flies in swarms in the air.

DESCR. Body entirely black. Thorax very thick, gibbous. Abdomen smooth, cylindrical. Wings white, ovate. Legs black, posterior legs twice as large as the others, thicker and longer; tibiae clavate or thicker at lower parts.

1897. EMPIS *livida* [*Empis livida* Linnaeus, 1758. Eng. Tan dance fly; Fam. Empididae, Eng. Dance flies or Dagger flies, Sw. Dansflugor],[1267] dark bluish grey; antennae thread-like; thorax with three black lines.

Occurs ubiquitously.

DESCR. Body larger than the house fly,[1268] ash-grey. Thorax with three dorsal, parallel, black lines. Abdomen ash-grey, narrow. Wings darkish, basally weakly rusty brown. Legs deep yellowish.

[1262] Linnaeus only refers to *Tipula*, see nos. 1735–1778.

[1263] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1264] See no. 1833.

[1265] See no. 1833.

[1266] This description probably refers to March flies, family Bibionidae. See nos. 1765, 1766, 1768, and 1770.

[1267] See no. 1915.

[1268] See no. 1833.

1898. EMPIS *forcipata* [*Rhamphomyia forcipata* (Linnaeus, 1761). Eng. Tooth-legged rhamphomyia; Fam. Empididae, Eng. Dance flies or Dagger flies, Sw. Dansflugor], ash-grey; antennae thread-like; wings oblong; cauda appendiculate.

Occurs ubiquitously. *Mr* C. *Solander.*

DESCR. Body slightly larger than that of a mosquito.[1269] Thorax ash-grey or lead-grey with scattered hairs. Abdomen oblong, more ash-grey; two cartilaginous forceps are attached at cauda, of which the anterior or outer has two valves and a bidentate tip, the inferior has a more protracted tooth; inside the anterior there is an inner forceps that is three times as long, lanceolate, gibbous, and with two valves. Femora pilose and tibiae rather long, ash-grey. Antennae awl-shaped. Wings hyaline, rather long.

1899. EMPIS *stercorea* [*Empis stercorea* Linnaeus, 1761. Eng. Single-striped xanthempis; Fam. Empididae, Eng. Dance flies or Dagger flies, Sw. Dansflugor], brick-red; antennae thread-like; wings reticulate; dorsum and abdomen with a black line.

Occurs ubiquitously.

DESCR. A dark bluish grey colour like that of the yellow dung fly.[1270] Antennae black. Longitudinal black line running through thorax and abdomen. Tarsi fuscous. Wings dark bluish grey, with reticulate rather dark veins.

Conops

1900. CONOPS *calcitrans* [*Stomoxys calcitrans* (Linnaeus, 1758). Eng. Stable fly, Sw. Vanlig stickfluga; Fam. Muscidae, Eng. House flies, Sw. Husflugor], ash-grey, glabrous, ovate; antennae subplumose.

Asilus, ash-grey, glabrous, ovate. *Fn.* 1042.

In Sweden: Sting-Fluga.

Occurs ubiquitously. This species stings our lower legs, especially when rain is imminent. Thus it causes cattle to continuously kick out and not rest on their legs. When stinging it often causes a red mark that is scarlet in the middle and long-lasting.

DESCR. Appearance, size, and colour are so similar to those of the most common house fly[1271] that one might certainly say it was the same, had not the sabulate, jet-black, corneous beak distinguished it.

1901. CONOPS *irritans* [*Haematobia irritans* (Linnaeus, 1758). Eng. Horn fly; Fam. Muscidae, Eng. House flies, Sw. Husflugor], antennae setarious; ash-grey, subpilose, ovate.

Lives among cattle, on the backs of which it rests most often in great numbers.

DESCR. Very similar to the preceding species, but one third of its size.

[1269] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1270] See no. 1861.

[1271] See no. 1833.

1902. CONOPS *macrocephala* [*Physocephala nigra* (De Geer, 1776). Eng. Large black beegrabber; Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], antennae clavate, mucronate, deep yellow; abdomen subcylindrical, glabrous with four segments whitish yellow at margin.

Asilus, antennae longer than head, clavate, acuminate; abdominal segments glabrous, light yellow at margin; frons glabrous. *Fn.* 1030.

Reaum. Gall. 4. t. 33. f. 12. 13.

Inhabits pastures.

DESCR. Face inflated, light yellow. Antennae lanceolate, rusty brown. Wings fuscous, of a quasi scorched colour. Thorax red-brown; dorsum medially black. Abdomen cylindrical, bent, fuscous; segments light yellow at margin, especially the anterior ones. Halteres whitish. There is a variety with an entirely black thorax and black antennae.

1903. CONOPS *vesicularis* [*Conops vesicularis* Linnaeus, 1761. Eng. Hornet grabber; Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], antennae clavate, mucronate, weakly rusty brown, partly fused; occiput inflated; abdomen greyish blue-whitish yellow.

Occurs among us; less abundant.

DESCR. Similar to the large black beegrabber.[1272] Face light yellow; occiput with a pellucid bladder. Thorax black; anteriorly with warts and laterally rusty brown. Scutellum rusty brown. Wings fuscous, half of them white. Halteres light yellow. Abdominal segments light yellow, but the first ones fuscous at base. Legs rusty brown. Abdomen subcylindrical, blunt, bent at base.

1904. CONOPS *flavipes* [*Conops flavipes* Linnaeus, 1758. Eng. Yellow-legged beegrabber; Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], antennae clavate, mucronate, black; abdomen subcylindrical, glabrous, with three segments light yellow at margins.

Occurs ubiquitously.

DESCR. Head and antennae black. Thorax jet-black, with a light yellow spot on each side in front of and behind wings. Scutellum with a light yellow spot. Halteres rusty brown. Abdomen clavate, black, posteriorly greyish white: the 1st segment with a light yellow spot on each side; the 2nd, 3rd, and 4th light yellow at margins. Legs deep yellow. Femora black at tip.

1905. CONOPS *buccata* [*Myopa buccata* (Linnaeus, 1758). Eng. Variegated spring beegrabber; Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], antennae setarious; abdomen hooked, grey; face inflated, white; wings cloudy.

Occurs ubiquitously.

DESCR. Middle-sized. Head pale, beneath white, inflated, pellucid. Eyes black. Antennae approximated, light yellow; the outermost segment glabrous, blunt with an arista. Wings pale with indistinct, fuscous fasciae. Abdomen oblong, cylindrical, dark bluish grey with a much curved tip. Halteres light yellow. Legs dark bluish grey.

[1272] See no. 1902.

1906. CONOPS *aculeata* [*Dalmannia aculeata* (Linnaeus, 1761). Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], blackish with setarious antennae; the margins of abdominal segments, scutellum, and two anterior thoracic spots light yellow.

Occurs among us; less abundant.[1273]

DESCR. The size of the house fly.[1274] Antennae clavate, setarious, black. Face inflated, light yellow. Thorax black, with a prominent, light yellow spot anteriorly on each side. Thin, light yellow line transversely at frontal part of wings. Scutellum light yellow. Abdomen ovate, black; margins of a deep yellow colour, irregular, sinuate, and beneath light yellow with a fuscous line. Legs deep yellow with black tarsi. In the female a black sting, curved, and inflexible.

1907. CONOPS *ferruginea* [*Sicus ferrugineus* (Linnaeus, 1761). Eng. Ferruginous beegrabber; Fam. Conopidae, Eng. Thick-headed flies, Sw. Stekelflugor], antennae setarious; body rusty brown; abdomen cylindrical; frons deep yellowish.

Occurs around us; very rare.

DESCR. Stature of the yellow-legged beegrabber.[1275] Body entirely rusty brown; thorax fuscous on dorsum. Abdomen cylindrical. Frons light yellow.

Asilus

1908. ASILUS *crabroniformis* [*Asilus crabroniformis* Linnaeus, 1758. Eng. Hornet robberfly, Sw. Getingrovfluga; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], abdomen tomentose, anteriorly black, posteriorly curved, light yellow.

Asilus, rusty brown; the three anterior abdominal segments jet-black, the four posterior ones light yellow. *Fn.* 1031.

Mouff. Lat. p. 46. Vespae species, figura exterior.

Jonst. Ins. t. 10. f. 2. Musca boaria ald. tab. 1.

Hoffn. Ins. t. 16. f. 10.

Raj. Ins. 267. Musca maxima crabroniformis.

Frisch. Germ. 3. p. 38. t. 8. Musca rapax magna, abdomine luteo maculato.

Reaum. Gall. 4. t. 8. f. 3.

Act. Ups. 1736. p. 29. n. 8. Ichneumon collari gibbo, abdomine ovato acuto.

Inhabits pastures; flies close to the ground.

DESCR. Appearance as that of a hornet.[1276] Thorax large, gibbous. Beak black, awl-shaped. Wings, legs, and venter beneath rusty brown. First three abdominal segments black; those closely following light yellow; anus or the cauda itself red-brown. Wings maculate with black at the thinner margin.

[1273] Not occurring in Sweden.

[1274] See no. 1833.

[1275] See no. 1904.

[1276] See no. 1670.

1909. ASILUS *gibbosus* [*Laphria gibbosa* (Linnaeus, 1758). Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], hirsute, black; abdomen posteriorly white.

Asilus, black, hirsute; last three abdominal segments white. *Fn.* 1034. *It. Scan.* 414. *Flor. Lapp.* 360. Oestrum bovinum: cauda alba.

Act. Ups. 1736. p. 31. n. 25. Oestrum bovinum, cauda alba.

Occurs in Närke and elsewhere.

DESCR. Same size as the preceding species; surpasses the actual hornet.[1277] It is entirely oblong, black, and hirsute. Frons growing pale. Wings grey; the three last abdominal segments white. Anus itself corneous, black, broad like a goat's hoof; cauda simple and abdomen more watery light yellow than that of the other sex.

1910. ASILUS *ater* [*Andrenosoma atrum* (Linnaeus, 1758). Sw. Blanksvart rovfluga; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], jet-black, hirsute, entirely black, with whitish down.

Occurs around us; very rare.[1278]

DESCR. Size almost as that of the preceding robberflies; entirely jet-black except for the white wool beneath head.

1911. ASILUS *flavus* [*Laphria flava* (Linnaeus, 1761). Eng. Bumble bee robberfly; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], black, hirsute; thorax posteriorly light yellow; abdomen red-yellow above; tarsi rusty brown.

Asilus, light yellow, hirsute; legs black; wings greyish blue. *It. gotl.* 327. *Fn.* 1032.

Occurs in Småland.

DESCR. It is large. At the cauda there is what resembles a goat's hoof, inside which there are various harmless stings.

1912. ASILUS *gilvus* [*Choerades gilvus* (Linnaeus, 1758). Eng. Ginger robberfly; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], abdomen pubescent, black, and red-brown above.

Asilus, black; three abdominal red-brown segments on the back. *Fn.* 1036.[1279]

Lives along with the preceding robberflies.

DESCR. Entirely black, slightly hirsute; a large red-brown area on the abdominal back. Wings fuscous.

1913. ASILUS *marginatus* [*Choerades marginatus* (Linnaeus, 1758). Eng. Golden-haired robberfly; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], halteres and abdominal segments light yellow; femora black.

Occurs in this country; rather rare.

[1277] See no. 1670.

[1278] Nowadays extinct in Sweden.

[1279] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

1914. ASILUS *forcipatus* [*Dysmachus picipes* (Meigen, 1820). Eng. Fan-bristled robberfly; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], hirsute, weakly ash-grey; halteres light yellow.

Frisch. Ins. 3. t. 7.

Lives on land.

DESCR. The size of the house fly.[1280] Body ash-grey, subpilose. Abdomen cylindrical. Wings hyaline. Halteres light yellow. Legs black. Male with quadridentate anal forceps with the two upper teeth larger. Female with a pointed anal stylus.

1915. ASILUS *tipuloides* [*Empis livida* Linnaeus, 1758. Eng. Tan dance fly; Fam. Empididae, Eng. Dance flies or Dagger flies, Sw. Dansflugor],[1281] ash-grey, naked; three black dorsal lines on thorax.

Asilus, dark bluish grey; three black dorsal lines on thorax. *Fn.* 1033.

Occurs on flowers.

DESCR. The size of a house fly. Abdomen and femora long, pale or dark bluish grey. Thorax dark bluish grey; on the back three longitudinal, black lines. Eyes grey. Beak black, curved beneath pectus, the length of the thorax. Wings hyaline. Antennae black. Legs whitish yellow.

1916. ASILUS *oelandicus* [*Dioctria oelandica* (Linnaeus, 1758). Eng. Orange-legged robberfly; Fam. Asilidae, Eng. Robber flies, Sw. Rovflugor], jet-black, naked; wings black; femora and halteres rusty brown.

Asilus, body jet-black, glabrous; wings black; femora and halteres rusty brown. *It. Oel.* 155. *Fn.* 1037.

Occurs in Öland.

DESCR. Entirely glabrous. Abdomen clavate, jet-black, shining. Head and thorax jet-black. Legs rusty brown with black tarsi. Halteres rusty brown. Wings slender, black.

1917. ASILUS *morio* [*Hemipenthes morio* (Linnaeus, 1758). Eng. Black-banded bee-fly; Fam. Bombyliidae, Bee-flies, Sw. Svävflugor],[1282] hirsute, black; wings varying with white and black.

Occurs in Turku.[1283]

DESCR. Thorax black; sides covered with deep yellowish hairs. Wings longer than body, variegated with jet-black and white especially at the thinner margin. Abdomen ovate, black, medially with an almost white fascia. Legs blackish rusty brown. Antennae with three segments, the outermost one awl-shaped. Beak apically lanceolate.

[1280] See no. 1833.

[1281] See no. 1897.

[1282] See no. 1784.

[1283] See the com. to no. 450.

Bombylius

1918. BOMBYLIUS *major* [*Bombylius major* Linnaeus, 1758. Eng. Dark-edged bee-fly, Sw. Stor svävfluga; Fam. Bombyliidae, Eng. Bee-flies, Sw. Svävflugor], wings half black.

Culex, wool-bearing; wings half fuscous. *Fn.* 1119.

Aldr. Ins. p. 350. f. 10. Musca X.

Mouff. Lat. 64. f. 5. *a sinistris*.

Hoffn. Ins. t. 8. f. 5.

Pet. Gaz. 56. t. 36. n. 5. Musca apiformis, proboscide porrecta, alis maculatis.

Raj. Ins. 273. Musca bombyliformis dense pilosa nigra, abdomine obtuso, ad latera rufo.

Act. Ups. 1736. p. 31. n. 14. nomen Petiveri.

Lives eagerly on flowers and sucks their honey while it is flying and not resting; it is an animal that does not bite.

DESCR. Beak long, always extended. Half of the wing is fuscous lengthways, namely the half which lies at the thicker margin and the half which is nearest the thinner edge is white. Whole body black, but entirely covered with a whitish hirsuteness and wool like that of a bumble bee,[1284] from where the appearance rises in an unusual way.

1919. BOMBYLIUS *medius* [*Bombylius medius* Linnaeus, 1758. Sw. Prickvingad svävfluga; Fam. Bombyliidae, Eng. Bee-flies, Sw. Svävflugor], wings punctate with fuscous.

Lives along with the preceding species.

DESCR. Body scarcely smaller than the preceding species, but it differs through the wings that are anteriorly or at margins thicker and fuscous, but the whole wing surface is scattered with fuscous spots.

1920. BOMBYLIUS *minor* [*Bombylius minor* Linnaeus, 1758. Eng. Heath bee-fly; Fam. Bombyliidae, Eng. Bee-flies, Sw. Svävflugor], wings without maculae. *It. Scan.* 164.

Reaum. Ins. 4. t. 8. f. 11. 13.

Lives as the preceding bee-flies.

DESCR. One third the size of the preceding bee-flies. Wings hyaline, base indistinctly darkening anteriorly.

Hippobosca

1921. HIPPOBOSCA *equina* [*Hippobosca equina* Linnaeus, 1758. Eng. Forest fly Sw. Hästfluga; Fam. Hippoboscidae, Eng. Louse flies or Keds, Sw. Lusflugor], wings blunt; thorax variegated with white.

Hippobosca, legs tetradactyl. *Fn.* 1043.

[1284] See the com. to no. 839.

Mouff. Lat. 59. Hippoboscus.
Frisch. Germ. 5. p. 43. t. 20. Ricinus volans.
Act. Ups. 1736. p. 31. n. 27. Musca equina tenax.
Reaum. Gall. 6. t. 48.
In Sweden: Haest-Fluga.
Lives on horses and cattle, especially at groins and the perineal region. When travelling common people fear greatly that it will enter their ears.
DESCR. Very well-known wherever it occurs; entirely glabrous, grey, very tenacious; if deprived of its head, it still lives a considerable time; hindlegs are rather long.

1922. HIPPOBOSCA *avicularia* [*Ornithomya avicularia* (Linnaeus, 1758). Eng. Bird louse fly, Sw. Fågelfluga; Fam. Hippoboscidae, Eng. Louse flies or Keds, Sw. Lusflugor], wings blunt; thorax unicoloured.
Lives on passerines.[1285] *Mr* C. *Solander.*
DESCR. Half as large as the preceding species. Wings one and a half times as long as body with lateral, jet-black vessels.

1923. HIPPOBOSCA *hirundinis* [*Stenepteryx hirundinis* (Linnaeus, 1758). Eng. Swallow louse fly, Sw. Svalfluga; Fam. Hippoboscidae, Eng. Louse flies or Keds, Sw. Lusflugor]; legs awl-shaped.
Hippobosca, legs hexadactyl. *Fn.* 1044.
Reaum. Gall. 4. t. 11. f. 1. 2. 3. 4. 5.
Lives on the chicks of swallows.[1286]
DESCR. Smaller than the preceding species. Abdomen posteriorly emarginate. Wings slender, widely spaced on the abdominal tergum. Each foot with six claws.

1924. HIPPOBOSCA *ovina* [*Melophagus ovinus* (Linnaeus, 1758). Eng. Sheep ked, Sw. Fårlus; Fam. Hippoboscidae, Eng. Louse flies or Keds, Sw. Lusflugor], no wings.
It. W:goth. 59.
Frisch. Ins. 5. t. 18.
Lives in the wool of sheep.[1287]
DESCR. Stated in *It. W:gothicum* l. c.

[1285] Linnaeus only refers to *Passeres*, see nos. 207–274.
[1286] Linnaeus only refers to *Hirundo*, see nos. 270–273.
[1287] See no. 45.

VII. APTERA

Lepisma

1925. LEPISMA *saccharina* [*Lepisma saccharina* Linnaeus, 1758. Eng. Silverfish, Sw. Silverfisk or Nattsmyg; Fam. Lepismatidae, Eng. Typical silverfishes, Sw. Silverborstsvansar], squamose; cauda with three long hairs.

Adam. Microgr. t. 28. f. 147.

Occurs among different kinds of sweet corn and is a recent immigrant.

DESCR. Body oblong, very levigate, weakly silvery, posteriorly gradually attenuated, consisting of ten segments excepting the head and cauda. Antennae the length of the body. Cauda with three setae that are widely diverging, pilose beneath, excepting some setae beneath the cauda.

1926. LEPISMA *terrestris* [*Nomen dubium*], naked, cauda with three long hairs.

Lives above the ground; very rare.

DESCR. Body cylindrical, white; appearance as that of a springtail.[1288] Antennae half the length of the body, blunt. Three extended caudal setae.

Podura[1289]

1927. PODURA *viridis* [*Sminthurus viridis* (Linnaeus, 1758). Eng. Clover springtail, Lucerne flea or Lucerne earth flea, Sw. Lucernloppa; Fam. Sminthuridae, Eng. Globular springtails, Sw. Klothoppstjärtar], green, subglobose. *Fn.* 1172.

Act. Ups. 1736. p. 37. n. 2. Pulex viridis plantarum.

Lives on plants; rather rare in Uppsala; especially on the early leaves of buckwheat, but nevertheless not very common on tartary buckwheat.

DESCR. Size of the head as that of a rather large head louse.[1290] Abdomen rather watery green, globose ending in a slightly oval shape, at anus entirely convex and green mixed with ash-greyish. Thorax very narrow, scarcely visible. Head green, blunt, thus not especially dissimilar to a cicada.[1291] Eyes above head black with a bilateral blackish line. Legs whitish green, equal. Antennae recurved.

1928. PODURA *atra* [*Ptenothrix atra* (Linnaeus, 1758). Fam. Dicyrtomidae, Eng. Globular springtails, Sw. Klothoppstjärtar], subglobose, jet-black; antennae the length of the body, apically white. *Fn.* 1173.

Occurs on forest fungi.

DESCR. It falls among the larger species of this genus. Abdomen globose, but anus protrudes like a capitulum. Antennae black, the length of the body. It projects antrorsely these divaricate and apically white antennae.

[1288] Linnaeus only refers to *Podura*, see nos. 1927–1936.

[1289] Order Collembola, springtails.

[1290] See no. 1939.

[1291] Linnaeus only refers to *Cicada*, see nos. 879–902.

1929. PODURA *fusca* [1758] [*Allacma fusca* (Linnaeus, 1758). Fam. Sminthuridae, Eng. Globular springtails, Sw. Klothoppstjärtar], globose, fuscous, shining; antennae long with many segments. *Fn.* 1174.

Act. Stockh. 1743. p. 296. t. 7.

Lives in decayed wood.

1930. PODURA *plumbea* [*Pogonognathellus flavescens* (Tullberg, 1871). Fam. Tomoceridae, Sw. Långhornshoppstjärtar], smoothly rounded, dusky blue, shining.

Podura, smoothly rounded, lead-grey. *Fn.* 1175.

Inhabits trees or meadows, always solitary, but abundant on fungi.

DESCR. Larger than the other species; it reaches the length of a common louse, entirely smoothly rounded, dusky blue, smooth, scattered with sparse hairs. Legs whitish. It runs all the time and sometimes jumps. Anal legs also white.

1931. PODURA *nivalis* [*Entomobrya nivalis* (Linnaeus, 1758). Eng. Cosmopolitan springtail; Fam. Entomobryidae, Sw. Brokhoppstjärtar], oblong, ash-grey with black markings. *Fn.* 1176.

De Geer. Act. Ups. 1740. p. 54. t. 2. Podura campestris cinerea, signaturis nigris, antennis longis.

In Sweden: Snöloppa.

Lives during winter in flocks in the actual snow and runs about very rapidly, unless the snow melts, in which case it dies. During summer abundant in the ripe berries of red currant, and then solitary.

DESCR. Body oblong, ash-grey, distinguished by black markings.

1932. PODURA *arborea* [*Vertagopus arboreus* (Linnaeus, 1758). Fam. Isotomidae, Eng. Smooth springtails], black; legs and the fork white. *Fn.* 1177.

De Geer. Act. Stockh. 1740. p. 272. t. 4.

Act. Ups. 1740. p. 49. t. 1. Podura campestris nigra splendens, pedibus caudaque albis.

Lives in the decayed wood of maple trees in Öland and elsewhere.

DESCR. Small in any aspect; black. Caudal fork together with the legs and antennae white at base.

1933. PODURA *cincta* [*Orchesella cincta* (Linnaeus, 1758). Fam. Entomobryidae, Sw. Brokhoppstjärtar], cylindrical, grey; abdomen with a jet-black belt that is anteriorly whitish.

Inhabits woods.

1934. PODURA *aquatica* [*Podura aquatica* Linnaeus, 1758. Fam. Poduridae, Sw. Vattenhoppstjärtar], acquatic, black. *It. Gotl.* 181. *Fn.* 1178.

De Geer. Act. Holm. 1740. p. 279. t. 3. 4.

Act. Ups. 1740. p. 57. t. 3. Podura aquatica tota nigra.

Lives on quiet and calm water bodies. Forms aggregations by the edges of fishponds, as if the edges had frozen over, especially in the morning hours when the water becomes calmer around these aggregations.

DESCR. Except for the two sexes, excellently described by *Mr De Geer*, I also observe, unless I am wrong, a third sex or animalcules which are also far smaller, red, more rounded or more gibbous, and mingled with the others.

1935. PODURA *fimetaria* [*Folsomia fimetaria* (Linnaeus, 1758). Fam. Isotomidae, Eng. Smooth springtails], terrestrial, white. Fn. 1180.

Lives in fertile soil, especially in gardens, where in springtime melons and other plants are sown in horse dung;[1292] hence an infinite number appears jumping like particles flying around, especially when the soil has become moistened.

DESCR. This species is definitely the very smallest of all; entirely white.

1936. PODURA *ambulans* [*Onychiurus ambulans* (Linnaeus, 1758). Fam. Onychiuridae, Sw. Blekhoppstjärtar], with an extended fork.[1293]

Pediculus, terrestrial, snow-white. *Fn.* 1170.

Lives in slightly wet, warm soil; hence it is abundant in fertile soil and in pots in hypocausts[1294] throughout the whole winter; it comes up as often as the water is refreshed, disappearing again when the soil becomes dry.

DESCR. The appearance of a typical springtail, smoothly rounded, oblong, white, soft, but without the fork, except that the cauda is bifid; it does not jump.

[1292] Linnaeus writes *venter equinus*, literally meaning "horse abdomen". It was a common name for decomposing horse dung as a heat source during the 17th and 18th centuries.

[1293] Mistake by Linnaeus, cf. DESCR. below.

[1294] I.e. hothouses.

Termes[1295]

1937. TERMES *pulsatorium* [*Trogium pulsatorium* (Linnaeus, 1758). Eng. Larger pale booklouse, Sw. Väggsmed; Fam. Trogiidae, Eng. Granary booklice, Sw. Stumpvingestövlöss], abdomen oblong; mouth red; eyes deep yellow.

Pediculus, in old wood. *Fn.* 1168.
Act. Stockholm. 1754. p. 152.
Blanck. Belg. 169. t. 14. f. F. Pediculus ligni.
Raj. Ins. 8. Pediculo cognatus & similis.
Bradl. Nat. t. 27. f. 3.
Derrham. Act. Angl. n. 271. p. 231.
291. p. 1586.
Physico-Theol. p. 119. Pediculus pulsatorius, fatidicus, mortifaga.
Allen. Act. Angl. n. 245. p. 376.
Lives in old wood, in long abandoned books, and on walls; runs around alone; strikes like a clock with its actual abdomen on the scales of dry wood. *Roland. Act. Hol.* l. c.
DESCR. Body, oblong, pale. Eyes light yellow. Antennae setaceous, the length of the actual body (in most cases); a fuscous, annular macula inside the body, and behind this one a fuscous spot at anus. Each abdominal segment is laterally marked with red-brown spots. Mouth red-brown.

1938. TERMES *fatidicum* [*Nomen dubium*], abdomen ovate; mouth pale; eyes fuscous.

Frisch. Germ. 11. p. 2. t. 10.
Lives in my herbarium.
DESCR. Similar to the preceding species but twice as large. Eyes fuscous. Mouth pale.

Pediculus[1296]

1939. PEDICULUS *humanus* [*Pediculus humanus* Linnaeus, 1758. Eng. Body louse or Head louse, Sw. Människolus, Huvudlus, Klädlus; Fam. Pediculidae, Sw. Människolöss], named after man. *Fn.* 1153.

Rhed. Exper. t. 18. Pediculus ordinarius.
Mouff. Lat. 259. Pediculus.
Swamm. Quart. 169. t. 7. Pediculus.
Bonan. Microgr. f. 55.
Anon. Angl. p. 203. f. 11.
Merr. Pin. 202. Pediculus in capite simpliciter.
ib. Pediculus corporeus maculatus.
In Sweden: Luus.

[1295] Order Psocoptera, bark lice, or Psocodea, however regarded as termites, Termes, by Linnaeus.
[1296] Order Phthiraptera or Psocodea.

Lives on man; especially in the hair of children and clothes of sailors, soldiers, etc. The largest ones are found in the rather warm mine galleries of Dalarna. The louse that lives in clothes is not different from the one on the head as to species, but only a variety.

1940. PEDICULUS *pubis* [*Pthirus pubis* (Linnaeus, 1758). Eng. Crab louse or Pubic louse, Sw. Flatlus; Fam. Pthiridae, Eng. Pubic lice, Sw. Flatlöss], in pubic hair. *Fn.* 1154.
Rhed. Exp. t. 19. f. 1. Pediculus inguinalis.
Pet. Gaz. t. 67. f. 9. Pediculus inguinalis.
Mouff. Lat. 200. Pediculus ferus.
Raj. Ins. 8. Pediculus ferus.
Merr. Pin. 202. Pediculus Morpio.
In Sweden: Flat-luus.
Lives in the genital hairs and on hirsute parts of unclean people.

1941. PEDICULUS *vespertilionis* [*Nycteribia sp.* Fam. Nycteribiidae, Eng. Bat flies, Sw. Fladdermusflugor],[1297] thorax angularly cruciform; legs with claws longer than body.
Frisch. Germ. 7. t. 7.
Lives on the particoloured bat.[1298] I do not know whether it can move about on flat ground.

1942. PEDICULUS *suis* [*Haematopinus suis* (Linnaeus, 1758). Eng. Hog louse, Sw. Svinlus; Fam. Haematopinidae, Eng. Ungulate lice, Sw. Hovdjurslöss], named after the pig.[1299]
Lives on pigs.

1943. PEDICULUS *porcelli* [*Gliricola porcelli* (Schrank, 1781). Fam. Gliricolidae], named after the guinea pig.
Lives on the guinea pig.

1944. PEDICULUS *cervi* [*Lipoptena cervi* (Linnaeus, 1758). Eng. Deer ked or Deer fly, Sw. Hjortfluga; Fam. Hippoboscidae, Eng. Louse flies or Keds, Sw. Lusflugor],[1300] named after the deer.
Frisch. Germ. 12. t. 5.
Lives on deer.[1301]

[1297] N.B. order Diptera.
[1298] See no. 2.
[1299] See no. 21.
[1300] N.B. order Diptera.
[1301] Linnaeus only refers to *Cervus*, see nos. 39–43.

1945. PEDICULUS *ovis* [*Bovicola ovis* (Schrank, 1781). Eng. Sheep body louse, Sw. Fårpälsätare; Fam. Bovicolidae], named after the sheep.[1302]
Lives on sheep.

1946. PEDICULUS *tauri* [*Bovicola bovis* (Linnaeus, 1758). Eng. Cattle biting louse, Sw. Pälsätande nötlus; Fam. Bovicolidae], named after the cattle; abdomen with eight transverse rusty brown lines. *Fn.* 1155.
In Sweden: Roe-luus.
Lives on cows.[1303] This is a rather small species. There is also another that is larger and not very common.
DESCR. Entirely white, tiny. Head brick-red. Legs brick-red, apically rather whitish. Abdomen white, with eight transverse brick-red lines on dorsum; five transverse fasciae on venter; all lines fail to touch the margin or sides, but the sides are darker than the rest of the body or marked with eight rusty brown spots.

1947. PEDICULUS *vituli* [*Linognathus vituli* (Linnaeus, 1758). Eng. Longnosed cattle louse, Sw. Långnosad nötlus; Fam. Linognathidae, Sw. Nötlöss], named after the cattle;[1304] abdomen lead-grey. *Fn.* 1156.
In Sweden: Blåluus.
Lives on cattle.
DESCR. Larger than the preceding species. Abdomen ventricose, acuminate, dusky blue. Legs short, thick, grey, just as the head and thorax are also grey.

1948. PEDICULUS *equi* [*Werneckiella equi* (Denny, 1842). Eng. Horse louse, Sw. Hästlus; Fam. Bovicolidae], named after the horse.[1305]
Lives on horses.

1949. PEDICULUS *tinnunculi* [*Laemobothrion tinnunculi* (Linnaeus, 1758). Fam. Laemobothriidae, Sw. Jättefjäderätare], named after the common kestrel.[1306] *Fn.* 1157.
Rhed. Ins. t. 13. Pediculus Tinnunculi.
Lives on the common kestrel.
DESCR. This species falls among the largest of all the lice that I have ever seen. Head depressed, oval-oblong. Head anteriorly blunt, at the region of ears viewed backwards bluntly sagittate on each side. Thorax almost marginate, as in the ground beetle[1307] or soldier beetle.[1308] Abdomen divided

[1302] See no. 45.
[1303] See no. 46.
[1304] See the com. to no. 1946.
[1305] See no. 47.
[1306] See no. 61.
[1307] Linnaeus only refers to *Carabus*, see nos. 780–814.
[1308] Linnaeus only refers to *Cantharis*, see nos. 699–720.

into 9 or 10 segments, with a completely entire margin, marked with a line. Palate prominent. Claws solitary; in the vola[1309] of the hand there is something spongy. Femora as if inwardly mutilated at tip.

1950. PEDICULUS *corvi* [*Philopterus corvi* (Linnaeus, 1758). Sw. genus Fjäderlingar; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the common raven.[1310] *Fn.* 1158.

Rhed. Exper. t. 16. Pulex Corvi.

Lives on the common raven.

DESCR. Abdomen oval-oblong, on each side contracted, depressed, plain, ash-grey, with twelve or ten black lines on the segments. Neck very short. Head tiny, black. Legs very short. Antennae very short, curved backwards. The constitution of a very tenacious animalcule. Although the toes are strongly compressed, it is most lively and runs around.

1951. PEDICULUS *infausti* [*Nomen dubium*], of the Siberian jay.

Pediculus, named after the Lappish jay. *Fn.* 1159.

Act. Ups. 1736. p. 37. n. 3. Pediculus Turdi Merulae montanae dicti.

Lives on the Siberian jay.[1311]

DESCR. Abdomen ovate, gibbous, diaphanous, pale, marked bilaterally at base with a squamule similar to a false wing. Thorax very narrow, short. Head tiny, roundish, blunt. Eyes black. Antennae the length of the body, very slender, white. Legs very slender, fairly long. The size of the head is like that of a very small louse, very sensitive so that you can easily make it shake just by touching it.

1952. PEDICULUS *anseris* [*Anaticola anseris* (Linnaeus, 1758). Eng. Slender goose louse; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the graylag goose.[1312]

Lives on geese.

1953. PEDICULUS *sternae* [*Saemundssonia sternae* (Linnaeus, 1758). Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the common tern.[1313] *Fn.* 1161.

Lives on the black tern.[1314]

DESCR. Head trigonal, broad, blunt, pale. Thorax very short, very narrow. Abdomen ovate, the length of the anterior body, in the middle longitudinally blackish. Antennae very short, capillary. Legs very short, thick, of which the anterior legs beneath head are the shortest. Abdomen concave beneath.

[1309] Lat. *vola* means the "hollow of the hand or foot" (*OED*).

[1310] See no. 85.

[1311] Lat. *Corvus infaustus*, see no. 93. Here Linnaeus refers to the Siberian jay, however using two different scientific names. Moreover no lice are known to occur on this bird in Sweden.

[1312] See no. 114.

[1313] See no. 158.

[1314] See no. 159. Linnaeus states that this species is named after the common tern, but that it lives on the black tern. The host is the common tern.

1954. PEDICULUS *gruis* [*Esthiopterum gruis* (Linnaeus, 1758). Eng. Crane louse, Sw. genus Vingätare; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the common crane.[1315] *Fn.* 1162.

Rhed. Ins. t. 3. Pulex Gruis.

Frisch. Germ. 5. p. 15. t. 4. Pediculus Gruis.

Lives on the common crane.

1955. PEDICULUS *ciconiae* [*Ardeicola ciconiae* (Linnaeus, 1758). Sw. genus Rasplöss; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the white stork.[1316]

Lives on storks.

1956. PEDICULUS *recurvirostrae* [*Cirrophthirius recurvirostrae* (Linnaeus, 1758). Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the pied avocet.[1317] *It. Oel.* 90. *Fn.* 1163.

Lives on the pied avocet.

DESCR. Body fuscous, oblong. Head indistinctly triangular, acuminate, with a transverse line excavated medially. Abdomen oblong, almost linear, medially slightly broader, with eight segments. Legs short, curved. Antennae short, small, capitate.

1957. PEDICULUS *haematopi* [*Saemundssonia haematopi* (Linnaeus, 1758). Eng. Oystercatcher head louse; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the Eurasian oystercatcher.[1318] *It. Oel.* 90. *Fn.* 1164.

Lives on the Eurasian oystercatcher.

DESCR. The size of a flea, entirely greyish blue. Head roundish, notably glabrous, convex and plain. Abdomen obversely ovate, with ten transverse, pale incisures. Legs short. Antennae very short. Thorax very narrow; hairs on the sides of the posterior part of abdomen.

1958. PEDICULUS *meleagridis* [*Chelopistes meleagridis* (Linnaeus, 1758). Eng. Large turkey louse, Sw. genus Djävulslöss; Fam. Goniodidae], named after the wild turkey.[1319] *Fn.* 1160.

Red. Exper. t. 1. f. 2. Pediculus Accipitris.

Lives on the turkey or the wild turkey 198.[1320]

DESCR. Head plain; anteriorly rounded; posteriorly dentate and angular, at margin awl-shaped backwards. Thorax medially cordate, on each side angular. Abdomen grey, with 8 or 10 segments, lengthwise medially white. Antennae short. Related to the wing louse.[1321]

[1315] See no. 161.

[1316] See no. 162.

[1317] See no. 191.

[1318] See no. 192.

[1319] See no. 198.

[1320] See *Fn. Su.* (1761), *Errata*, p. 560.

[1321] See no. 1960.

1959. PEDICULUS *gallinae* [*Menopon gallinae* (Linnaeus, 1758). Eng. Poultry shaft louse, Sw. genus Spollöss; Fam. Menoponidae, Eng. Chicken body louse family, Sw. Spolätare], named after the domestic hen;[1322] thorax and head mucronate on each side. *Fn.* 1166.

Lives on poultry. Our peasants treat their hens that suffer from lice with a pepper powder that has been mixed and kneaded with butter; they then give it to the hens to eat. This procedure rarely fails.

DESCR. Smaller than the common flea. Body scattered with grey hairs. Abdomen oblong, ovate with 8 or 9 segments. Head crescent-shaped with its shanks facing posteriorly. Antennae very short. Thorax mucronate with a sharp, right angle on both sides.

1960. PEDICULUS *caponis* [*Lipeurus caponis* (Linnaeus, 1758). Eng. Wing louse or Depluming louse, Sw. genus Vinkellöss; Fam. Philopteridae, Eng. Bird lice, Sw. Fjäderlöss], named after the domestic hen;[1323] abdomen black marginally. *Fn.* 1165.

Rhed. Ins. t. 16. Pulex capi.

Frisch. Germ. 11. p. 24. t. 24. Pediculus galli.

Lives on the domestic hen.

DESCR. The size of an egg (or nit) of a body louse.[1324] Body depressed; blunt at cauda. Abdominal sides black; dorsum white, diaphanous; at head a black macula like a translucent heart. Head white. Often moves the antennae.

1961. PEDICULUS *tetraonis* [*Goniodes tetraonis* (Linnaeus, 1761). Eng. Grouse-fly, Sw. genus Medusalöss; Fam. Goniodidae], named after the Eurasian black grouse.[1325]

Lives on grouse.

DESCR. Head semi-ovate; posteriorly truncated and emarginate; posterior angles emarginate and truncated; anteriorly rounded, plain above. Collar crescent-shaped. Abdomen ovate, blunt; margin serrate with nine rusty brown segments. Antennae very short, blunt.

1962. PEDICULUS *lagopi* [*Goniodes lagopi* (Linnaeus, 1758). Eng. Grouse-fly, Sw. genus Medusalöss; Fam. Goniodidae], named after the willow grouse.[1326] *Fn.* 1167.

Act. Ups. 1730. p. 37. n. 2. Pediculus Tetraonis Lagopi dicti.

Lives on the willow grouse.

DESCR. Body depressed, on each side blunt. Abdomen anteriorly narrow, posteriorly dilated, formed like a fruit of the shepherd's purse or a capsule of the European speedwell, surrounded by a black margin inwardly serrate. The head is fixed without a noticeable thorax, on each side blunt, laterally emarginate.

[1322] See no. 199.

[1323] See no. 199.

[1324] See no. 1939.

[1325] See no. 202.

[1326] See no. 203.

1963. PEDICULUS *hirundinis* [*Dennyus hirundinis* (Linnaeus, 1761). Eng. Swallow louse fly, Sw. genus Spollöss; Fam. Menoponidae, Sw. Spolätare], palish; abdomen ovate, with a touch of white and black, laterally setose, with rather large posterior setae.

Lives on the common swift.[1327]

1964. PEDICULUS *farionis* [*Salmincola farionis* (Linnaeus, 1761). Eng. Trout louse, Sw. Laxlus; Fam. Lernaepodidae].[1328]

Lives on the brown trout[1329] in the Norwegian Sea. *A. Martin.*

DESCR. Body white. Head rather short, rather broad. Collar very short. Thorax almost square. Abdomen ovate, depressed. Six legs very short. Above cauda two cylinders, longer than body, covered with tubercles.

Pulex[1330]

1965. PULEX *irritans* [*Pulex irritans* Linnaeus, 1758. Eng. Human flea, Sw. Människoloppa; Fam. Pulicidae, Sw. Husloppor], proboscis shorter than body.

Pulex, jet-black. *Fn.* 1171.
Leuwenh. Epist. 1. p. 357. f. 7.
Hook. Microgr. f. *egregia.*
Bonan. Microgr. f. 50.
Anon. Angl. p. 204. f. 12.
Merr. Pin. 202.
Raj. Ins. 7. Pulex vulgaris.
Frisch. Germ. 11. p. 8. Pulex.
In Sweden: Loppa.

Lives on humans, especially on women; common in autumn; very abundant in the nests of sand martins.[1331] I have not seen it in Lapland.

[1327] See no. 272.
[1328] A freshwater copepod crustacean, parasitic on fish. See no. 2102.
[1329] See no. 348.
[1330] Order Siphonaptera, Eng. Fleas, Sw. Loppor.
[1331] See no. 273.

Acarus[1332]

1966. ACARUS *reduvius* [*Ixodes ricinus* (Linnaeus, 1758). Eng. Castor bean tick, Common sheep tick or Pasture tick, Sw. Vanlig fästing; Fam. Ixodidae, Eng. Hard ticks or Scale ticks, Sw. Hårda fästingar],[1333] ovate, flat, with an obovate macula at abdominal base.

Acarus ovinus. Fn. 1192.

Charlet. Onom. 49. Reduvius.

Raj. Ins. 9. Pediculus ovinus, quem Mouffetus Reduvium vocat.

It. Oel. 62. 126. Festing.

In Öland: Festing.

Lives on sheep,[1334] the wool of which it damages.

DESCR. Body depressed, the size of a bed bug.[1335] Abdomen anteriorly on dorsum with an ovate macula that is pale medially and surrounded by a fuscousness emitting striae facing backwards.

OBS. Varies as to colour; always depressed and flat, with a prominent lateral margin.

1967. ACARUS *ricinus* [*Ixodes ricinus* (Linnaeus, 1758). Eng. Castor bean tick, Common sheep tick or Pasture tick, Sw. Vanlig fästing; Fam. Ixodidae, Eng. Hard ticks or Scale ticks, Sw. Hårda fästingar],[1336] globose-ovate; round macula at abdominal base; antennae clavate.

Acarus, abdomen dark bluish grey, anteriorly ovate and fuscous; antennae clavate. *Fn.* 1193.

Raj. Ins. 10. Ricinus caninus.

Frisch. Germ. 5. p. 41. t. 19. Pediculus caninus.

In Sweden: Flott.

Lives on cattle,[1337] as also on dogs;[1338] abundant.

DESCR. Body ovate-globose, whitish deep yellow; on the back a round, black macula at abdominal base. Anus on the underside of abdomen. Thorax scarcely visible. Head tiny. Mouth bifid. Head and legs black. Antennae clavate, the length of the rostrum.

1968. ACARUS *cancroides* [*Chelifer cancroides* (Linnaeus, 1758). Eng. House pseudoscorpion, Sw. Bokskorpion; Fam. Cheliferidae, Eng. House pseudoscorpions, Sw. Tvåögonklokrypare],[1339] antennae cheliform; abdomen ovate, depressed.

Acarus, first pair of legs cheliform. *Fn.* 1187.

Clerck. Aran. t. 6. f. 10. 1. 2.

[1332] Subclass Acari, Eng. Mites and ticks, Sw. Kvalster och fästingar.

[1333] See no. 1967.

[1334] See no. 45.

[1335] See no. 909.

[1336] See no. 1966.

[1337] See no. 46.

[1338] See no. 5.

[1339] Order Pseudoscorpiones, Eng. Pseudoscorpions, Sw. Klokrypare.

Frisch. Germ. 8. p. 2. t. 1. Scorpio-araneus.

It. Oel. 84. Acarus Scorpio-araneus dictus.

Lives in houses that have been closed for a long time and not been exposed to air, as also in chests and stores. At night it usually penetrates the peasant's femur with its head so that a pustule as large as a hazelnut appears resulting in a terrible pain in the whole femur. *Dr Bergius.*

DESCR. With its crayfish chelae of the forefeet, and through the fact that it walks backwards it is easily distinguished from the others. Feeds on the larger pale booklouse.[1340]

1969. ACARUS *crassipes* [*Pergamasus crassipes* (Linnaeus, 1758). Fam. Parasitidae], second pair of legs very thick. *Fn.* 1189.

Lives on the ground, where it runs around ubiquitously and often lives gregariously so that many can be found in one place; abundant in gardens.

DESCR. The size of a smaller flea. Whole body chestnut-coloured. Second pair of femora monstrously thick and cheliform, yet the chela ends in a slender foot similar to the others; hence the foot of the second pair, beside the base and femur, is very thick and armed with four denticles or branches or spines; tip of the chela is curved in order to make it grasp better, but it does not walk on this foot.

OBS. I have found another mite[1341] clinging to this one at its anus; it is of a chestnut colour, tiny, with the surface divided into regions, as in a tortoise-shell or depressed, with a pointed margin on each side; legs very short, equal. It is therefore perhaps a different species, unless it undergoes a remarkable development.

1970. ACARUS *passerinus* [*Analges passerinus* (Linnaeus, 1758). Fam. Analgidae], third pair of femora very thick.

Acarus, third pair of legs very large. *Fn.* 1190.

De Geer. Act. Holm. 1740. p. 351. t. 1. f. 2. Acarus avium, pedibus tertii paris mole monstrosis.

Rhed. Ins. t. 2. f. 4. Pulex Sturni.

Lives on the common chaffinch.[1342] We have not yet seen it.

DESCR. It is tiny, with a black spot on dorsum. Third pair of legs large. At the same time both femora of this species are almost of the same bulk as the body itself; the other legs very small. It does not walk on these monstrous legs, but it just fastens itself to the feathers of a very lively and agile bird so that it will not be shaken off. For more information, see *Act. Stock.* l. c. *Rhede* has delineated this mite badly, but *Mr De Geer* excellently.

1971. ACARUS *motatorius* [*Linopodes motatorius* (Linnaeus, 1758). Fam. Eupodidae], first legs very long, motatorious. *Fn.* 1188.

Occurs on fungi; runs rapidly.

DESCR. The size of a nit. Wax-coloured, whitish or weakly light yellow. Forelegs very long, which it often raises when running and keeps them in motion like antennae, and they are longer than the body and paler than the other legs.

[1340] See no. 1937.

[1341] Linnaeus only refers to *Acarus*, see nos. 1966–1991.

[1342] See no. 232.

1972. ACARUS *aphidioides* [*Asca aphidioides* (Linnaeus, 1758). Fam. Ascidae], red; primary legs longer than those with which it runs; abdomen posteriorly bicornate. *Fn.* 1191.

Lives on the trunks of pine.

DESCR. Small, red. First pair of legs longer than the others, and never raised, but used for running just as the others. Abdomen equipped posteriorly with two cornicles like those of aphids.

1973. ACARUS *coleoptratus* [*Achipteria coleoptrata* (Linnaeus, 1758). Fam. Achipteridae], jet-black; sides with black sheath wings. *Fn.* 1211.

Lives under stones. *P. Kalm.*

DESCR. It is tiny, barely as large as a poppy seed; eight legs; dorsum glabrous, shining; the sides pointed towards the head like short[1343] black sheath-wings; hence the abdomen connects to the head as if antrorsely bicornate and augmented on the sides with a little black membrane, but the sheath-wings not yet mobile, as they are in the Coleoptera.

1974. ACARUS *telarius* [*Tetranychus urticae* C.L. Koch, 1836. Eng. Red spider mite or Two-spotted spider mite, Sw. Växthusspinnkvalster; Fam. Tetranychidae; Eng. Spider mites, Sw. Spinnkvalster], transparent red-yellow.

Acarus, whitish green; on the leaves of linden. *Fn.* 1212.

Acarus, on the hollyhock. *Fn.* 1196.

Lives on the leaves of linden, hollyhock, and others, but abundant in hothouses, where it severely damages the plants and makes them paler. And through the barely visible threads that it has drawn, it suffocates the plants.

DESCR. Scarcely visible to the naked eye. Entirely of a transparent colour, laterally rusty brown.

1975. ACARUS *siro* [*Acarus siro* Linnaeus, 1758. Eng. Flour mite or Grain mite, Sw. Mjölkvalster; Fam. Acaridae], sides sublobate; four very long hindlegs; femora and head rusty brown; abdomen setose.

Acarus, of flour. *Fn.* 1195.

Leuw. Arcan. t.[1344]

Blank. Belg. p. 158. t. 14. f. A. B.

Bonan. N. C. dec. 2. *anno* 10. *app.* 34. Acarus ex arido caseo.

Riv. Prurit. 18. fig. D. E. F. G. I. K. L. N.

In Sweden: Mahl.

Lives in old flour and old cheese.

β *Acarus*, on humans, subcutaneous.[1345] *Fn.* 1194.

Ettmüll. Act. Lips. 1682. p. 319.

Rivin. Diss. Exanth. p. 18. f. A. B.

[1343] Lat. *brevi* should be written as *brevia*.

[1344] The ref. number is missing.

[1345] *Sarcoptes scabiei* (Linnaeus, 1758). Eng. Itch mite, Sw. Skabbkvalster or Rävskabb; Fam. Sarcoptidae. See no. 1976.

Act. Ups. 1736. p. 37. n. 5. Acarus scabiei.
In Sweden: Klåmask.
Lives under the skin of people and causes scabies. When it has made a vesicle under the skin, it recedes slightly following the corporeal wrinkles, then rests again and evokes itching and titillation. The trained observer reveals with his naked eye that it hides under the skin; it is easily removed with a needle. Having been placed on the nail it barely moves. But if it is exposed to the warm breath of the mouth, it runs about rapidly on the nail.
DESCR. Tiny, barely the size of a nit, roundish; head hardly visible; mouth, just as legs, red-brown or brick-red. Abdomen ovate, hyaline; on dorsum a double crescent-shaped line or marked with a pair of recurved, fuscous lines, and as if with a lobe on each side.

1976. ACARUS *exulcerans* [*Sarcoptes scabiei* (Linnaeus, 1758). Eng. Itch mite, Sw. Skabbkvalster or Rävskabb; Fam. Sarcoptidae],[1346] legs setaceous, very long, the two anterior ones short.
Lives in the scabs of wild animals, which it has caused.

1977. ACARUS *geniculatus* [*Nomen dubium*], black; knees of femora globose. *Fn.* 1210.
Lives in dead branches.

1978. ACARUS *aquaticus* [*Limnochares aquatica* (Linnaeus, 1758). Eng. Water mite, Sw. Gummibåtskvalster; Fam. Limnocharidae], abdomen depressed, tomentose, posteriorly blunt, aquatic.
Acarus, aquatic, red; depressed. *Fn.* 1199.
Charlet. Onom. 47. Buprestis araneolae.
Frisch. Germ. 8. p. 5. t. 3. Araneus aquaticus ruber parvus.
In Småland: Qualster.
Lives underwater in lakes, where it moves rapidly, often dragging a globe behind it, swimming swiftly, laying red eggs on the water scorpion.[1347]
DESCR. Body ovate; slightly depressed on dorsum, scarlet.

1979. ACARUS *holosericeus* [*Trombidium holosericeum* (Linnaeus, 1758). Eng. Velvet mite, Sw. Sammetskvalster, Bärkvalster or Löpkvalster; Fam. Trombidiidae], abdomen depressed, tomentose, posteriorly blunt, terrestrial.
Acarus, terrestrial, red; abdomen depressed. *Fn.* 1200.
Blank. Belg. p. 170. t. 14. f. 1. Aranetis terrestris scharlatinus.
List. Aran. 100. f. 38. Araneus exiguus coccineus vulgo anglice a Tant dictus.
Raj. Ins. 41. n. 38. Nomen Listeri.
Pet. Mus. 65. n. 701. Araneus anglicus coccineus minimus.

[1346] See no. 1975. β *Acarus.*
[1347] See no. 906.

It. Oel. 84. Acarus coccineus terrestris.
In Östergötland: Bråfrö.
Lives on the ground; in water it does not move, but dies.
DESCR. More similar to the preceding species than an egg is to an egg;[1348] entirely red, completely silky and scarlet. Head tiny. Eyes two. Four legs on each side with many segments. Abdomen large, depressed, in the rear and laterally gibbous, posteriorly furrowed. Size as that of the preceding species. Two palps at tip ending in a claw and an ovate segment.

1980. ACARUS *baccarum* [*Anystis baccarum* (Linnaeus, 1758). Eng. Whirligig mite; Fam. Anystidae], abdomen extended, red, laterally rather dark. *Fn.* 1201.
Occurs ubiquitously in trees, especially on red currant and its berries; running around very rapidly; very common.
DESCR. Many times smaller than the preceding species; by no means depressed dorsally, and neither wrinkled nor silky or villous, but glabrous and swollen in all directions, with a dark spot on each side at thorax. Hairs have sprung out on both sides.

1981. ACARUS *muscarum* [*Myianoetus muscarum* (Linnaeus, 1758). Fam. Histiostomatidae], abdomen red-brown; hindlegs very long, filiform. *Fn.* 1209.
Lives on flies; the smallest species of all.

1982. ACARUS *gymnopterorum* [*Braula coeca* Nitzsch, 1818. Eng. Bee louse, Sw. Bilus; Fam. Braulidae],[1349] abdomen red; each side with two scarlet spots.
Acarus, gymnopterous,[1350] red; a pair of scarlet spots on each side. *Fn.* 1208.
Lives on mosquitoes,[1351] bees,[1352] and others; belongs, as the following *Acarus*, to those that are the sheath-winged.
DESCR. Red, tiny, just as eyes and legs. It cannot be distinguished by a mere word. Abdomen globose, bright red, hispid with some hairs; in anterior abdominal part, a pair of rather dark red spots on each side, of which one is anteriorly, the other posteriorly situated.

1983. ACARUS *coleoptratorum* [*Parasitus coleoptratorum* (Linnaeus, 1758). Fam. Parasitidae], red-brown; anus verging on white. *Fn.* 1198.
List. Loqu. 381. Pediculus subflavus scarabaeis infestus.
Blank. Belg. 168. t. 14. f. H. Pediculus insectorum volatilium.
Frisch. Germ. 4. p. 17. t. 10. Pediculus scarabaei currens.
Act. Ups. 1736. p. 37. n. 2. Acarus insectorum coleoptratorum.
Reaum. Gall. 6. t. 4. f. 14. 13.

[1348] See the com. to no. 511.

[1349] Order Diptera!

[1350] Linnaeus writes gymnopterous meaning "with naked wings". Since this fly is lacking wings, Linnaeus has probably used gymnopterous as a synonym of apterous. See Ch. *Technical Terms*.

[1351] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1352] Linnaeus only refers to *Apis*, see nos. 1684–1719.

Lives on the scarab beetles,[1353] hirsute bees,[1354] and similar insects beneath pectus or inside femora.

DESCR. Body roundish, red-brown, convex, hard. Head and collum hardly visible; at anus verging on white. Legs rapid, anterior one longer. The transverse suture distinguishes the body above.

1984. ACARUS *rupestris* [*Erythraeus rupestris* (Linnaeus, 1758). Fam. Erythraeidae], fuscous with a dorsal line of two colours. *Fn.* 1202.

Lives on stones and in fields.

DESCR. The size and form of the water mite,[1355] but the way it runs is strange. The abdominal dorsal longitudinal line dilated at both ends; in some anteriorly whitish, in others red; often anteriorly whitish, posteriorly red; the rest of body is cloudy black, legs red.

1985. ACARUS *longirostris*[1356] [*Bdella longicornis* (Linnaeus, 1758). Fam. Bdellidae], red; antennae longer than rostrum. *Fn.* 1205.

Lives on cliffs; seldom on heads of people, where it is most irritating.

DESCR. This species is easily distinguished from all the others. Antennae longer than rostrum. In the others, the antennae are hardly obvious. When counting these antennae I do not include the eight ordinary legs. Thus I do not consider the primary legs to be antennae. Rostrum, antennae, legs, and body are rather pale.

1986. ACARUS *littoralis* [*Neomolgus littoralis* (Linnaeus, 1745). Fam. Bdellidae], dusky brown-red; legs, blood-coloured. *Fn.* 1206.

It. Oel. 96. Acarus.

Occurs on cliffs at the seashores of Öland.

1987. ACARUS *fungorum* [*Humerobates rostrolamellatus* Grandjean, 1936. Fam. Humerobatidae], dusky red-brownish; abdomen subglobose, glabrous. *Fn.* 1207.

Lives in clusters at the roots of fungi; moves about slowly.

DESCR. The size of a nit. Entirely rusty brown or dull red-brownish, whence notably glabrous, without lateral maculae.

1988. ACARUS *scaber* [*Nomen dubium*], ash-grey, depressed; sides scabrous. *Fn.* 1197.

Lives on the ground early in spring; abundant.

DESCR. It is a tiny creature. Body depressed, dark ash-grey. Abdominal sides scabrous on the back with elevated spots; anus depressed, bidentate; if placed on its back, it stretches forth its legs on all sides.

[1353] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

[1354] Linnaeus only refers to *Apis*, see nos. 1684–1719.

[1355] See no. 1978.

[1356] Linnaeus here wrote the species epithet *rupestris*, obviously a duplication from no. 1984 to no. 1985. He then erroneously corrected the name, see *Fn. Su.* (1761), *Errata* p. 560, to *longirostris* instead of *longicornis* used in *Syst. nat.* (1758) and in Ch. *A small fauna of Sweden*.

1989. ACARUS *salicinus* [*Anystis salicinus* Linnaeus, 1758. Fam. Anystidae], red, with a double dorsal anteriorly bifurcate fuscous line.
Acarus, on willow, red; dorsum fuscous. *Fn.* 1203.
Lives on willow, where it runs around very swiftly.
DESCR. In size very similar to the water mite.[1357] Double dorsal line parallel, longitudinal, fuscous, and bifurcate towards thorax.

1990. ACARUS *croceus* [*Nomen dubium*], red-yellow; thoracic sides with a red-brown spot.
Acarus, on willow rose galls. *Fn.* 1204.
Lives on the very small willow, which is monstrously formed like a rose, often with sawflies.[1358]
DESCR. Body barely visible to the naked eye; saffron yellow or watery red-yellow. Thorax with a red-brown, saturated spot on each side.

1991. ACARUS *tremellae* [*Liacarus tremellae* (Linnaeus, 1761). Fam. Liacaridae], subglobose; bluish jet-black, bright.
Lives on the European hawthorn rust.

Phalangium[1359]

1992. PHALANGIUM *opilio* [*Phalangium opilio* Linnaeus, 1758. Eng. European harvestman or Harvest spider, Sw. Hornlocke; Fam. Phalangiidae, Eng. Phalangiid harvestmen, Sw. Långbenslockar], abdomen ovate, white beneath.
Acarus, all legs very long. *Fn.* 1186.
Clerck. Aran. t. 6. f. 10. 3.
Aldr. Ins. 607. t. 608. f. 4. Araneus XIV.
Mouff. Lat. 234. f. 4. Araneus longipes.
Hoffn. Ins. 2. t. 9.
Goed. Belg. 2. p. 197. f. 49.
List. Goed. 348. f. 143.
Angl. 95. t. 1. f. 35. Araneus cinereus cristatus.
Raj. Ins. 39. n. 35. Nomen Listeri.
Bradl. Natur. t. 24. f. 2.
In Sweden: Låcke.
Lives on plants and other things; not uncommon.

[1357] See no. 1978.
[1358] Linnaeus only refers to *Tenthredo*, see nos. 1533–1572.
[1359] Order Opiliones, Eng. Harvestmen, Sw. Lockespindlar.

Aranea[1360]

1993. ARANEA *diadema* [*Araneus diadematus* Clerck, 1757. Eng. Cross orb-weaver or European garden spider, Sw. Korsspindel; Fam. Araneidae, Eng. Orb-weaver spiders, Sw. Hjulspindlar], abdomen subglobose, dusky red having a cross punctate with white. *Fn.* 1214.

Clerck. Aran. t. 1. f. 4. 3.

Aldr. Ins. 607. t. 608. f. 9. Araneus IX.

Jonst. Ins. t. 18. f. 17. 19. 20.

Hoffn. Ins. t. 4. f. 16. & t. 8. f. 16. 17 & *edit. alt.* 4. t. 3. *f. penult.*

Mouff. Lat. 233. f. 1. Araneus velarius maximus.

List. Aran. 28 f. 2. Araneus rufus sive avellaneus cruciger, cui utrinque ad superiorem alvi partem, quasi singula tubercula prominent.

Raj. Ins. 18. n. 2. Nomen Listeri.

Frisch. Germ. 7. p. 7. t. 4. Araneus magnus rubroluteus.

Lives on trees, especially birch.

DESCR. Colour red-brown. It differs from all others by its size and ovate abdomen; on abdominal dorsum a white cross like a diadem of nodes.

1994. ARANEA *reticulata* [*Metellina segmentata* (Clerck, 1757). Eng. Lesser garden spider, Sw. Höstspindel; Fam. Tetragnathidae, Eng. Long-jawed orb-weavers, Sw. Käkspindlar], whitish; abdomen globose, reticulate, cloudy dusky purplish, above. *Fn.* 1221.

Inhabits gardens. O. *Celsius, Doctor of the Most Holy Theology.*

DESCR. Body verging on white. Thorax of a hyaline colour, oblong, with a blackish macula on the back and black spots on the sides. Abdomen very delicately reticulate, white, with blackish veins; on dorsum dusky cloudy, and on the sides dark purplish. Legs with black maculae.

1995. ARANEA *cucurbitina* [*Araniella cucurbitina* (Clerck, 1757). Eng. Cucumber green orb spider or Common cucumber-spider, Sw. Lövgurkspindel; Fam. Araneidae, Eng. Orb-weaver spiders, Sw. Hjulspindlar], abdomen subglobose, light yellow, with some black spots. *Fn.* 1224.

Clerck. Aran. t. 2. f. 4.

List. Aran. 34. f. 5. Araneus viridis, cauda nigris punctis utrinque ad marginem superne notata, ipso ano croceo.

Raj. Ins. 20. n. 8. Listeri nomen.

Lives on birches, apples, and pears; abundant in the evening. The mother rests close to the loose net, in which the eggs are enclosed, and she cannot easily be driven away.

[1360] Order Araneae, Eng. Spiders, Sw. Spindlar.

DESCR. Thorax and legs pale, with a black line on each side of the thorax. Leg segments spinose, all blackish at tips. Abdomen ovate, green; on each side four spots at anus and on abdominal disc; at its base 3 pairs of blackish punctations. Anus often red-yellow.

1996. ARANEA *calycina* [*Misumena vatia* (Clerck, 1757). Eng. Goldenrod crab spider or Flower spider, Sw. Blomkrabbspindel; Fam. Thomisidae, Eng. Crab spiders, Sw. Krabbspindlar], abdomen globose, pale whitish yellow. *Fn.* 1228.

Act. Ups. 1736. p. 38. n. 6. Aranea globosa pallida flores inhabitans.

Occurs rather rarely in the Academical Garden of Uppsala,[1361] where it hides itself inside the calyces of plants, especially those having rough leaves, when the corolla has fallen off. Here it conceals itself. When catching flies these spiders get food without a net by inserting their proboscides[1362] or legs towards the calyx.

DESCR. Middle-sized. Abdomen whitish, hardly clearly whitish yellow; punctations above: 1 at base, then 2 small ones, finally 2 medially. Thorax with a greenish line on the sides. Legs long, stretched out on the sides.

1997. ARANEA *bipunctata* [*Steatoda bipunctata* (Linnaeus, 1758). Eng. Rabbit hutch spider or Common false-widow, Sw. Fettspindel; Fam. Theridiidae, Eng. Cobweb spiders or Comb-footed spiders, Sw. Klotspindlar], abdomen globose, jet-black, with two punctations. *Fn.* 1232.

Act. Ups. 1736. p. 38. Aranea atra, abdomine superne duobus punctis excavato.

Occurs sometimes on windows; the web is not geometrical but consists of various scattered threads.

DESCR. Entirely jet-black. Legs brick-red. Abdomen globose, glabrous, shining, with two uncoloured spots, distinguished in that they are impressed medially on the back; if one pays close attention, there are another two, but smaller, punctations, placed slightly anteriorly. From head along thorax and abdomen, an entirely sordid brick-red line runs between the pairs of punctations all the way to anus.

1998. ARANEA *arundinacea* [*Dictyna arundinacea* (Linnaeus, 1758). Eng. Common mesh-weaver, Sw. Ljungkardarspindel; Fam. Dictynidae, Eng. Mesh web spiders, Sw. Kardarspindlar], abdomen subglobose, white, with watery fuscous maculae. *Fn.* 1243.

Lives inside the tuft of reeds.

DESCR. It falls among the rather small species of its genus. Abdomen whitish with maculae almost as those of the barn funnel weaver,[1363] but more watery and more distinct. Thorax dark bluish grey or grey. Head grey-white above.

[1361] See the com. to no. 484.

[1362] Linnaeus writes proboscides although spiders have no proboscis but a pair of chelicerae.

[1363] See no. 2000.

1999. ARANEA *angulata* [*Araneus angulatus* Clerck, 1757. Eng. Angular orb-weaver, Sw. Knölspindel; Fam. Araneidae, Eng. Orb-weavers, Sw. Hjulspindlar], abdomen anteriorly ovate with angulate, pointed sides.

Aranea, abdomen anteriorly acuminate on the sides. *It. Gotl.* 216. *Fn.* 1213. *Clerck. Aran.* t. 1. f.

Lives on trees, especially in Gotland.

DESCR. Very large, in that it is often as large as the last segment of the thumb. Differs from all the others in the abdominal form, which is bicornate-like anteriorly with widely spaced projections; differs also in the abdominal colour, which is maculated with white, deep yellow, and jet-black. Legs variegated with white and black; no redness on the whole body.

2000. ARANEA *domestica* [*Tegenaria domestica* (Clerck, 1757). Eng. Barn funnel weaver, Common European house spider, Domestic house spider or Lesser house spider, Sw. Mindre husspindel; Fam. Agelenidae, Eng. Funnel weavers, Sw. Trattspindlar], abdomen ovate, fuscous, with five almost contiguous black spots, anterior ones larger.

Aranea, fuscous; dorsum with five longitudinally almost contiguous black spots, anterior ones longer. *Fn.* 1215. *Clerck. Aran.* t. 2. f. 9.

List. Aran. 59. n. 17. Araneus subflavus hirsutus, praelongis pedibus domesticus.

Raj. Ins. 27. n. 17. Listeri nomen.

Act. Ups. 1736. p. 38. n. 7. Aranea fusca: maculis quinque nigris dorsalibus longitudinalibus contiguis.

In Sweden: Foenster-Spindel, Dwaerg. In Småland: Låche.

Occurs on our windows; very common.

DESCR. Head and thorax pellucid. Abdomen pale with oblong, transverse, black spots, arranged longitudinally, five on each side, almost contiguous, anterior ones broader, gradually narrower towards posterior parts.

2001. ARANEA *lineata* [*Stemonyphantes lineatus* (Linnaeus, 1758). Eng. Horse-head spider, Sw. Randmattvävare; Fam. Linyphiidae, Eng. Money spiders or Sheet-web spiders, Sw. Täckvävarspindlar], abdomen ovate, whitish, with three longitudinal lines of blackish spots. *Fn.* 1220.[1364]

Inhabits groves.

DESCR. Legs dark bluish grey, with black rings. Thorax dark bluish grey, with a longitudinal black line on the sides. The abdomen's three longitudinal lines are made up of blackish spots.

[1364] See Ch. *A small fauna of Sweden* and *Fn. Su.* (1761), *Errata*, p. 560.

2002. ARANEA *riparia* [*Agelena labyrinthica* (Clerck, 1757). Eng. Labyrinth spider, Sw. Labyrintspindel; Fam. Agelenidae, Eng. Funnel weavers, Sw. Trattspindlar],[1365] abdomen ovate, bronze black, with a weakly deep yellow, bicornate anus. *It. Oel.* 125.* *Fn.* 1222.

Lives on the coarse gravel of riverbanks and shores extending its webs horizontally.

2003. ARANEA *labyrinthica* [*Agelena labyrinthica* (Clerck, 1757). Eng. Labyrinth spider, Sw. Labyrintspindel; Fam. Agelenidae, Eng. Funnel weavers, Sw. Trattspindlar],[1366] abdomen fuscous, ovate, with a whitish, pinnate line; cauda bifurcate. *It. Gotl.* 251. *Fn.* 1223.

Clerck. Aran. t. 2. f. 8.

List. Aran. 60. n. 18. Araneus cinereus maximus, ani appendicibus insigniter prominentibus.

Raj. Ins. 27. n. 18. Listeri nomen.

Inhabits grassy meadows of Öland and Gotland, where it stretches a white, broad, horizontal web over the grasses; at margin there is a cylindrical sac weaved together of rather thick threads, in the bottom of which the spider hides safely from the birds, less exposed to rays and leaves; as soon as somebody touches the net, it immediately leaves its cave searching for prey.

DESCR. Thorax grey with three longitudinal pale lines. Abdomen fuscous, shining, with a dorsal, longitudinal, very thin, whitish line, and on each side sending out opposed striae mimicking a feather. Anus or cauda with a double fork or sharp points, upper shorter than lower; beneath abdomen three longitudinal, pale fasciae.

2004. ARANEA *redimita* [*Enoplognatha ovata* (Clerck, 1757). Eng. Common candy-striped spider, Sw. Äggspindel; Fam. Theridiidae, Eng. Cobweb spiders or Comb-footed spiders, Sw. Klotspindlar], abdomen oblong-ovate, light yellow, with a dorsal, oval, red ring. *Fn.* 1227.

Clerck. Aran. t. 3. f. 9.

List. Aran. 51. n. 12. Araneus albicans, corona coccinea in alvo ovali.

Raj. Ins. 24. n. 12. Listeri nomen.

Frisch. Germ. 10. p. 6. t. 4. Araneus hortensis albus serto dorsali cinnabarino rubro.

Inhabits gardens; protracts its webs like the barn funnel weaver.[1367]

DESCR. The size of a fly. Legs fairly long, white, diaphanous, equipped with anterior black knees. Thorax of a watery appearance. Abdomen sulphur-coloured; on the back an annular, ovate, blood-red macula, within which there is an oblong fuscous, longitudinal line.

[1365] See no. 2003.

[1366] See no. 2002.

[1367] See no. 2000.

2005. ARANEA *corollata* [*Steatoda albomaculata* (De Geer, 1778). Sw. Fläckvaxspindel; Fam. Theridiidae, Eng. Cobweb spiders, Comb-footed spiders or False widow spiders, Sw. Klotspindlar], abdomen ovate, black, with a dorsal oval, white ring. *It. Oel.* 126. *Fn.* 1229.

Occurs in Öland.

DESCR. Entirely black. Abdomen ovate, with a white oval, bifurcate line enclosing the oval space on the abdominal back; inner margin decorated with various small teeth.

2006. ARANEA *fumigata* [*Pardosa amentata* (Clerck, 1757). Eng. Spotted wolf spider, Sw. Prickvargspindel; Fam. Lycosidae, Eng. Wolf spiders, Sw. Vargspindlar],[1368] abdomen ovate, fuscous, with two white spots at base. *Fn.* 1231.

Clerck. Aran. t. 5. f. 6.

Lives in – – –[1369]

DESCR. Middle-sized spider. Legs long. Abdomen oblong. On dorsum, at abdominal base, two ovate, white spots that are dehiscent[1370] rather far from each other at tips.

2007. ARANEA *montana* [*Linyphia triangularis* (Clerck, 1757). Eng. Common hammock-weaver, Sw. Ängsbaldakinspindel; Fam. Linyphiidae, Eng. Money spiders or Sheet-web spiders, Sw. Täckvävarspindlar], abdomen ovate, white, with ash-grey maculae.

Aranea, abdomen variegated with whitish ash-grey. *Fn.* 1242.

Lives on trees.

DESCR. Abdomen ovate, cloudy ash-grey and white, laterally snow-white. Whole abdomen is entirely ash-grey beneath. Thorax and legs pale. Forelegs long, which it stretches straight out when resting.

2008. ARANEA *notata* [*Phylloneta sisyphia* (Clerck, 1757). Eng. Mothercare spider or Mothercare comb-foot, Sw. Tältklotspindel; Fam. Theridiidae, Eng. Cobweb spiders or Comb-footed spiders, Sw. Klotspindlar], abdomen ovate, fuscous, with transverse, arcuate, white lines.

Lives on plants.

DESCR. Abdomen subglobose; size as that of a vetch seed; fuscous above; a white macula roundish at base; then oval, then linear, and finally linear; on each side four white, recurved lines. Body and legs pale.

[1368] See no. 2021.

[1369] Unfinished sentence.

[1370] See the com. to no. 554.

2009. ARANEA *rufipes* [*Gongylidium rufipes* (Linnaeus, 1758). Eng. Orange-legged spider, Sw. Morotsdvärgspindel; Fam. Linyphiidae, Eng. Money spiders or Sheet-web spiders, Sw. Täckvävarspindlar], thorax black; abdomen fuscous; legs red. *Fn.* 1230.

Lives on nettles.

DESCR. Middle-sized. It escapes me as to whether it changes colours when it grows larger.

2010. ARANEA *nocturna* [*Callilepis nocturna* (Linnaeus, 1758). Eng. Moon spider, Sw. Guldspindel; Fam. Gnaphosidae, Eng. Ground spiders, Sw. Plattbuksspindlar], abdomen black with two white spots; base with a white crescent. *Fn.* 1235.

Act. Ups. 1736. p. 38. n. 11. Aranea capite nigro, abdomine albo maculato, cauda prominula nigricante.

Inhabits groves. Agile at night, tranquil at daytime.

DESCR. Of average size. Whole body and legs black, just as in the middle of dorsum. Two abdominal, tiny, white, hardly visible spots, a single one on each side; a thin, white line anteriorly surrounding the abdominal anterior gibbous part like a crescent. Anus prominent, compressed.

2011. ARANEA *extensa* [*Tetragnatha extensa* (Linnaeus, 1758). Eng. Common stretch-spider, Sw. Mässingssträckspindel; Fam. Tetragnathidae, Eng. Long-jawed orb-weavers, Sw. Käkspindlar], abdomen long, silvery greenish; legs extended longitudinally. *Fn.* 1216.

List. Aran. 30. f. 3. Araneus ex viridi inauratus, alvo longiuscula praetenui.

Raj. Ins. 19. n. 2. Nomen Listeri.

Inhabits marshy groves; rests longitudinally and tightly close to the branches, with four legs stretched straight out and forwards and equally many extended backwards.

DESCR. Legs dark bluish grey. Abdomen beneath with a longitudinal, jet-black line; on each side light yellow, outwardly grey, but on the back with black veins.

2012. ARANEA *fimbriata* [*Dolomedes fimbriatus* (Clerck, 1757). Eng. Raft spider, Sw. Kärrspindel; Fam. Pisauridae, Eng. Nursery web spiders, Sw. Vårdnätsspindlar],[1371] abdomen oblong, black, with a lateral, longitudinal, white line from both ends; legs fuscous. *Fn.* 1226.

Clerck. Aran. t. 5. f. 9.

Lives on water bodies; runs over the water surface.

DESCR. It is fairly large. Legs palish grey or pale fuscous. Thorax and abdomen black, on each side a broad, white line, which merges at cauda. Anus bifurcate. Palps apically globose and very large; hence it is a male without doubt. On abdomen, above the lateral white line, a longitudinal row of tiny, white spots on each side.

[1371] See no. 2022.

2013. ARANEA *sexpunctata* [*Nuctenea umbratica* (Clerck, 1757). Eng. Walnut orb-weaver, Sw. Större skuggspindel; Fam. Araneidae, Eng. Orb-weavers, Sw. Hjul-spindlar], abdomen oblong; three pairs of punctations. *Fn.* 1233.

Lives in forests under pine bark pieces.

DESCR. It should be counted among the larger species. Thorax ash-grey. Abdomen ovate-oblong, rather smoothly rounded, with greyish blue hairs, others with rather rare black hairs. On the abdominal back, three pairs of punctations can be observed.

2014. ARANEA *quadripunctata* [*Scotophaeus quadripunctatus* (Linnaeus, 1758). Sw. Golvmusspindel; Fam. Gnaphosidae, Eng. Ground spiders, Sw. Plattbuks-spindlar], abdomen oblong, black, with four punctations.

Aranea, oblong, fuscous; abdomen black, with a spinose tip; back with four punctations. *Fn.* 1234.

It. Oel. 34. Araneus oblongus fuscus, abdomine nigro apice spinoso: tergo punctis quatuor depressis notato.

Occurs on windows.

DESCR. Thorax fuscous. Abdomen black with ash-grey hairs. Legs dusky rusty brown. Anus with 5 or 6 awl-shaped, truncated, small appendages.

2015. ARANEA *holosericea* [*Clubiona pallidula* (Clerck, 1757). Sw. Grensäckspindel; Fam. Clubionidae, Eng. Sac spiders, Sw. Säckspindlar], abdomen, ovate-oblong, entirely silky; base with two light yellow spots beneath.

Aranea, dark bluish grey; abdomen jet-black, entirely silky; base with two light yellow spots. *Fn.* 1241.

List. Aran. 71. t. 23. Araneus plerumque lividus, non raro tamen subflavus sine ulla pictura.

Lives in rubble, on plants and trees, where it rolls the leaves together and hides itself and lays eggs.

DESCR. Whole body, head, legs, and thorax dusky dark bluish grey, hirsute; legs also scattered with hair; oral forceps robust. Abdomen ovate-oblong, jet-black, entirely silky or covered with an imperceptable hirsuteness; tip with two small truncated appendages; beneath abdomen, near base, two light yellow tubercles. Thus far very similar to the water spider,[1372] but only half as large and terrestrial, and the small forfex of the mouth is much smaller.

2016. ARANEA *senoculata* [*Segestria senoculata* (Linnaeus, 1758). Eng. Snake-back spider spider or Snake's-back tube-weaver, Sw. Huggormsspindel; Fam. Segestriidae, Eng. Tube-dwelling spiders, Sw. Sexögonspindlar], only six eyes.

List. Aran. 74. t. 24.

Occurs ubiquitously; rather rare.

[1372] See no. 2020.

2017. ARANEA *scenica* [*Salticus scenicus* (Clerck, 1757). Eng. Zebra spider or Common zebra spider, Sw. Murzebraspindel; Fam. Salticidae, Eng. Jumping spiders, Sw. Hoppspindlar], jumping, black, with transverse, semi-circular, white lines. *Fn.* 1237.

Clerck. Aran. t. 5. f. 13.

List. Aran. 87. t. 31. Araneus cinereus, alvo circiter senis fasciis transversis in angulos acutos, in medio erectis argenteis & nigris alternatim dispositis insignibus.

Raj. Ins. 37. n. 31. Listeri nomen.

Bradl. Natur. t. 24. f. 5.

Lives on walls of houses and windows; very common outside houses.

2018. ARANEA *truncorum* [*Nomen dubium*], jumping, black; dorsum with white spots. *Fn.* 1236.

Act. Ups. 1736. p. 38. n. 13. Araneus saliens niger punctis albis notatis.

Lives on walls of houses and tree trunks, ubiquitously dragging a thread behind itself.

2019. ARANEA *rupestris* [*Evarcha falcata* (Clerck, 1757). Eng. Multi-coloured jumper, Sw. Brokhoppspindel; Fam. Salticidae, Eng. Jumping spiders, Sw. Hoppspindlar], jumping; abdomen with black macula and red margin, medially white. *Fn.* 1238.

Lives on walls of houses and wood.

DESCR. Dorsal macula oval, black, with a red margin, and in the centre or middle white.

2020. ARANEA *aquatica* [*Argyroneta aquatica* (Clerck, 1757). Eng. Diving bell spider or Water spider, Sw. Vattenspindel; Fam. Argyronetidae, Sw. Vattenspindlar], dark bluish grey; abdomen ovate, with a transverse line and two punctations. *Fn.* 1240.

Clerck. Aran. t. 6. f. 8.

Lives in water, indeed not above the water surface, but in and under the water.

DESCR. It falls among the largest species of its genus, entirely dark bluish grey or of a dusky pale colour. Abdomen ovate-oblong, ash-grey; anus blunt or truncated, with two small appendages. Abdomen gibbous on the back, marked with an excavated, transverse line at base, and beneath this line the abdomen has two punctations. Legs long; tibiae as if geniculate at base. The oral forceps are the largest among all our spiders, and they are black, hard, gaping, often biting, yet grabbing objects: in short, owing to its forceps, it resembles entirely a tarantula.[1373] And to mention something else, it is most certainly venomous, because of its colour, structure, form of mouth, etc.

[1373] Nowadays the common name tarantula is used mostly for bird spiders, fam. Theraphosidae, but in earlier days – and still – also used for wolf spiders, fam. Lycosidae (*Lycos* in Greek means "wolf"). In fact, the first naming *Aranea tarantula* Linnaeus, 1758, was for a wolf spider, nowadays *Lycosa tarantula*. In the Italian province of Taranto (taking its name from Tarantas), Apulia, the bite of a locally common type of wolf spider, named "tarantula" after the region, was popularly believed to be highly venomous and led

2021. ARANEA *saccata* [*Pardosa amentata* (Clerck, 1757). Eng. Spotted wolf spider, Sw. Prickvargspindel; Fam. Lycosidae, Eng. Wolf spiders, Sw. Vargspindlar],[1374] abdomen ovate, dusky rusty brown.
List. Aran. 82. f. 28.
Frisch. Ins. 8. t. 2.
Occurs ubiquitously on the ground carrying around an egg sac.

2022. ARANEA *virescens* [*Dolomedes fimbriatus* (Clerck, 1757). Eng. Raft spider, Sw. Kärrspindel; Fam. Pisauridae, Eng. Nursery web spiders, Sw. Vårdnätsspindlar],[1375] abdomen oblong, greenish light yellow with lateral, white lines.
Aranea, greenish whitish yellow, with a white line on each side. *Fn.* 1225.
Jonst. Ins. t. 18. f. 42. Araneus mouff. ultimus.
Frisch. Germ. 12. t. 3. f. 13.
Act. Ups. 1736. p. 38. n. 8. Aranea flavo-viridis, lateribus linea alba cinctis.
Inhabits gardens.

2023. ARANEA *palustris* [*Pardosa palustris* (Linnaeus, 1758). Eng. Marsh wolf spider, Sw. Vitbrämad vargspindel; Fam. Lycosidae, Eng. Wolf spiders, Sw. Vargspindlar],[1376] abdomen oblong, cloudy, with lateral, white lines.
Aranea, black; thorax with a triple longitudinal, white line; abdomen cloudy. *Fn.* 1219.
Frisch. Germ. 8. p. 3. t. 2. Araneus terrestris sacco ovifero.
Act. Ups. 1736. p. 38. n. 9. Aranea nigra, pectore abdomineque linea alba cinctis.
Inhabits dried up marshes; abundant around us.
OBS. Regarding the globiferous wolf spiders,[1377] neither *Frisch* in the place cited nor *Lister*, p. 77, n. 25, 26, 27, 28, remember having seen any species in which the thorax is marked on each side with a longitudinal, white line, or a third longitudinal, white thoracic line in the middle of dorsum; hence I am in doubt about synonyms. Thorax is black in some. Abdomen black with notably black cloudlike maculae.

2024. ARANEA *viatica* [*Xysticus cristatus* (Clerck, 1757). Eng. Common crab spider, Sw. Fältkrabbspindel; Fam. Thomisidae, Crab spiders, Sw. Krabbspindlar], abdomen roundish, plain, blunt; the four posterior legs very short. *Fn.* 1218.
Clerck. Aran. t. 6. f. 5.

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to a hysterical condition known as tarantism. This type of dance became known as the *tarantella*.

[1374] See no. 2006.

[1375] See no. 2012.

[1376] The name *Aranea palustris* occurs both in *Syst. nat.* (1758) and in *Fn. Su.* (1761). However, *Aranea palustris* of *Syst. nat.* is *Dolomedes fimbriatus* (Clerck, 1757), and *Aranea palustris* of *Fn. Su.* is *Pardosa palustris* (Linnaeus, 1758). The similarity between the two species probably misled Linnaeus.

[1377] Lat. *Araneae lupis.*

Frisch. Germ. 7. p. 10. t. 5. Araneus hortensis, pedibus quatuor longis anticis, abdomine plano.

List. Aran. 83. f. 29. Araneus subfuscus, minutissimis oculis e viola purpurascentibus tardipes & gressu & figura cancro marino non adeo dissimilis.

Raj. Ins. p. 35. n. 29. Nomen Listeri.

Lives on tree trunks and wood, where it broods its own eggs.

2025. ARANEA *levipes* [*Philodromus margaritatus* (Clerck, 1757). Sw. Brokig barksnabblöpare; Fam. Philodromidae, Running crab spiders, Sw. Snabblöparspindlar], abdomen rhomboid, depressed; legs transversely extended, variegated. *Fn.* 1217.

List. Aran. 85. f. 30. Araneus parvus subrufus inauratus, ipsa alvi spice infuscata, levipes.

Frisch. Germ. 10. p. 16. t. 14. Araneus truncorum albo nigroque varius.

Lives on walls of houses, tree trunks, and in hedges.

DESCR. Ash-grey, middle-sized. Abdomen rhomboid or depressed, posteriorly rounded; anus slightly pointed. Legs transversely expanded, somewhat more spaced, fuscous, with white rings. It often drags a thread behind itself. Legs 2, 1, 3, 4 equalize each other in length.

Cancer[1378]

2026. CANCER *maenas* [*Carcinus maenas* (Linnaeus, 1758). Eng. European shore-crab or Green crab, Sw. Strandkrabba; Fam. Carcinidae, Sw. Grundvattenskrabbor], short-tailed; thorax smooth; five teeth on each side; hands ovate; wrists dentate; hindlegs weakly awl-shaped.

Cancer, short-tailed; claws ventricose, smooth, unicoloured. *It. W:goth.* 173.

Rumpf. Mus. t. 6. f. O.

In Sweden: Krabba.

Occurs in the Atlantic Ocean.

2027. CANCER *rostratus* [*Macropodia rostrata* (Linnaeus, 1758). Eng. Long legged spider crab, Sw. Långnosig spindelkrabba; Fam. Inachidae, Spider crabs and Decorator crabs, Sw. Spindelkrabbor], short-tailed; thorax with two erect spines; hands oblong, compressed.

Occurs in the ocean.

DESCR. Small, sordid. Thorax inversely cordate, uneven above; medially armed with two erect, stout spines, of which one is anterior and the other posterior; thorax is extended anteriorly into the rostrum. Antennae armed with setae. Hands oblong, smooth, with straight, grooved, compressed digits; base of the chela as if equipped with two indistinct and blunt spines.

[1378] Subphylum Crustacea, Eng. Crustacean, Sw. Kräftdjur. Order Decapoda, Eng. Decapods, Sw. Tiofotade kräftdjur.

2028. CANCER *pagurus* [*Cancer pagurus* Linnaeus, 1758). Eng. Edible crab or Brown crab, Sw. Krabbtaska; Fam. Cancridae, Eng. Rock crabs, Sw. Storklokrabbor], short-tailed; thorax bluntly pleated nine times on each side; hands apically jet-black.

Cancer, short-tailed; digits of hands jet-black. *Fn.* 1244. *It. W:goth.* 173.*

Bellon. Aquat. 368. Pagurus.

Aldrov. Exsang. 186. Pagurus.

Jonst. Exsang. t. 5. f. 2. Cancer marinus.

Gesn. Aquat. 155. Cancer marinus.

Merr. Pin. 192. Cancer marinus.

Charl. Exerc. 57. Cancer marinus.

Schonef. Ichth. 30. Cancer officinarum.

Rond. Pisc. 560. Cancer Maeas.

Dal. Pharm. 400. n. 24. Cancer officinarum.

Act. N. C. 1. p. 315. t. 10. f. 1. Cancer marinus.

Occurs in the Atlantic Ocean around Gothenburg.

2029. CANCER *hirtellus* [*Pilumnus hirtellus* (Linnaeus, 1761). Eng. Bristly crab, Hairy crab or Bristly xanthid crab, Sw. Tjockhårskrabba; Fam. Pilumnidae, Sw. Hårkrabbor], short-tailed; thorax with five teeth on each side; hands outwardly muricate.

Occurs in the Northern Ocean. *A. Martin.*

DESCR. Minute; thorax rounded, smooth, but with five teeth marginally on each side; anteriorly entire, very weakly denticulate. Hands smooth, but outwardly muricate and pilose. Hindlegs pointed and villous.

2030. CANCER *araneus* [*Hyas araneus* (Linnaeus, 1758). Eng. Atlantic lyre crab, Great spider crab or Toad crab, Sw. Hövre or Maskeringskrabba; Fam. Oregoniidae, Sw. Trekantskrabbor], short-tailed; thorax ovate, tuberculate, hirsute; rostrum bifid; hands ovate.

Cancer, short-tailed; thorax aculeate; hands straight, glabrous; rostrum bicornate. *Fn.* 1246. *It. Scan.* 312.

Jonst. Exsang. t. 5. f. 13. Pagurus faemina.

Occurs in the Atlantic Ocean.

OBS. Hands or chelae anteriorly straight, very slightly ventricose; digits of the same length; the other feet monodactyl.

2031. CANCER *maja* [*Lithodes maja* (Linnaeus, 1758). Eng. Norway king crab, Devil's crab or Northern stone crab, Sw. Röd trollkrabba; Fam. Lithodidae, Eng. King

crabs, Sw. Trollkrabbor], thorax aculeate; hands ventricose, spinose; hands with a brush-like hirsuteness.

C*ancer*, short-tailed; thorax aculeate; hands ventricose, smooth. *Fn.* 1245. *It. Scan.* 327.

Matth. Diosc. p. 229. Maja.

Jonst. Exsang. t. 5. f. 5. Cancer Maja.

Occurs in the Atlantic Ocean.

DESCR. Thorax cordate, muricate with spines all over, but large marginally. Rostrum awl-shaped, apically bidentate, with horizontal equal teeth. The chelae are muricate with spines and scattered with fascicles of hairs, but the actual digits smooth except at margin.

2032. CANCER *bernhardus* [*Pagurus bernhardus* (Linnaeus, 1758). Eng. Common marine hermit crab or Soldier crab, Sw. Rödvit eremitkräfta; Fam. Paguridae, Eng. Hermit crabs, Sw. Eremitkräftor], long-tailed, parasitic; chelae cordate, smooth, the left one larger.

C*ancer*, long-tailed, the soft cauda enclosed in a shell; the right chela larger. *Fn.* 1250.

Matth. Diosc. 230. Cancellus.

Rond. Pisc. 1. p. 553. Cancellus.

Bellon. Aquat. 361. Cancellus.

Gesn. Aquat. 161. Cancellus.

Aldr. Exsang. 218. Cancellus.

Jonst. Exsang. t. 7. f. 6. 7. 8. 9. 10. 11. 12. Cancellus.

Charl. Exerc. 58. Cancellus quibusdam in Bernhardus Eremita dictus.

Merr. Pin. 192. Cancer in testis degens.

Worm. Mus. 250. Cancellus quibusdam Bernhardus Eremita.

Dal. Pharm. 399. n. 22. Cancellus.

Swamm. Bibl. t. 11. f. 1. 2. Cancellus.

In Sweden: Kryp-Kong.

Occurs in the Atlantic Ocean.

OBS. It adopts various and diverse abandoned shells, which it covers with a scabrous crust; in these crusts it encloses itself, especially in order to protect its tail, although it also retracts the whole body inside the shell; hence it always carries the shell around, just as *Diogenes* did with his barrel.[1379]

[1379] See *Biogr. notes.*

2033. CANCER *gammarus* [*Homarus gammarus* (Linnaeus, 1758). Eng. European lobster or Common lobster, Sw. Europeisk hummer; Fam. Nephropidae, Eng. Lobsters, Sw. Humrar], long-tailed; thorax smooth; rostrum laterally dentate, with a double tooth on upper side of base. *Fn.* 1248. *It. W:goth.* 174.*

Matth. Diosc. 227. Astacus.
Gesn. Aquat. 91. Astacus.
Rond. Pisc. 1. p. 538. Astacus.
Aldr. Exsang. 112. Astacus verus.
Jonst. Exsang. t. 71. Astacus marinus communis.
Merr. Pin. 191. Astacus marinus.
Schonef. Ichth. 23. Astacus marinus.
Charl. Exerc. 55. Astacus marinus.
Worm. Mus. 247. Astacus marinus.
Dal. Pharm. 399. n. 20. Astacus marinus.
In Sweden: Hummer.
Occurs in the sea around Gothenburg and Bohuslän changing habitat according to the season of the year.

2034. CANCER *astacus* [*Astacus astacus* (Linnaeus, 1758). Eng. Noble crayfish or European crayfish, Sw. Flodkräfta; Fam. Astacidae, Eng. Crayfish, Sw. Kräftor], long-tailed; thorax smooth; rostrum laterally dentate, with a single tooth on each side at base.
Cancer, long-tailed; rostrum serrate above; one simple tooth at base on each side. *Fn.* 1249.
Rond. Pisc. 22. p. 210. Astacus fluviatilis.
Gesn. Aquat. 104. Astacus fluviatilis.
Aldr. Exsang. 129. Astacus fluviatilis.
Jonst. Exsang. t. 4. f. 1. Astacus fluviatilis.
Matth. Diosc. 228. Gammarus.
Bellon. Pisc. 355. Gammarus.
Worm. Mus. 248. Gammarus sive Astacus fluviatilis.
Schonef. Ichth. 24. Astacus fluviatilis.
Charl. Exerc. 56. Astacus fluviatilis.
Merr. Pin. 192. Astacus fluviatilis.
Dal. Pharm. 399. n. 21. Astacus fluviatilis.
In Sweden: Kräfweta.
Lives in lakes and rivers in Sweden; today fairly abundant. Before the days of *King Johan III* it was hardly seen in Sweden.

2035. CANCER *mantis* [*Squilla mantis* (Linnaeus, 1758). Eng. Mantis crab, Sw. Mantiskrabba; Fam. Squillidae, Eng. Squillid mantis shrimps], divided into segments, long-tailed; hands clawless, compressed, falcate, serrate-dentate. *Mus. Ad. Fr.* 1. p. 86.

Rumph. Mus. t. 3. f. 1.

Occurs in the Norwegian Ocean. *A. Martin.*

2036. CANCER *strigosus* [*Galathea strigosa* (Linnaeus, 1761). Eng. Blue striped squat lobster or Spiny squat lobster, Sw. Blåröd trollhummer; Fam. Galatheidae, Eng. Squat lobsters, Sw. Bredpannade trollhumrar], long-tailed; thorax anteriorly wrinkled and ciliate with spines; rostrum pointed with seven teeth.

Occurs in the Norwegian Sea. *A. Martin.*

DESCR. Body the length of a finger. Thorax obovate; margin of each side ciliate with eight acuminate spines extended anteriorly; numerous wrinkles anteriorly imbricate on dorsum. Rostrum extended, pointed, with three bilateral pointed spines. Chelae oblong, depressed, aculeate marginally, scabrous above, beneath almost squamose. Digits inwardly hirsute, apically red. In addition, there are three legs on each side, unguiculate, hispid, apically red; the fifth pair filiform, apically villous and unarmed. Tail with five segments, apically with five leaves with a small emarginate leaf in the middle.

2037. CANCER *squilla* [*Palaemon adspersus* Rathke, 1836. Eng. Baltic prawn, Sw. Långfingrad tångräka; Fam. Palaemonidae, Eng. Palaemonid shrimps, Sw. Tångräkor], long-tailed; thorax smooth; rostrum serrate above, tridentate beneath; hands with equal digits. *Fn.* 1252.

Matth. Diosc. p. 229. Squilla.

Worm. Mus. p. 248. Squilla.

Klein. Dub. 35. *f. ae.* Squilla fusca.

Act. Ups. 1736. p. 39. n. 5. Cancer cauda exserta, rostro superne serrato.

In Sweden: Räka.

Lives in the Baltic Sea among water horsetails.[1380]

DESCR. Rostrum lanceolate, perpendicular, pointed; eight furrows above, three serrate ones beneath. The hands, which are located at the third pair of legs, have equal digits.

2038. CANCER *crangon* [*Crangon crangon* (Linnaeus, 1758). Eng. Brown shrimp, Common shrimp, Bay shrimp or Sand shrimp, Sw. Hästräka; Fam. Crangonidae, Eng. Crangonid shrimps, Sw. Lerräkor], long-tailed; thorax smooth; rostrum most entire; thumb of hands rather long.

Act. Ups. 1736. p. 39. n. 6. Cancer cauda exserta, rostro integerrimo.

Lives in the sea; often caught with the following species.

DESCR. Rostrum most entire, without furrows or spines, very short. Thumb of hands, which is mobile, is longer than the chela, and as if fastened to the tip, yet the chela reaches the opposite,

[1380] Lat. *Equisetum lacustre.* Junior synonym of *Equisetum fluviatile* L.

shorter edge. By these chelae and its most entire rostrum it is easily distinguished from the following species, with which it is confused, and also sold as such and eaten as the very same species; in addition, slightly larger than the following species. During my earlier time in Holland I often saw that it was confused with the following species.

2039. CANCER *norvegicus* [*Nephrops norvegicus* (Linnaeus, 1758). Eng. Norway lobster or Dublin bay prawn, Sw. Havskräfta; Fam. Nephropidae, Eng. Lobsters, Sw. Humrar], long-tailed; thorax anteriorly aculeate; hands prismatic with spinose angles. *Fn.* 1247. *It. Scan.* 307.
Aldr. Exsang. 113. Astacus mediae magnitudinis prior.
Act. Ups. 1736. p. 39. n. 9. Cancer cauda exserta, chelis angulatis.
Lives abundantly in the seas adjacent to Lapland.

2040. CANCER *arctus* [*Scyllarus arctus* (Linnaeus, 1758). Eng. Small European locust lobster; Fam. Scyllaridae, Eng. Slipper lobsters, Sw. Toffelhumrar], long-tailed; thorax subaculeate, hirtous, hands clawless.
Rumph. Mus. t. 2. f. C. D.
Occurs in the Northern Ocean.

2041. CANCER *pulex* [*Gammarus pulex* (Linnaeus, 1758). Eng. Freshwater shrimp or River shrimp; Fam. Gammaridae, Eng. Gammarid amphipods or Gammarids],[1381] long-tailed; divided into segments; rostrum pointed; hands clawless; tail attenuated, with bifid spines.
Cancer, long-tailed, red-brownish; thorax distinctly segmented. *Fn.* 1253.
It. Oel. 42. 96. *It. Scan.* 125.
Raj. Ins. 44. Pulex fluviatilis.
Frisch. Germ. 7. p. 26. t. 18. Vermis aquaticus cancriformis.
It. Oel. 42. 96. Cancer Pulex fluviatilis dictus.
In Sweden: Märta.[1382] In Skåne: Sandhare.
Lives in great numbers by sea shores; very common; gnaws at nets; makes skeletons out of fish; swims on its back.
DESCR. 7 pairs of legs, of which 4 pairs are turned forwards; of these the anterior pairs are cheliferous with a mobile digit without a thumb. The 3 posterior pairs of legs are turned backwards.

[1381] Subphylum Crustacea, Eng. Crustacean, Sw. Kräftdjur. Order Amphipoda, Eng. Scuds or Sideswimmers, Sw. Märlkräftor.

[1382] Märta is in fact first used here, probably incorrect form for Märla. See *SAOB*: Märta, Etymologi.

2042. CANCER *locusta* [*Gammarus locusta* (Linnaeus, 1758). Eng. Common intertidal amphipod or Locust amphipod; Fam. Gammaridae, Eng. Gammarid amphipods or Gammarisa],[1383] long-tailed, divided into segments, with a blunt rostrum and clawless hands; tail attenuated with bifid spines.

Cancer, blue, long-tailed; thorax distinctly segmented. *It. Gotl.* 260. *Fn.* 1254.

I have seen it living in the sea near the hill Torsburgen in Gotland.

OBS. Larger than the previous species, entirely blue. Rostrum by no means prominent. Body with 14 segments. Tail triple foliate, with the middle leaf awl-shaped.

2043. CANCER *stagnalis* [*Tanymastix stagnalis* (Linnaeus, 1758). Eng. Fairy shrimp, Sw. Hällkarsräka; Fam. Branchiopodidae],[1384] long-tailed, divided into segments; hands clawless; legs outspread; tail cylindrical, bifid.

Larva, aquatic, with a scarlet, bright, umbilicate globule; tail bifid. *Fn.* 1357. t. 1.

Lives in cavities and crevices of cliffs and mountains, where the water is still; swims on its back.

DESCR. The appearance of a very small fish. The length of a thumb's width.[1385] Head depressed. Eyes small, lateral, well spaced, fuscous. Capillary antennae. Frons blunt. Beak blunt, curved as in a leafhopper,[1386] slender, somewhat blunt. Dorsum convex, weakly flesh-coloured. Tail rather smoothly rounded, distinctly segmented, almost the length of the body, with a horizontal, bifid, pointed dorsal fin. Globule the size of a mustard seed; close to the perianal area it is scarlet, shining with gold, laterally bright light yellow. Many legs (around 12) on the sides of body, arranged imbricately on each side. Swims on its back like the common backswimmer.[1387] Female is equipped with only a single globule, which might be an ovary so that the eggs are ready when the shrimp has undergone its transformation.

Monoculus[1388]

2044. MONOCULUS *foliaceus* [*Argulus foliaceus* (Linnaeus, 1758). Eng. Carp louse or Common fish louse; Fam. Argulidae, Eng. Carp lice or Fish lice, Sw. Karplöss], shell leaflike, flat.

Loesl. Act. Ups. 1750. p. 42.

Frisch. Germ. 6. t. 12.

Inhabits lagoons; kills fish.

[1383] See the com. to no. 2041.

[1384] Subphylum Crustacea, Eng. Crustacean, Sw. Kräftdjur. Order Anostraca, Eng. Fairy shrimps, Sw. Gälbladfotingar.

[1385] The long measure "a thumb's width" (Lat. *pollex transversus*) is one twelfth of a foot, i.e. one inch.

[1386] Linnaeus only refers to *Cicada*, see nos. 879–902.

[1387] See no. 903.

[1388] Subphylum Crustacea, Eng. Crustaceans, Sw. Kräftdjur.

2045. MONOCULUS *piscinus* [*Caligus curtus* O.F. Müller, 1785. Fam. Caligidae, Eng. Sea lice], somewhat flat; carapace roundish; body obcordate.

Lives on cod[1389] and brown trout[1390] in the Norwegian Sea. *A. R. Martin.*

DESCR. Similar to the carp louse.[1391] Carapace wide, roundish, convex, beneath concave. Body obcordate posteriorly, gibbous. Tail cylindrical, awl-shaped, the length of the back of the body; tip bifid. At tail two cylinders that are subarticulate, blunt, and in some individuals they are longer than the body. Six legs beneath carapace, but between carapace and body there are two longer legs.

2046. MONOCULUS *apus* [*Lepidurus apus* (Linnaeus, 1758). Sw. Spetssköldbladfoting; Fam. Triopsidae, Eng. Tadpole shrimps], shell somewhat compressed, anteriorly apically notched, posteriorly truncated; tail bisetose.

Monoculus, tail bisetose. *Fn.* 1181.

Frisch. Germ. 10. p. 1. t. 1. Apus.

Act. Angl. 40. p. 150. t. 1. f. 2. Scolopendra aquatica scutata.

Lives ubiquitously in fishponds and ditches in early spring.

DESCR. Body weakly greenish, the size of a gland. Two eyes close together on vertex. Many legs, branched. Tail with two valid setae, with a lamella in between.

2047. MONOCULUS *pulex* [*Daphnia pulex* (Linnaeus, 1758). Eng. Common water flea, Sw. Vattenloppa; Fam. Daphniidae], antennae dichotomous; tail curved. *Fn.* 1182.

Swamm. Quart. p. 66. t. 1. Pulex aquaticus arborescens.

Merr. Pin. 207. Vermes minimi rubri aquam stagnalem colore sanguineo inficientes, unde vulgus dira protendit.

Hierne Flock. 1. p. 32. 35. Abyssus Satanae.

Lives in all kinds of still water bodies.

OBS. Their aggregations in the water makes it appear as accumulations of blood so that folk believe that the water has been transformed into blood.

2048. MONOCULUS *pediculus* [*Polyphemus pediculus* (Linnaeus, 1758). Eng. Predatory giant-eyed waterflea; Fam. Polyphemidae], antennae dichotomous; tail turned backwards. *Fn.* 1183.

Lives in water bodies.

2049. MONOCULUS *quadricornis* [*Cyclops sp.* Fam. Cyclopidae], four antennae; tail straight, bifid. *Fn.* 1184.

Blank. Belg. p. 149. t. 13. f. B.

Lives in water bodies along with the previous waterfleas.

[1389] Linnaeus only refers to *Gadus*, nos. 306–315.

[1390] See no. 348.

[1391] See no. 2044.

DESCR. Two pairs of antennae. Tail slender, rather long, double, furnished with setae at tip; beneath the tail clusters of eggs on each side; hence very similar to a crab.[1392] The body is fuscous, but the egg-shaped ovaries, which are extended near the tail on each side, are deep yellow and also almost as large as the whole body.

2050. MONOCULUS *conchaceus* [*Cypris sp.* Fam. Cyprididae], antennae capillary, numerous; shell bivalvate. *Fn.* 1185.

Lives in fishponds and marshes.

DESCR. Shell larger than a cabbage seed, ovate, slightly oblong, equal on each side, anteriorly gibbous and with an apically slightly notched tip. Therefore, it is by and large a clam, but in the clams there is an aperture on the thinner side, and a hinge where it is more gibbous, and this is the opposite in this species. When this species is taken out of the water, it closes itself so that one might believe it were a seed of some plant; when it is open in water, one might have sworn that it was a clam. It moves swiftly through the water, just as the other one-eyed insects; the shell is ash-grey and filthy. When it opens the shell, it extends many equal, whitish hairs at the other extreme end of the aperture, and by moving these hairs it travels with agility through water. It does not rest until it finds either a shell or something terrestrial; then it settles down with great pleasure along with its companions, and advances with its legs over this body and attaches itself to it. When it rests, the whole body hides within the shell.

2051. MONOCULUS *lenticularis* [*Limnadia lenticularis* (Linnaeus, 1761). Eng. Eastern clam shrimp, Sw. Linsräka; Fam. Limnadiidae], shell compressed, lentiform.

Occurs in Finland.

DESCR. Shell strongly compressed, with a pointed margin, pellucid, the size of a bean.

Oniscus[1393]

2052. ONISCUS *asilus* [*Nomen dubium*], abdomen covered with two leaves; tail semi-oval. *Mus. Ad. Fr.* 1. p. 88.

Bellon. Aquat. 443. Asilus sive Oestrum.

Occurs in the ocean.

2053. ONISCUS *oestrum* [*Cymothoa oestrum* (Linnaeus, 1758). Fam. Cymothoidae], abdomen covered with six leaves; tail with an apically notched tip. *Mus. Ad. Fr.* p. 89.

Occurs in the ocean.

2054. ONISCUS *psora* [*Aega psora* (Linnaeus, 1758). Fam. Aegidae], abdomen naked beneath; tail semi-oval, pointed.

Occurs in the Norwegian Ocean. *Mr* C. *Solander.*

DESCR. The size of the preceding wood-lice. Thorax with 7 equal segments. Tail with five rather slender segments except for the last one, which is semi-oval, but pointed. Antennae ¼ of the whole

[1392] Linnaeus only refers to *Cancer*, see nos. 2026–2043.

[1393] Order Isopoda, Eng. Wood lice and kin, Sw. Gråsuggor och tånglöss.

body length. 14 legs, of which the 6 primaries are turned anteriorly with a curved digit and attached to the body with an arcuate segment. Abdomen naked. Tail covered with slender small leaves that do not defoliate. The use of its ovary externally against scabies is specific to the Norwegians. *Solander.*

2055. ONISCUS *entomon* [*Saduria entomon* (Linnaeus, 1758). Sw. Ishavsgråsugga, Skorv or Spånakäring; Fam. Chaetilidae, Sw. Ishavsgråsuggor], abdomen naked beneath; tail awl-shaped.

Oniscus, tail awl-shaped, appendiculate bilaterally. *Fn.* 1255.

Raj. Ins. 43. Asellus marinus cornubiensis alius.

Act. Ups. 1736. p. 39. n. 1. Oniscus marinus maximus.

Klein. Dub. 38. f. 1. 2. Entomon pyramidale.

In Sweden: Syrmask. In Österbotten: Grundskorfwa.

Lives in the Baltic Sea along with the herrings;[1394] abundant.

DESCR. Size as that of the last segment of a thumb, convex above, flat beneath; margins pointed on all sides. Clypeus of head is incised on each side. Three forelegs on each side, rather small, glabrous; the four posterior legs on each side rather large, ciliated. Two antennae on each side of frons. Body with seven segments besides the head and tail. Tail two thirds length of body, undivided, smoothly rounded, triangular, clothed beneath with two rods that are convex and parallel. Whole animal white except for the eyes.

2056. ONISCUS *ceti* [*Cyamus ceti* (Linnaeus, 1758). Eng. Whale louse; Fam. Cyamidae, Eng. Whale lice, Sw. Vallöss], oval, with distinct segments; legs of third and fourth pairs linear, without spines.

Martens. Spitzb. t. O f. D. Pediculus Ceti.

Lives on whales in the ocean.

DESCR. Body oval, with 7 distinct segments. Head, which constitutes the first segment, is very small. Legs 1, 2, 5, 6, and 7 with thick chelae that end in a mobile, pointed claw. But legs of the 3rd and 4th pair are filiform and lack spines; the first pair is situated beneath body. Segments of body more widely separated and distinct than in other species.

2057. ONISCUS *marinus* [*Nomen dubium*], semi-cylindrical; tail ovate-oblong, entire. *It. W.goth.* 190.*

Occurs in the ocean.

2058. ONISCUS *asellus* [*Oniscus asellus* Linnaeus, 1758. Eng. Common wood louse, Shiny woodlouse, Common sowbug or Grey garden woodlouse, Sw. Murgråsugga; Fam. Oniscidae], oval; tail blunt, bifid.

Oniscus, tail blunt, bifurcate. *Fn.* 1257.

Matth. Diosc. 257. Millepeda.

Charl. Exerc. 54. Millepes.

Raj. Ins. 41. n. 1. Asellus asininus sive vulgaris.

[1394] See no. 357.

In Sweden: Gråsuggor.
Lives in houses, on old, wet walls, and especially in the hothouses of gardens.

2059. ONISCUS *armadillo* [*Armadillidium sp.* Fam. Armadillidiidae, Eng. Pill woodlice, Sw. Klotgråsuggor], ovate, tail blunt, entire.
Oniscus, tail blunt, absolutely entire. *It. Gotl.* 298. *Fn.* 1256.
Raj. Ins. 42. Asellus lividus major.
Inhabits the meadows of Gotland.
DESCR. Entirely black; margins of segments white; a white macula on each segment beneath hind femora. Tail blunt, entire, not bifurcate. If touched, it contracts itself like an armadillo; it lies quiet for a long time so that an ignorant person would definitely take it for a small ball or pupa of an ichneumon wasp.[1395]

2060. ONISCUS *scopulorum* [*Cymothoa scopulorum* (Linnaeus, 1758). Fam. Cymothoidae], deep yellow, with fuscous streaks. *It. W:goth.* 190.
Occurs in the ocean.

2061. ONISCUS *aquaticus* [*Asellus aquaticus* (Linnaeus, 1758). Eng. Aquatic sowbug, Water hoglouse or Waterlouse, Sw. Sötvattengråsugga; Fam. Asellidae, Sw. Sötvattengråsuggor], tail rounded with bifurcate styli.
Oniscus, tail bifid; styli bifurcate. *Fn.* 1258.
Raj. Ins. 43. Asellus aquaticus gesneri.
Frisch. Germ. 10. p. 7. f. 5. Asellus aquaticus.
Lives in ditches and water bodies derived from wells.
DESCR. Consists of seven segments, except for the tail and head. Tail segment larger than the others, and also larger than the actual head, and it is flat and roundish, from which two styli protrude, each bifid. Seven legs on each side, of which the posterior are always longer than the preceding ones. The setaceous antennae have three segments.

2062. ONISCUS *bicaudatus* [*Corophium volutator* (Pallas, 1766). Eng. European mud scud; Fam. Corophiidae], semi-cylindrical; two tails the length of the body.
Lives by the shores of the Norwegian Sea. *Martin*.
DESCR. Body semi-cylindrical, fuscous, with 12 segments. 7 white legs on each side, of which the solitary posterior legs turned backwards. 2 tails, lengthened, the length of the body, with 5 segments, of which the third is larger, longer, and thicker, the first and second short, the fourth and fifth more slender. Between these tails, there are 2 other segments that are short and awl-shaped.

[1395] Linnaeus only refers to *Ichneumon*, see nos. 1578–1647.

Scolopendra[1396]

2063. SCOLOPENDRA *lagura* [*Polyxenus lagurus* (Linnaeus, 1758). Eng. Bristly millipede, Sw. Penselfoting; Fam. Polyxenidae, Eng. Bristly millipedes or Pincushion millipedes, Sw. Penseldubbelfotingar], twelve legs on each side; body oval; tail with a white brush of hairs. *Fn.* 1264.

Act. Ups. 1736. p. 39. n. 3. Oniscus minimus, cauda alba.

Occurs in Uppsala on tree roots; at the beginning of spring abundant among mosses, especially close to castle gardens.

DESCR. The size of a louse. 12 legs on each side; a brush of hairs on the back stretching out above each leg, then a transverse fascicle medially on dorsum. Tail consists of a larger brush of rather large hairs tightly held together.

2064. SCOLOPENDRA *forficata* [*Lithobius forficatus* (Linnaeus, 1758). Eng. Garden centipede, Common centipede, Brown centipede or Stone centipede, Sw. Brun stenkrypare; Fam. Lithobiidae, Eng. Stone centipedes, Sw. Stenkrypare], fifteen legs on each side. *Fn.* 1263.

Raj. Ins. 45. Ad scolopendram accedens triginta pedibus instructa.

In Sweden: Twåstiert.

Lives in the soil.

DESCR. It is red, barely the length of a finger's width.[1397] Forelegs thick and stout; last ones the longest; hence the tail is as if bifurcate. Every other segment of the body only half as long as the others.

2065. SCOLOPENDRA *electrica* [*Geophilus electricus* (Linnaeus, 1758). Eng. Electric centipede, Sw. Linnés jordkrypare; Fam. Geophilidae, Sw. Storjordkrypare], seventy legs on each side. *Fn.* 1261.

Aldr. Ins. 637. t. 636. f. 8. Scolopendra vulgaris ac vera.

Raj. Ins. 45. Scolopendrae valde exiles longae.

Frisch. Germ. 11. p. 22. t. 8. f. 1. Scolopendra plana longa.

Lives in the actual soil.

DESCR. It is red, flat, filiform, flexible like a snake. *Frisch* counts 54 legs on each side. Our specimen has 70 or at least 68 legs.

[1396] Subphylum Myriapoda, Class Chilopoda. Eng. Centipedes, Sw. Enkelfotingar. However, no. 2063 belongs to the next class Diplopoda. Eng. Millipedes, Sw. Dubbelfotingar.

[1397] The length measurement "a finger's width" (Lat. *digitus transversus*) is three quarters of an inch or one sixteenth of a foot.

Julus[1398]

2066. JULUS *terrestris* [*Julus terrestris* Linnaeus, 1758. Sw. Dolkdubbelfoting; Fam. Julidae, Sw. Kejsardubbelfotingar]. *Fn.* 1260.

Aldr. Ins. 637. t. 636. f. 4. Scolopendra terrestris minor.

Mouff. Lat. 30. Julus quartus glaber.

Jonst. Ins. t. 23. Julus glaber mouff. 1.

Raj. Ins. 46. Julus quartus glaber.

Lives in the actual soil.

DESCR. Body subcylindrical, fuscous. Dorsum marked with a double longitudinal, rusty brown line. Antennae with 5 segments, of which the last is subglobose. There is also another species that is entirely black and also smaller.

2067. JULUS *sabulosus* [*Ommatoiulus sabulosus* (Linnaeus, 1758). Eng. Striped millipede, Sw. Bandkejsarfoting; Fam. Julidae, Sw. Kejsardubbelfotingar], one hundred and twenty legs on each side. *It. Gotl.* 280. *Fn.* 1262.

Raj. Ins. 47. Julo glabro adfinis, lividis albisque circulis.

Lives under stones on the Island of Stora Karlsö.

DESCR. The length of a thumb's width;[1399] thick as 8 columbid feathers, glabrous, ash-grey, with two dorsal longitudinal lines that are rusty brown, pale; each segment of the body, near the side, longitudinally striate, rather pale; body approximately (with around) 60 segments. Antennae with 5 segments. Legs whitish. When touched, it contracts into a flat coil, but the legs face the ground.

2068. JULUS *complanatus* [*Polydesmus complanatus* (Linnaeus, 1761). Eng. Flat-backed milliped, Sw. Skogsplattfoting; Fam. Polydesmidae, Sw. Plattdubbelfotingar], 30 legs on each side; body rather flat; antennae clavate. *Mr* C. *Solander.*

Occurs in Skåne.

DESCR. Body the length of one's nail, rather flat, linear, laterally angular, pale above, turning to white beneath, with 20 segments; it is covered with small shields that are rather flat, tuberculate, marginate, subquadrate, laterally serratulate, angular, posteriorly pointed and very slightly projecting beyond the corporeal segments. First segment is the ovate, depressed head; second segment is the collar covered with an anteriorly rounded and posteriorly truncated or crescent-shaped shield; third and fourth segments are shorter than the others and almost linear. 20th segment or the triangular tail or the acuminate segment is smooth. 30 legs on each side, namely two pairs beneath each segment, but beneath the 3th, 4th, 18th or 19th segments only one pair of legs. Antennae three times longer than head, with six segments; 5th segment subglobose, rather dark; 6th segment is very small.

[1398] Subphylum Myriapoda, Class Diplopoda. Eng. Millipedes, Sw. Dubbelfotingar.

[1399] See the com. to no. 2043.

Class VI

VERMES

I. INTESTINA

Gordius[1400]

2068 [*sic!*]. GORDIUS *aquaticus* [*Gordius aquaticus* Linnaeus, 1758. Eng. Horsehair worm, Sw. Tagelmask; Fam. Gordiidae], pale, with black extreme ends. *Fn.* 1265.

It. Gotl. 282. Gordius.

Gesn. Aquat. 463. Vitulus aquaticus.

Aldr. Inspect. 720. t. 765. Seta sive Vitulus aquaticus.

Jonst. Ins. t. 25. Meerwyrm.

Merr. Pin. 207. Seta aquatica.

In Småland: Onda-Betet.

Lives in white clay and water bodies.

DESCR. Form and size as that of a horsehair, of a pale colour; head and tail black. The peasants of Småland believe that its bites cause paronychia; they even call this disease "Onda betet",[1401] by which name they also call the worm that enters the body. This worm is totally unknown to our peasants.[1402] The peasants of Småland cure paronychia with a cut by a small knife, by which the horsehair worm first has been divided into small segments. They also say that when all parts of the worm have been thrown into the water, they grow again into a perfect body.

2069. GORDIUS *argillaceus* [*Nomen dubium*], whitish yellow with concolorous extreme ends.

Lives in white clay, which it penetrates as a fish through water. Therefore, it is found anywhere where ditches are dug in muddy soil. This worm, along with the previous one, is the main origin[1403] of the springs.[1404]

DESCR. Most similar to the previous species but larger, and the mouth is not very distinct and the tail more pointed.

[1400] Phylum Nematomorpha, Eng. Horsehair worms or Gordian worms, Sw. Tagelmaskar.

[1401] I.e. Eng. "the Evil bite".

[1402] Note the comparison with the peasants of Småland; hence Linnaeus probably means the peasants of Uppland, when he writes "our peasants".

[1403] Lat. *authorcum* should be written as *author cum*.

[1404] Linnaeus believes that the water seeks an outlet through the tunnels which the worm makes in the clay bed; the worm thus becomes the origin of the springs.

Furia

2070. FURIA *infernalis* [*Nomen dubium*], *D. S. Solander, Act. Ups. Amoen. Acad.* 3. p. 322.[1405]

Occurs in Västerbotten and Österbotten, especially in the vast marshes and swamps north of Kemi; I do not know how the worm leaves the marshlands there and appears on solid land, nor in what way it enters the bodies of animals, even man himself; in an instant it kills its victim with a most terrible pain.

DESCR. I have not seen it alive; just exsiccated; similar to a tiny fibril. *Erwast*, vicar of Kemi, once sent it to me.

Ascaris[1406]

2071. ASCARIS *vermicularis* [*Enterobius vermicularis* (Linnaeus, 1758). Eng. Pinworm or Threadworm, Sw. Springmask; Fam. Oxyuridae], the length of a thumb's width. *Fn.* 1269.

Lives in swamps and in the rectum of children, often even in the very vulvae of girls suffering from chlorosis,[1407] very common in the intestines of horses; at the beginning of spring very abundant in rotten roots; hence the plants often die the following summer.

2072. ASCARIS *lumbricoides* [*Ascaris lumbricoides* Linnaeus, 1758. Eng. Giant intestinal worm, Sw. Spolmask; Fam. Ascarididae], a span-long.[1408]

Lives in the intestines of people, especially common in children. I have not seen it appear outside the intestines.

DESCR. In size similar to the common earthworm,[1409] but without the ring and the two awl-shaped extreme ends; hence it has the shape of the preceding species, but it is huge.

Lumbricus[1410]

2073. LUMBRICUS *terrestris* [*Lumbricus terrestris* Linnaeus, 1758. Eng. Common earthworm or Dew worm, Sw. Stor daggmask; Fam. Lumbricidae, Eng. Earth worms, Sw. Daggmaskar], with three rows of stings directed backwards.

Lumbricus, smooth. *Fn.* 1271.

Rhed. Quart. t. 15. f. 1.

[1405] Despite the many accounts of this purported animal by respected authorities, including Daniel Solander and Linnaeus himself, it is now accepted that no such animal exists.

[1406] Phylum Nematoda, Eng. Roundworms, Sw. Rundmaskar.

[1407] I.e. the so-called "green sickness" caused by severe iron-deficiency anemia.

[1408] See the com. to no. 285.

[1409] See no. 2073.

[1410] Phylum, Annelida, Eng. Segmented worms, Sw. Ringmaskar.

Raj. Ins. 2. Lumbricus terrestris minor.
In Sweden: Metmask.

α *Raj. Ins.* 1. Lumbricus major.
In Sweden: Daggmask.

β *Raj. Ins.* 2. Lumbricus intestinorum teres.
Merr. Pin. 206. Vermes in homine sive Lumbricus.
Lives in the soil. When their collars have approached each other, these worms copulate above the soil at night; hence when leaving the soil, they dig mounds to copulate, which are troublesome in gardens and walkways. Moles feed on these worms. Therefore, if you jump lightly on the ground, the worms often emerge from the soil for fear of the mole.

2074. LUMBRICUS *marinus* [*Arenicola marina* (Linnaeus, 1758). Eng. European lug worm, Yellowtail, Blow lugworm or Sandworm, Sw. Sandmask; Fam. Arenicolidae, Eng. Lug worms, Sw. Sandmaskar], dorsal papillae arranged in pairs, setigerous. *It. W:Goth.* 189. t. 3. f. 6. *It. Scan.* 315.
Lumbricus, with rather prominent spots. *Fn.* 1270.
Occurs abundantly in the Northern Sea. Found everywhere in subterranean tunnels that are visible beneath the sea tide.
DESCR. Body a span-long.[1411] Thick as a swan feather; in the middle anteriorly consisting of 14 or 15 segments and each segment of five smaller ones, of which the outermost is more elevated. Each of these 14 or 15 segments is equipped with a pair of tubercules on the back, and from each tubercule is an erect seta, but the four posterior segments consist only of smaller segments, similarly equipped with a pair of setae. Body, from the middle backwards, smooth and ash-grey with uneven rings or wrinkles scattered with the minutest spots. Beneath, from the middle of the body, the red-brownish entrails hang down, filled with light yellow granules; hence perhaps an ovary.

Fasciola[1412]

2075. FASCIOLA *hepatica* [*Fasciola hepatica* Linnaeus, 1758. Eng. Common liver fluke or Sheep liver fluke, Sw. Stora leverflundran; Fam. Fasciolidae], ovate. *Amoen. Acad.* 4. p. 185. 186.
Hirudo, depressed, white; bilaterally pointed. *It. Gotl.* 182. 250. *Fn.* 1274.
Limax, ovate, dark bluish grey, with a pointed margin. *Amoen. Acad.* 2. p. 86.
Reaum. Act. – –[1413] Hirudo-Limax.

[1411] See the com. to no. 285.
[1412] Phylum Platyhelminthes, Eng. Flatworms, Sw. Plattmaskar.
[1413] Incomplete sentence.

Lives under water; abundant on the upper sides of stones in rivulets, often also in fish, especially numerous in sticklebacks[1414] and not uncommon in the liver of sheep. *It. Gotl.* 182.
DESCR. To be found in *Amoen. Acad.* 2. p. 86.

2076. FASCIOLA *intestinalis* [*Ligula intestinalis* (Linnaeus, 1758). Fam. Diphyllobothriidae], linear, long. *Amoen. Acad.* 2. p. 71.
Taenia, flat and long, with continuous longitudinal furrows. *Fn.* 1268.
Lives in the intestines of fish.
DESCR. Given in *Amoen. Acad.* l. c.

2077. FASCIOLA *barbata* [*Nomen dubium*], mouth fasciculate with warts.
Lives in the intestines of the squid.[1415] *Martin*.
DESCR. Body white, oblong, the size of a cucumber seed, depressed, often consisting of 2 parts, of which the anterior one is linear having a fasciculate mouth with numerous warts, the posterior one oval.

Hirudo[1416]

2078. HIRUDO *sanguisuga* [*Haemopis sanguisuga* (Linnaeus, 1758). Eng. Horse leech, Sw. Hästigel; Fam. Hirudinidae, Sw. Käkiglar], depressed, fuscous, with a lateral light yellow margin. *Fn.* 1272.
Bergm. Act. Stockh. 1757. n. 4. f. 3. 4.
Raj. Ins. 3. Hirudo maxime in anglia vulgaris.
In Sweden: Snigel.
Lives in swampy water bodies and ditches.
DESCR. It is viviparous enjoying only a single embryo, in which the caudal cord of the tail is inserted.

2079. HIRUDO *medicinalis* [*Hirudo medicinalis* Linnaeus, 1758. Eng. European medicinal leech, Sw. Blodigel; Fam. Hirudinidae, Sw. Käkiglar], depressed, fuscous, with six dorsal, light yellow lines, intermediate ones without maculae; beneath ash-grey and maculate with black.
Bergm. Act. Stock. 1757. n. 4. f. 1. 2.
Inhabits freshwater bodies.

[1414] Linnaeus only refers to *Gasterosteus*, see nos. 336–338.
[1415] See no. 2107.
[1416] Subclass Hirudinida, Eng. Leeches, Sw. Iglar.

2080. HIRUDO *octoculata* [*Erpobdella octoculata* (Linnaeus, 1758). Eng. Eight-eyed leech, Sw. Hundigel; Fam. Erpobdellidae, Sw. Hundiglar], depressed, fuscous, with eight black spots above mouth.
Bergm. Act. Stock. 1757. n. 4. f. 5–8.
Hirudo, depressed, black; abdomen palish ash-grey.
Coccus aquaticus. Fn. 725. Egg.
In Sweden: Blod igel.
Occurs ubiquitously in water bodies.
DESCR. It is black above, but each segment marked with pale spots arranged in a transverse line.

2081. HIRUDO *stagnalis* [*Helobdella stagnalis* (Linnaeus, 1758). Eng. Biocular leech; Fam. Glossiphoniidae, Freshwater jawless leeches, Sw. Broskiglar], depressed, black; abdomen palish ash-grey.
Bergm. Act. Stock. 1757. n. 4. f. 9–11.
Inhabits freshwater bodies.

2082. HIRUDO *complanata* [*Glossiphonia complanata* (Linnaeus, 1758). Eng. Greater snail leech or Snail leech; Fam. Glossiphoniidae, Freshwater jawless leeches, Sw. Broskiglar], depressed, ovate-oblong; interior fuscous, pinnately translucent.
Bergm. Act. Stock. 1757. n. 4. f. 12. 14. Hirudo sexoculata.
Inhabits freshwater bodies.
DESCR. The size of a thumb, ovate, pale, anteriorly acuminate with two longitudinal fuscous striae that are placed close together and parallel; from these striae, another six striae which are bent transversely, fuscous, blunt, and broader, appear on each side. Head with 3 pairs of spots.

2083. HIRUDO *geometra* [*Piscicola geometra* (Linnaeus, 1761). Eng. Common fish leech or Great tailed leech, Sw. Fiskigel; Fam. Piscicolidae, Eng. Fish leeches, Sw. Fiskiglar], smoothly rounded with dilated extreme ends. *Fn.* 1275.
Frisch. Germ. 5. p. 25. t. 11. Hirudo ore caudaque ampla.
Inhabits water bodies; it is even easily found on fish; grasps with mouth and tail in equal measure.
DESCR. Filiform with orbicular, dilated extreme ends.

2084. HIRUDO *muricata* [*Pontobdella muricata* (Linnaeus, 1758). Eng. Ray leech or Skate leech, Sw. Taggvårtig spoligel; Fam. Piscicolidae, Eng. Fish leeches, Sw. Fiskiglar], smoothly rounded; body warty.
Hirudo muricata. *Mus. Ad. Fr.* 1. p. 93. t. 8. f. 3.
Rond. Aquat. 2. p. 111. Hirudo marina.
Occurs in the Northern Ocean.

2085. HIRUDO *heteroclita* [*Alboglossiphonia heteroclita* (Linnaeus, 1761). Fam. Glossiphoniidae, Freshwater jawless leeches, Sw. Broskiglar], hyaline, posteriorly deep yellow.

Occurs in the lake at Leufsta.

DESCR. Rather small, hyaline; half of posterior part is translucent green. Head with six black spots, of which the posterior are more spaced.

Myxine[1417]

2086. MYXINE *glutinosa* [*Myxine glutinosa* Linnaeus, 1758. Eng. Atlantic hagfish or Common hag, Sw. Pirål; Fam. Myxinidae, Eng. Hagfishes, Sw. Pirålsfiskar], *Mus. Ad. Fr.* 1. p. 91. t. 8. f. 4.

In Sweden: Putåhl.

Occurs in the Northern Ocean. Often found in fish caught in nets, the inner parts of which it consumes.

Teredo[1418]

2087. TEREDO *navalis* [*Teredo navalis* Linnaeus, 1758. Eng. Common shipworm or Great shipworm, Sw. Större skeppsmask; Fam. Teredinidae, Eng. Shipworms, Sw. Äkta skeppsmaskar], inside wood; shell flexuous.

Membranous, cylindrical shell with teeth and inserted in wood. *Fn.* 1329.

Sell's *Teredo navalis*.

Lives in marine ships and oars arriving from foreign shores and destroys the wood. Some years ago it was observed around us in great numbers.

[1417] Phylum Chordata: Class Myxini. Eng. Chordates: Hagfishes. Sw. Ryggsträngsdjur: Pirålsartade kraniedjur.

[1418] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

II. MOLLUSCA

Limax[1419]

2088. LIMAX *ater* [*Arion ater ater* (Linnaeus, 1758). Eng. Black arion, Black snail or Large black slug, Sw. Svart skogssnigel; Fam. Arionidae, Eng. Roundback slugs, Sw. Skogssniglar], black. *Fn.* 1276.
Aldr. Ins. Limax tertia tota nigra.
Jonst. Ins. 138. Limax.
Merr. Pin. 207. Limax.
List. Angl. 131. Limax ater.
Hist. 1. p. 102. Limax ater.
Dal. Pharm. 383. Limax ater.
In Småland: Skog-snigel.
Inhabits groves and small, shady woods; abundant after rain and abundant in moisture. It is androgynous, just as its congeners, for it is both active and passive.[1420]

2089. LIMAX *rufus* [*Arion ater ruber* (Garsault, 1764). Eng. Chocolate arion or Greater red slug, Sw. Röd skogssnigel], weakly red-brown. *Fn.* 1277.
Aldr. Ins. 702. Limax magna colore rufo.
List. Hist. 1. p. 103. Limax subrufus.
Angl. app. 6. t. 2. f. 1. Limax quartus subrufus montanus.
Dal. Pharm. 383. Limax ruber.
Inhabits shady places and where the moisture is not easily dried out, nevertheless less abundant.

2090. LIMAX *maximus* [*Limax maximus* Linnaeus, 1758. Eng. European giant garden-slug, Great grey slug or Leopard slug, Sw. Pantersnigel; Fam. Limacidae, Eng. Keelback slugs, Sw. Kölsniglar], ash-grey, maculate. *It. Oel.* 61. *Fn.* 1278.
List. Angl. 130. app. t. 2. f. 2. Limax cinereus maximus striatus & maculatus.
Anom. Hist. Nat. 386. t. 32. f. 26.
Occurs at slightly moist places in the very thick forests of Öland.
DESCR. It falls among the largest of its congeners, deeply striate and wrinkled, with rather dark maculae.

[1419] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.
[1420] Linnaeus's way of describing the male and female role in reproduction.

2091. LIMAX *agrestis* [*Deroceras agreste* (Linnaeus, 1758). Eng. Field slug or Grey field slug, Sw. Ängssnigel; Fam. Agrolimacidae, Sw. Fältsniglar], ash-grey, without maculae. *Fn.* 1279.
List. Angl. 130. Limax cinereus parvus immaculatus pratensis.
Blank. Belg. 151. t. 13. f. X.
In Sweden: Mask på Säden.
Inhabits gardens, often among vegetables, and usually visible on the leaves of cabbage. Common nuisance in rye fields; consumes the small delicate leaves at night, when the rye is still growing.
DESCR. Size of a bean seed. Body wrinkled, ash-grey, barely maculate.

2092. LIMAX *flavus* [*Limacus flavus* (Linnaeus, 1758). Eng. Cellar slug, Yellow slug or Tawny garden slug, Sw. Gul källarsnigel; Fam. Limacidae, Eng. Keelback slugs, Sw. Kölsniglar], light yellow, maculate. *Fn.* 1280.
List. Exercit. Anat. p. 1. t. 1. Limax succini colore, albidis maculis insignitus.
Lives in shady places among plants.

2093. LIMAX *papillosus* [*Aeolidia papillosa* (Linnaeus, 1761). Eng. Common grey sea slug, Maned nudibranch or Papillose eolis, Sw. Större snigelkott; Fam. Aeolidiidae, Sw. Släthornsnudingar], ovate, covered with tubercules.
Occurs in the Norwegian Sea. *Martin.*
DESCR. Body white, the size of a rice seed, entirely covered above with acuminate, soft papillae, beneath flat. Anteriorly four larger tentacles.

2094. LIMAX *bilamellatus* [*Nomen dubium*], ovate, covered with a parallel lamella.
Lives in the liver of the righteye flounder[1421] of the Norwegian Sea. *Martin.*
DESCR. Body white, the size of a rice seed, oval, consisting of two thin, horizontal lamellae that are incumbent on each other and equal, oval, soft, white, of which the lower is the foot and the upper the dorsum. The hidden body connects these lamellae with each other, and anteriorly emits four tentacules, as do the slugs.

Nereis[1422]

2095. NEREIS *caerulea* [*Nomen dubium*], glabrous, bluish. *Amoen. Acad.* 4. p. 254. n. 38. *Nereis tentaculorum* 184. paribus. *Mus. Ad. Fr.* 1. p. 93.
Occurs in the ocean.

[1421] Linnaeus only refers to *Pleuronectes*, see nos. 325–329.

[1422] Phylum Annelida: Class Polychaeta. Eng. Annelids or Segmented worms: Lugworms, Clam worms, Bristleworms, etc. Sw. Ringmaskar: Havsborstmaskar.

2096. NEREIS *pelagica* [*Nereis pelagica* Linnaeus, 1758. Eng. Slender ragworm, Sw. Tångrovmask; Fam. Nereididae, Ragworms or Clam worms, Sw. Rovmaskar], 40 ringed segments, furrowed beneath.

Occurs in the sea where it surges against Halland.

DESCR. Body filiform, with a longitudinal furrow consisting of about 44 segments with just as many pairs of pediform tentacles and setae. Mouth with two claw-formed jaws at tip. On top of head two projecting tubercles; between these tubercles two cirri and from each side four cirri.

2097. NEREIS *mollis* [*Nomen dubium*], solitary papillae of the corporeal segments above the pediform tentacles.

Occurs in the Norwegian Sea. *Martin.*

DESCR. Appearance as that of a centipede,[1423] soft, the size of a thumb, depressed, distinctly segmented. Lateral tentacles corresponding to the legs in the centipede. Papillae blunt, pierced, on each body segment, laterally, above the tentacles. Mouth unarmed, with some tentacles formed like antennae above proboscis.

2098. NEREIS *noctiluca* [*Odontosyllis fulgurans* (Audouin & H. Milne-Edwards, 1833). Fam. Syllidae], 23 ring-formed segments.

Noctiluca marina. Amoen. Acad. 3. p. 203. t. 3.

Grisl. Monograph. Scolopendra marina lucens.

Vianelli. Monogr. Lucioletta aquae marinae.

Occurs ubiquitously in the ocean. Since the water here also seems as if set on fire, it most often shines at night towards the ships as has been observed by the Italians.

Aphrodita[1424]

2099. APHRODITA *aculeata* [*Aphrodita aculeata* Linnaeus, 1758. Eng. Sea mouse, Sw. Guldmus; Fam. Aphroditidae, Eng. Sea mice, Sw. Musmaskar], oval, hirsute, aculeate.

Aphrodita nitens. Fn. 1284. *Mus. Ad. Fr.* 1. p. 93. *Amoen. Acad.* 1. p. 326.

Barth. Act. 3. p. 88. t. 88. Vermis aureus.

Barr. Rar. 131. t. 1284. Eruca marina griseo fusca.

Dal. Harv. 394. Mus marinus.

Ruysch. Ovat. 1. p. 23. n. 49. Eruca marina, pilis lateralibus aureis caeruleis viridibus, iridis instar fulgentibus praedita, Hystrix marina dicta.

Occurs in the West Sea; rather rare.

[1423] Linnaeus only refers to *Scolopendra*, see nos. 2063–2065.

[1424] Phylum Annelida: Class Polychaeta. Eng. Annelids or Segmented worms, Lugworms, Clam worms, Bristleworms, etc. Sw. Ringmaskar: Havsborstmaskar.

Lernaea[1425]

2100. LERNAEA *cyprinacea* [*Lernaea cyprinacea* Linnaeus, 1758. Eng. Anchor worm; Fam. Lernaeidae], body inversely clavate; thorax cylindrical, bifurcate, with apically crescent-shaped brachia.

Lernea, with four tentacles, two apically crescent-shaped. *Fn.* 1282.

Lives on the crucian carp,[1426] the blood of which it drinks up.

DESCR. The length of a finger's width.[1427] Body smoothly rounded, subpellucid, having emerged from the base from a white tunic like a prepuce; this abdomen is the body, which enjoys three blunt tubercles at tip, of which one is larger; anteriorly there is an oral aperture; beside it are two soft projections, and near these an anus on each side; a soft projection that is outwardly crescent-shaped at tip; this anterior part is covered by the white tunic.

2101. LERNAEA *asellina* [*Lernentoma asellina* (Linnaeus, 1758). Fam. Chondracanthidae], body crescent-shaped; thorax cordate.

Lernea, with a doubled, smoothly rounded tail. *It. W:goth.* 171. t. 3. f. 4.

Occurs in the ocean, [1428] in the gills of the cod.[1429]

2102. LERNAEA *salmonea* [*Salmincola salmoneus* (Linnaeus, 1758). Eng. Salmon gill-maggot; Fam. Lernaeidae], body obovate; thorax obcordate, with two linear gills, placed closely together.

Act. Holmens. 1751. p. 181. t. 6. f. 1–5. Pediculus Salmonis.

Lives in the gills of salmon.[1430]

DESCR. Thorax obcordate ending at tip in a bilabiate, somewhat pointed mouth. Upper lip emarginate, lower lip bifid. Two filiform gills at thoracic base the length of the body, merging at tip, and with the prey affixed. Two ovaries, adherent to the abdominal tip, and cylindrical, granulate, the length of the whole animal.

Priapus[1431]

2103. PRIAPUS *senilis* [*Metridium senile* (Linnaeus, 1761). Eng. Brown sea anemone, Clonal plumose anemone or Frilled anemone, Sw. Havsnejlika or Sjönejlika; Fam. Metridiidae, Eng. Sea anemones, Sw. Havsanemoner], subcylindrical, wrinkled.

Occurs on oysters in the ocean.

[1425] Subphylum Crustacea: Class Copepoda. Eng. Crustaceans: Copepods. Sw. Kräftdjur: Hoppkräftor.

[1426] See no. 364.

[1427] See the com. to no. 2064.

[1428] Not occurring in Sweden.

[1429] Linnaeus only refers to *Gadus*, see nos. 306–315.

[1430] Linnaeus only refers to *Salmo*, see nos. 345–354.

[1431] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Corals and Sea anemones. Sw. Nässeldjur: Koralldjur.

DESCR. Body the size of our outermost phalanx; sordid, fuscous at the extreme end, wrinkled, apically pierced, consisting of a somewhat leathery tunic, inside of which there is a thin tunic that is soft, sanguineous, and inwardly filled with light yellow, scattered seeds.

2104. PRIAPUS *judaicus* [*Actinia judaica* (Linnaeus, 1761). Fam. Actiniidae, Eng. Sea anemones, Sw. Havsanemoner], cylindrical, smooth, truncated; interior prepuce undulate, smooth.

Planc. Conch. 43. t. 6. Culum marinum.

Occurs in the ocean.[1432] *Messrs Bierkén and Martin.*

2105. PRIAPUS *felinus* [*Urticina felina* (Linnaeus, 1761). Eng. Dahlia anemone or Feline dahlia anemone; Fam. Actiniidae, Eng. Sea anemones, Sw. Havsanemoner], cylindrical, smooth, with a muricate gland.

Lives along with the preceding species.[1433]

DESCR. Very similar to theß previous species, but with a muricate gland.

Sepia[1434]

2106. SEPIA *officinalis* [*Sepia officinalis* Linnaeus, 1758. Eng. Common cuttlefish or European common cuttlefish, Sw. Sidensepia; Fam. Sepiidae], body without a tail, marginate, with two tentacles. *Mus. Ad. Fr.* 1. p. 93.

Sepia. Fn. 1281. *Amoen. Acad.* 1. p. 325.

Matth. Diosc. 244. Sepia.

Salv. Aquat. 165. Sepia.

Ald. Exsang. 44. Sepia.

Jonst. Exsang. 7. Sepia.

Bellon. Aquat. 336. Sepia.

Rond. Aquat. 1. p. 498. Sepia.

Gesn. Aquat. 850. Sepia.

Charl. Exerc. 51. Sepia.

Merr. Pin. 191. Loligo-Sepia.

Dal. Pharm. 392. Sepia.

Occurs in the sea where it surges against Skåne, on the shores of which every year gravel is thrown up together with the cuttlefish bone.

DESCR. In *Amoen. Acad.* l. c.

[1432] Not occurring in Sweden.

[1433] Not occurring in Sweden.

[1434] Phylum Mollusca: Class Cephalopoda. Eng. Molluscs: Cephalopods. Sw. Blötdjur: Bläckfiskar.

2107. SEPIA *loligo* [*Loligo vulgaris* Lamarck, 1798. Eng. European squid, Common squid, Kalmar common squid or Inkfish, Sw. Sydkalmar; Fam. Loligoginidae, Eng. Pencil squids, Sw. Kalmarer], body subcylindrical, awl-shaped; tail divided into two parts, rhomboid.

Bellon. Aquat. 339. Loligo.
Rond. Pisc. 506. Loligo.
In Sweden: Bläckfisk.
Occurs in the ocean.

Medusa[1435]

2108. MEDUSA *capillata* [*Cyanea capillata* (Linnaeus, 1758). Eng. Lion's mane jellyfish, Giant jellyfish, Arctic red jellyfish or Hair jelly, Sw. Röd brännmanet; Fam. Cyaneidae, Eng. Cyaneid jellies], margin of disc notched sixteen times. *Fn.* 1286. *It. W:goth* 172. t. 3. f. 3.

Gesn. Aquat. 760. Pulmo marinus?
Aldr. Exsang. 577. Pulmo marinus?
Jonst. Exsang. 56. Pulmo marinus?
Bell. Aquat. 438. Pulmo marinus?
Rond. Aquat. 2. p. 121. Pulmo marinus?
Bauh. Pin. 369. Pulmo marinus?
Charl. Exerc. 68. Pulmo marinus?
Dal. Pharm. 393. Pulmo marinus?
Tabern. Hist. 1524. f. 1. Pulmo marinus?
Occurs in the Atlantic Ocean; abundant by the shores of Lapland or Finnmark; food for the bowhead.[1436]

DESCR. All illustrations are bad; hence I warn you about dubious synonyms. Head orbicular, convex above, entirely resembling jelly, friable and pellucid; a scabrous or echinate or squamose circle is described on the lower or flat part, inside of which circle eight pairs of radial arms that are extended and attached from the centre towards the periphery. Stamina or gills snow-white, in some individuals flesh-coloured, always curly. Very long pistils[1437] or a manifold mass of filaments, which are very long, all sprung forth from the centre of the lower side. Octifid, blunt corporeal edge; each lobe emarginate; hence 16 sinuses. In some there are numerous and very long pistils, in others none at all.

[1435] Phylum Cnidaria: Class Scyphozoa. Eng. Cnidarians: True jellyfish. Sw. Nässeldjur: Maneter.
[1436] See no. 49.
[1437] Linnaeus sees the jellyfish as a flower and therefore writes "pistils" almost as a metaphor.

2109. MEDUSA *aurita* [*Aurelia aurita* (Linnaeus, 1758). Eng. Common jellyfish, Moon jellyfish, Moon jelly or Saucer jelly, Sw. Öronmanet; Fam. Ulmaridae], disc marked beneath with four cavities. *Fn.* 1287. *It. West:goth.* 172. t. 3. f. 1.

It. Oel. 160. Medusa.

Commonly called "sea-nettle".

In Sweden: Manet. In Skåne: Brennwabel.

They occur ubiquitously in the sea shining towards the sun like stars in the sea; stinging when touched.

DESCR. Body pellucid resembling jelly; outwardly convex, beneath concave; margin somewhat ciliate; medially beneath, a cavity composed of four parts; each part arcuate and encircled by an opaque line consisting of more than twenty parallel spots; four sickles appear from the middle of the disc with the outer margin ciliate. On the back of the body there are many pale veins located medially.

2110. MEDUSA *cruciata* [*Laodicea undulata* (Forbes & J. Goodsir, 1853). Sw. Vågmedusa; Fam. Laodiceidae],[1438] orbicular, embellished with a white cross.

Occurs in the Atlantic Ocean.

DESCR. This is the smallest species of all, entirely jelly-like, glass-coloured; a large, white cross, extended all the way to the margins, embellishes the disc; the margin is entire and lacks all appendicles namely cavities, pistils,[1439] stamens, and gills.

Asterias[1440]

2111. ASTERIAS *rubens* [*Asterias rubens* Linnaeus, 1758. Eng. Common sea star or Common starfish, Sw. Vanlig sjöstjärna; Fam. Asteriidae, Eng. Asteriid starfish, Sw. Nätsjöstjärnor],[1441] stellate, entirely aculeate, with lanceolate, gibbous radial arms.

Asterias, each with five rather broad, scattered radial arms. *Fn.* 1285. *It. W:goth.* 172.

Plot. Ox. 85. n. 16. t. 2. f. 2.3. Asteria.

Pet. Mus. 6. n. 10. Asteria Slagburiensis.

Merr. Pin. 191. Stella marina minor.

Olear. Mus. 55. t. 28. f. 4. Stella marina.

Schonef. Ichth. 75. Stella marina plinio.

In Sweden: Sjöstierna.

In Halland: Korsfisk; in Marstrand: Korstroll.

Occurs in the sea where it surges against Skåne and Norway, and where it often consumes fish on hooks.

[1438] Phylum Cnidaria: Class Hydrozoa. Eng. Cnidarians: Hydrozoans. Sw. Nässeldjur: Hydrozoer.

[1439] See the com. to no. 2108.

[1440] Phylum Echinodermata: Classes Asteroidea & Ophiuroidea. Eng. Echinoderms: Sea stars & Brittle stars and basket stars. Sw. Tagghudingar: Sjöstjärnor & Ormstjärnor.

[1441] See no. 2112.

DESCR. A pentadactyl star, violet, red or white, and entirely covered with soft, very small hooks; papillae beneath, arranged in fourfold rows. Mouth beneath in the middle.

2112. ASTERIAS *minuta* [*Asterias rubens* Linnaeus, 1758. Eng. Common sea star or Common starfish, Sw. Vanlig sjöstjärna; Fam. Asteriidae, Sw. Nätsjöstjärnor],[1442] stellate, blunt, ciliate.

Occurs in the Norwegian Sea. *Martin.*

DESCR. In some ways similar to the common sea star,[1443] but as large as a parsnip seed and with ovate, blunt, ciliate lobes having six or seven pellucid sharp edges.

But I would hardly call it a juvenile of the preceding species or a distinct species, as long as I have not seen the juveniles of the preceding species.

2113. ASTERIAS *glacialis* [*Marthasterias glacialis* (Linnaeus, 1758). Eng. Spiny starfish, Sw. Taggsjöstjärna; Fam. Asteriidae, Sw. Nätsjöstjärnor], stellate, with heptagonal radial arms having aculeate angles.

Link. Stell. t. 7. f. 9. & t. 32. f. 52. Stella marina.

Occurs in the Norwegian Sea.

2114. ASTERIAS *ophiura* [*Ophiura ophiura* (Linnaeus, 1758). Eng. Serpent star, Sw. Brungrå fransormstjärna; Fam. Ophiuridae, Ophiurid brittlestars, Sw. Fransormstjärnor], radiate, with five radial arms; an orbicular, squamose star.

Martens. Spitzb. t. P. f. D.

Planc. Conch. 38. t. 4. f. 4.

Occurs in the Norwegian Ocean.

2115. ASTERIAS *caput medusae* [*Gorgonocephalus caputmedusae* (Linnaeus, 1758). Eng. Gorgon head starfish or Basket star, Sw. Medusahuvud; Fam. Gorgonocephalidae, Sw. Medusahuvuden], radiate, with dichotomous radial arms.

Mus. Ad. Fr. 1. p. 95. Asterias caput medusae.

Martens. Spitzb. t. P. f. E.

Seb. Mus. 3. t. 9. f. 1. 2.

Occurs in the depth of the Norwegian Ocean; abundant.

[1442] See no. 2111.

[1443] See no. 2111.

Echinus[1444]

2116. ECHINUS *esculentus* [*Echinus esculentus* Linnaeus, 1758. Eng. European edible sea urchin or Common sea urchin, Sw. Ätlig sjöborre; Fam. Echinidae, Sw. Taggsjöborrar], hemispherical-globose, with ten ambulacra and weakly warty areas.

Echinus, subglobose with a flat vertex. *Fn*. 1289.

List. Angl. 169. t. 3. f. 18. Echinus marinus, aculeorum vestigiis parum aut nihil eminentibus.

In Sweden: Borre.

Occurs in the Norwegian Sea.

2117. ECHINUS *spatagus* [*Metalia spatagus* (Linnaeus, 1758). Eng. Heart urchin; Fam. Brissidae, Eng. Heart urchins, Sw. Lyrsjöborrar], ovate, gibbous, with four depressed ambulacra.

Echinus, weakly flattened, with a rather prominent vertex. *Fn*. 1290.

List. app. 28. Echinus minor angulosus, ex utraque parte compressus.

Occurs in the Northern Sea.[1445]

2118. ECHINUS *cidaris* [*Cidaris cidaris* (Linnaeus, 1758). Eng. Long-spine slate pen sea urchin, Sw. Piggsvinssjöborre; Fam. Cidaridae, Sw. Piggsvinssjöborrar], hemispherical, depressed, with five repand, linear ambulacra and alternate bifarious areas.

Gualt. Test. t. 108. f. D. E.

Occurs in the Norwegian Ocean.[1446] *A. R. Martin.*

[1444] Phylum Echinodermata: Class Echinoidea. Eng. Echinoderms: Sea urchins. Sw. Tagghudringar: Sjöborrar.

[1445] Not occurring in Sweden.

[1446] Not occurring in Sweden.

III. TESTACEA

Chiton[1447]

2119. CHITON *punctatus* [*Chiton punctatus* Linnaeus, 1758. Fam. Chitonidae],[1448] shell with eight smooth valves; body with punctations.

Occurs in the Norwegian Ocean. *A. R. Martin.*

DESCR. The specimen that *Mr Martin* brought with him from the Norwegian Sea was small, the size of a nit. Shell smooth, flesh-coloured with eight valves, which in their turn have some small valves with transverse, arcuate striae.

2120.[1449] LEPAS *anatifera* [*Lepas anatifera* Linnaeus, 1758. Eng. Duck barnacle or Common goose barnacle; Fam. Lepadidae], shell flattened, with five smooth valves and the glabrous, intestinal part attached.

Lepas, shell flattened; base with cylindrical membrane. *Fn.* 1350.
Argenv. Nat. 364. t. 30. f. F. Concha anatifera adhaerens.
Pet. Mus. 82. n. 862. Balanus anatifera.
Bart. Cent. 6. p. 271. Concha anatifera major.
Worm. Mus. 256. Concha anatifera.
List. Hist. 23. t. 440. f. 283. Concha anatifera margine laevi.
Exerc. t. 7. f. 4. 5.
Stalpart. Obs. 2. p. 458. t. 15. Conchae falsis gravidae anseribus.
Bonan. Recr. 95. f. 2.
Sennert. Hypomn. 2. c. 8. Concha anatifera.
Sibb. Mus. 170. n. 2. Concha quinquevalvis compressa, tubulo quodam lignis aut algae marinae adhaerens; animal sui generis multis cirrhis instructum continens, falso dicta anatifera.
Scot. 2. *l.* 3. c. 12. t. 18. f. 1. Concha anatifera.
Aldr. Exsang. 543. Conchae anatiferae ex arbore dependentes.
Grew. Mus. 148. Balanus compressa.
Lob. Ic. 2. p. 250. Conchae anatiferae britannicae.
Bauh. Pin. 513. n. 1. 2. 3. Arbores anatiferae.
Bauh. Hist. 3. p. 803. Anates Conchiferae vel Anatiferae falso dictae aut Tellinae & Balani.
Hoffn. Ins. 3. t. 6. Concha anatifera vulgo Branta & Bernicla.
Chabr. Sciagr. 580. f. 3. 4. Arbores conchiferae & anatiferae dictae.

Occurs in the ocean; abundant on wood.

[1447] Except no. 2119: Phylum Arthropoda, Subphylum Crustacea, Subclass Cirripedia, Order Thoracica. Eng. Barnacles. Sw. Rankfotingar: Långhalsar och havstulpaner.

[1448] N.B. Phylum Mollusca: Class Polyplacophora. Eng. Molluscs: Chitons. Sw. Blötdjur: Ledsnäckor.

[1449] Cf. *Fn. Su.* (1761), *Errata*, p. 560. But all is correct.

2121. LEPAS *scalpellum* [*Scalpellum scalpellum* (Linnaeus, 1758). Eng. Velvet goose barnacle; Fam. Scalpellidae], shell flattened, with thirteen rather smooth valves attached to the thin, squamous part of the intestine.

Ellis. Act. Angl. 1758. vol. 2. t. 34. f. 4.

Occurs in the Norwegian Ocean, from where *A. R. Martin, Candidate of Medicine*, brought it.

OBS. The shell is not always sessile, but often attached to the thin, squamous part of the intestine; otherwise similar to the duck barnacle,[1450] but the former species has a greater number of small valves.

2122. LEPAS *balanus* [*Balanus balanus* (Linnaeus, 1758). Eng. Rough barnacle; Fam. Balanidae, Eng. Acorn barnacles, Sw. Havstulpaner], shell conical, furrowed; with acuminate opercules. *Fn.* 1349. *It. W:goth.* 170.

Argenv. Nat. 364. t. 30. f. A.

Lives attached to oysters and stones; abundant in the Atlantic Ocean.

DESCR. Differs from the following species since it is: 1. Larger. 2. The shell is laterally carved out with various uneven furrows. 3. The opercule is composed of four small valves and closes with a long, oblique point.

2123. LEPAS *balanoides* [*Semibalanus balanoides* (Linnaeus, 1761). Eng. Common rock barnacle or Acorn barnacle, Sw. Räfflad havstulpan; Fam. Balanidae, Eng. Acorn barnacles, Sw. Havstulpaner], shell conical, truncated, smooth, with obtuse-angled opercules. *Fn.* 1348.

Pet. Mus. 82. n. 802. Balanus noster parvus vulgaris.

Argenv. Nat. 364. t. 30. f. D.

List. Angl. 196. t. 2. f. 41. Balanus cinereus velut e senis laminibus striatis compositus, ipso vertice altera testa bifida rhomboide occluso.

Hist. 3. t. 444. f. 287. Balanus parvus striatus.

Leuwenh. Arcan. Epist. 82. p. 472. t. 465. f. 1. E & f. 7.

Lives attached to stones; very common in the Atlantic Ocean.

DESCR. This animal has: 1. A soft rostrum, turned inwards. 2. Four long legs on each side, distinctly segmented, pilose. 3. Three legs on each side, ventricose, like short chelae, each leg equipped with two short setae, distinctly segmented. 4. Mouth with teeth beneath, two on each side with a little superimposed lip. You will see that the illustration by *Leeuwenhoek* is fairly good.

[1450] See no. 2120.

Pholas[1451]

2124. PHOLAS *dactylus* [*Pholas dactylus* Linnaeus, 1758. Eng. Common piddock, Sw. Flerräfflad borrmussla; Fam. Pholadidae, Eng. Piddocks or Angelwings, Sw. Borrmusslor], oblong, from here reticulate-striate.
List. Angl. app. 44. t. 2. f. 3. Pholas rostratus major diepensis.
Seb. Mus. 3. t. 16. f. 6.
Occurs on the rocks in the Norwegian Sea.[1452] *A. R. Martin.*

2125. PHOLAS *crispata* [*Zirfaea crispata* (Linnaeus, 1758). Eng. Atlantic great piddoc or Oval piddoc, Sw. Nordlig borrmussla; Fam. Pholadidae, Eng. Piddocks or Angelwings, Sw. Borrmusslor], shell oval, hence rather blunt, crispate-striate with a hinge of a curved tooth.
List. Angl. t. 5. f. 36. concha altera parte dimidia striis crispatis.
Occurs in the ocean.
DESCR. The shell is open as much as possible at both extremities. Transverse furrow dividing the small valves into two parts; the other part is very wrinkled and crisp, in which the margin is turned backwards towards the hinge.

Mya[1453]

2126. MYA *truncata* [*Mya truncata* Linnaeus, 1758. Eng. Blunt gaper clam or Truncate softshell, Sw. Trubbig sandmussla; Fam. Myidae, Sw. Sandmusslor], shell ovate, posteriorly truncated; hinge tooth anteriorly extended, very blunt.
It. W:goth. 199. n. 2. t. 5. f. 3. nomine Listeri.
List. Angl. 191. t. 5. f. 36. Concha laevis, altera tantum parte clausilis.
Occurs in the ocean, also often found as a fossil.

2127. MYA *arenaria* [*Mya arenaria* Linnaeus, 1758. Eng. Soft-shelled clam, Large-neck clam, Long necked clamor or Sand gaper, Sw. Spetsig sandmussla; Fam. Myidae, Sw. Sandmusslor], shell ovate, posteriorly rounded with an anteriorly extended, rounded hinge tooth and a lateral denticle.
It. W:goth. 187. Concha subarenaceo-marina.
Occurs in the ocean where it surges against Bohuslän; lives under the sand, covered by water. It can be examined through the two openings that are exposed at the fundus.
DESCR. Shell the size of a goose egg, smooth; the hinge of the one small valve consists of a rounded lobe with a lateral denticle, the other of a cavity elevated beneath. For further information, see *It. W:goth.*

[1451] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

[1452] Not recorded from Sweden.

[1453] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

2128. MYA *lutraria* [*Lutraria lutraria* (Linnaeus, 1758). Eng. Common otter clam or Common otter shell, Sw. Avlång trågmussla; Fam. Matricidae, Sw. Trågmusslor], shell oblong-ovate; hinge tooth depressed, parallel, rotundate and with an erect, emarginate denticle.

List. Angl. 170. t. 4. f. 19. Concha longa lataque in mediis cardinibus cavitate pyriformi.

Lives at the mouths of rivers as they flow into the sea.

2129. MYA *pictorum* [*Unio pictorum* (Linnaeus, 1758). Eng. Painter's mussel, Sw. Äkta målarmussla; Fam. Unionidae, Sw. Målarmusslor], shell ovate; primary hinge tooth crenulate, lateral, longitudinal, the other one doubled.

List. Angl. app. 20. t. 1. f. 4. Musculus ex viridi pallidus omnium angustissimus.

Lives in rivers.

2130. MYA *margaritifera* [*Margaritifera margaritifera* (Linnaeus, 1758). Eng. Eastern pearlshell, Freshwater pearl mussel or Scottish pearl mussel, Sw. Flodpärlmussla; Fam. Margaritiferidae, Eng. Freshwater pearl mussels, Sw. Flodpärlmusslor], shell ovate, anteriorly contracted; primary hinge tooth conical; umbones decorticated.

Concha, shell oblong, in the middle anteriorly contracted. *Fn.* 1331.

List. app. 15. t. 1. f. 1. Musculus niger omnium crassissima & ponderosissima testa.

Gesn. Aqu. Conchae longae species.

List. app. 15. f. 1. Musculus niger omnium crassissima & ponderosissima testa, conchae longae species.

In Sweden: Pärlemussla.

Occurs in very large rivers, especially those of Lapland, where it is commonly found in deep holes.

DESCR. Shell oval-oblong, heavy, anteriorly apically notched and compressed, exteriorly rough, blackish, laterally rather narrow or upper part slightly villous. Umbones strongly decorticated; owing to the dryness it is also intrinsically fragile. Inwardly the shell is whitish with two cicatrices for the insertion of muscles. There is no lateral, conical, blunt, extended hinge tooth, but in smaller individuals a longitudinal crenulate tooth is found. Might it perhaps be another smaller species?

Solen[1454]

2131. SOLEN *siliqua* [*Ensis siliqua* (Linnaeus, 1758). Eng. Pod razor or Sword razor, Sw. Rak knivmussla; Fam. Pharidae, Eng. Razor clams, Sw. Knivmusslor], shell linear and straight, with the one hinge bidentate.

List. Angl. 192. t. 5. f. 37. Concha fusca longissima angustissima.

Occurs in the Norwegian Ocean.

[1454] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor

Tellina[1455]

2132. TELLINA *radiata* [*Tellina radiata* Linnaeus, 1758. Eng. Rising sun or Sunrise tellin; Fam. Tellinidae, Eng. Tellins, Sw. Skivmusslor], shell oblong, longitudinally very subtly and weakly striated, bright; anal suture grooved.
Occurs in the Norwegian Ocean.

2133. TELLINA *trifasciata* [*Latona trifasciata* (Linnaeus, 1758). Fam. Donacidae, Eng. Bean clams or Wedge shells, Sw. Kilmusslor], shell ovate, rather smooth, with three radiating blood-coloured fasciae and wrinkled, downy hair.
Occurs in the Norwegian Ocean.

2134. TELLINA *incarnata* [*Bosemprella incarnata* (Linnaeus, 1758). Eng. Red tellin; Fam. Tellinidae, Eng. Tellins, Sw. Skivmusslor], shell ovate, flattened and rather plain; umbones terminating almost in a point.
Concha, shell ovate; the one side angular and flat from the hinge to the outer edge. *Fn.* 1337.
List. app. 32 f. 8. Concha rugosa tellinaeformis, lineola quadam paululum eminente ab ipso cardine ad imum ambitum donata.
Lives in the sea.
DESCR. Shell small, the size of a bean, smooth, with minimal, transverse wrinkles. The shell is flat at the gaping mouth where the valves merge from the other side of the hinge.

2135. TELLINA *bimaculata* [*Heterodonax bimaculatus* (Linnaeus, 1758). Eng. False-bean or False-bean clam; Fam. Psammobiidae, Eng. Sunset clams, Sw. Solnedgångsmusslor], shell triangular, roundish, rather broad, smooth, and whitish, internally with two blood-coloured oblong maculae.
Occurs in the ocean.

2136. TELLINA *balthica* [*Macoma balthica* (Linnaeus, 1758). Eng. Baltic macoma or Baltic tellin, Sw. Östersjömussla; Fam. Tellinidae, Eng. Tellins, Sw. Skivmusslor], shell roundish, smooth, externally flesh-coloured.
Concha, shell roundish, glabrous, flesh-coloured. *Fn.* 1335.
It. Oel. 43. Concha subrotunda glabra incarnata.
Occurs in the Baltic Sea.
DESCR. Shell delicate, the size of a wild bean seed, very fragile, can hardly endure being touched, externally flesh-coloured, angular at hinges; slightly convex without any striae at all.

[1455] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

2137. TELLINA *pisiformis* [*Strigilla pisiformis* (Linnaeus, 1758). Eng. Pea strigilla; Fam. Tellinidae, Eng. Tellins, Sw. Skivmusslor], shell subglobose, smooth, internally flesh-coloured, obliquely weakly striated, having striae turned backwards at an acute angle posteriorly.

Gualt. Test. t. 7. f. D.

Occurs in the ocean.

2138. TELLINA *cornea* [*Sphaerium corneum* (Linnaeus, 1758). Eng. European fingernailclam or Horny orb mussel, Sw. Allmän klotmussla; Fam. Sphaeriidae, Eng. Fingernail clams, Sw. Ärtmusslor], shell globose, glabrous, horn-coloured with a transverse furrow.

Concha, shell subglobose, glabrous, horn-coloured, with a transverse furrow. *Fn.* 1336.

List. Angl. app. 22. f. 5. Musculus exiguus pisi magnitudine subrotundus.

Lives in marshes among water violets.

DESCR. The size of a larger pea seed, subglobose. Shell broader transversely than anteriorly at the hinges; it is strongly gibbous, smooth; one furrow or transverse stria is subpellucid, not at all white, but entirely the colour of a bovine horn, and this colour is amplified and weakly diaphanous near the combs.

Cardium[1456]

2139. CARDIUM *echinatum* [*Acanthocardia echinata* (Linnaeus, 1758). Eng. European prickly cockle or Thorny cockle, Sw. Tagghjärtmussla; Fam. Cardiidae, Eng. Cockles, Sw. Hjärtmusslor], shell subcordate; furrows grooved with a ciliate line and having many curved aculei.

Concha, shell roundish; 20 longitudinal furrows that are anteriorly aculeate on dorsum. *Fn.* 1339.

Rond. Aqu. 22. Concha echinata.

Gesn. Aqu. 131. 132.

Bonan. Test. Clas. 2. n. 90. p. 446. Concha striata echinata.

List. Angl. 188. t. 5. f. 33. Pectunculus echinatus.

Lang. Test. 60. Concha cordiformis aequilatera umbone cardinum unito, striata papillosa verrucosa aculeata vel imbricata.

Occurs in the Atlantic Ocean; abundant.

DESCR. Shell is roundish, hence with depressed valves, but thereby more rounded, strongly gibbous, grooved with 20 furrows and with interjacent elevated striae, longitudinally turned backwards, and covered with spines, especially at margin.

[1456] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

2140. CARDIUM *solidum* [*Spisula solida* (Linnaeus, 1758). Eng. Thick trough shell or Thick surf clam, Sw. Tjockskalig trågmussla; Fam. Mactridae, Eng. Trough shells or Duck clams, Sw. Trågmusslor], shell triangular, almost rounded, opaque, rather smooth; hinges with a little pear-shaped fovea.

List. Angl. 174. t. 4. f. 24.

Occurs in the Norwegian Ocean.

2141. CARDIUM *edule* [*Cerastoderma edule* (Linnaeus, 1758). Eng. Common European cockle or Edible cockle, Sw. Ätlig hjärtmussla; Fam. Cardiidae, Eng. Cockles, Sw. Hjärtmusslor], shell aged, with 26 indistinct furrows recurved, imbricate.

Concha, shell roundish; 26 longitudinal furrows and three transverse ones. *Fn.* 1340.

Aldr. Exsang. 449. Concha striata altera Rondeletii.

Pet. Mus. 86. n. 835. Pectunculus maritimus nostras edulis vulgatissimus.

List. Angl. 189. t. 5. f. 34. Pectunculus vulgaris rotundus circiter XXVI striis majusculis at planioribus notatus.

Hist. 3. n. 171. Pectunculus capite minore rotundiore & magis aequali margine.

Schonef. Ichth. 55. Pectunculus.

Dal. Pharm. 398. Pectunculus.

It. Oel. 42. Concha testa subrotunda, sulcis 26 longitudinalibus, tribus transversalibus.

Occurs in the ocean; cast up on the shores in great numbers.

DESCR. Shell roundish; it is as if enlarged with two or three deep wrinkles or furrows. Around 26 distinct, longitudinal furrows, well spaced, with wrinkled interstices. These furrows are considered to be similarly deeply engraved beneath at margin. The shell is entirely thick.

Donax[1457]

2142. DONAX *trunculus* [*Donax trunculus* Linnaeus, 1758. Eng. Truncate donax or Truncated wedge clam; Fam. Donacidae, Eng. Bean clams or Wedge shells, Sw. Kilmusslor], shell anteriorly smooth; internally violet; margins serrated like a saw.

List. Angl. 190. t. 5. f. 35. Tellina intus ex violaceo purpurascens, in ambitu serrata.

Occurs in the Norwegian Ocean.

[1457] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

Venus[1458]

2143. VENUS *gallina* [*Chamelea striatula* (da Costa, 1778). Eng. Striped venus clam or Chicken venus, Sw. Finräfflad venusmussla; Fam. Veneridae, Eng. Venerids or Venus clams, Sw. Venusmusslor], shell subcordate, radiated with transverse, blunt striae; posterior hinge tooth tiny; margin crenulate.
Occurs in the Norwegian Ocean.

2144. VENUS *mercenaria* [*Mercenaria mercenaria* (Linnaeus, 1758). Eng. American hard-shell clam, Northern quahog or Cherry stone, Sw. Hård venusmussla; Fam. Veneridae, Eng. Venerids or Venus clams, Sw. Venusmusslor], shell cordate, hard, transversely weakly striated, smooth; margin crenulate, internally violet; anus ovate.
Kalm. Canad. 2. p. 355. Clam.
List. Angl. 229. t. 8. f. 33.
Occurs copiously in the Norwegian Ocean.

2145. VENUS *exoleta* [*Dosinia exoleta* (Linnaeus, 1758). Eng. Rayed artemis or Rayed dosinia, Sw. Större rundmussla; Fam. Veneridae, Eng. Venerids or Venus clams, Sw. Venusmusslor], shell lentiform, transversely striate, pale, with indistinctly radiating fasciae; anus cordate.
Gualt. Test. t. 75. f. F. G.
Occurs in the Norwegian Ocean.

2146. VENUS *literata* [*Tapes literatus* (Linnaeus, 1758). Eng. Lettered carpet shell, Lettered carpetclam or Lettered venus; Fam. Veneridae, Eng. Venerids or Venus clams, Sw. Venusmusslor], shell ovate, anteriorly angular, with transverse, weakly undulating striae.
Gualt. Test. t. 86. f. E. F.
Occurs in the Norwegian Ocean.

Arca[1459]

2147. ARCA *barbata* [*Barbatia barbata* (Linnaeus, 1758). Eng. Bearded ark or Bearded ark shell; Fam. Arcidae, Eng. Ark shells or Arks, Sw. Raktandmusslor], shell oblong, bearded with striae; umbones curved, approximated; margin entire, closed.
Gualt Test. t. 91. f. F.
Occurs in the Norwegian Ocean.

[1458] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.
[1459] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

Ostrea[1460]

2148. OSTREA *maxima* [*Pecten maximus* (Linnaeus, 1758). Eng. Great scallop, King scallop, St James shell or Escallop, Sw. Stor kammussla; Fam. Pectinidae, Eng. Scallops, Sw. Kammusslor], shell rounded, longitudinally striated.

Concha, shell aurite, with 14 striae. *Fn.* 1343.

Pet. Mus. 86. n. 829. Pecten major nostras vulgaris.

List. Angl. 184. t. 5. f. 29. Pecten maximus circiter striis 14 admodum crassis & eminentibus & iisdem ipsis striis insignitus.

Hist. 3. t. 163. f. 1. Pecten magnus albidus circiter 12 striis multis minutisque incisuris exasperatis donatus.

Occurs in the Atlantic Ocean.

2149. OSTREA *edulis* [*Ostrea edulis* Linnaeus, 1758. Eng. Common oyster, European flat oyster or Edible oyster, Sw. Europeiskt ostron; Fam. Ostreidae, Eng. Oysters, Sw. Ostron],[1461] shell semi-orbicular, with imbricate undulating membranes; the other valve flat, absolutely entire.

Concha, shell roundish, wrinkled, weakly striated, with unequal valves and an obsolete hinge. *Fn.* 1338.

Rond. Aquat. 2. p. 37. Ostrea.

Gesn. Aqu. 645. Ostrea.

Aldr. Exsang. 482. Ostrea Rondeletii marina.

Jonst. Exsang. 44. Ostrea.

Schonef. Icht. 54. Ostrea.

Charl. Exerc. 66. Ostrea.

Merr. Pin. 193. Ostrea.

List. Angl. 176. t. 4. f. 26. Ostreum vulgare maximum intus argenteo quodam splendore albescens.

Hist. 3. p. 20. Ostrea major sulcata inaequaliter utrinque ad cardinem denticulata.

Bonan. Recr. 108. t. 70. Concha satis nota in caenis, Ostrea latinis dicta, non Ostreum.

Lang. Test. 81. Ostreum vulgare striatum.

Dal. Pharm. 397. Ostrea.

Pet. Mus. 85. n. 822. Ostrea vulgaris esculenta.

In Sweden: Ostra.

Occurs in the West Sea.

[1460] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

[1461] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

Anomia[1462]

2150. ANOMIA *craniolaris* [*Crania craniolaris* (Linnaeus, 1758). Eng. Brattingsborg penny, Sw. Brattenburgspenning; Fam. Craniidae], shell orbicular, with a rather gibbous, conical and convex small valve; base rather flat with three apertures.

Concha, shell rather flat, orbicular, resembling a human skull. *Fn*. 1347. t. 2. f. 1347.

Stobaei Diss. Epist. 1732. 4to Lundini. f. 1. 2. Nummulus Brattenburgensis.

Act. Ups. vol. 2. p. 560. t. 152. f. 4. Nummus brattenburgensis territorii willans, insulae Ivae lacu, ubi ad littora saepe rejicitur pagi Biskops-gården.

Occurs at Ivö and Balsberg in Skåne, but only found as a fossil and not extant.

OBS. *Mr Leche* found two adjacent shells: the one is *Stobaeus's* Brattingsborg penny, the other is more concave internally and turbinate, convex externally. Thus there is no longer any doubt that the genus in fig. II: α shows the upper part of the clam, previously illustrated in natural size, seen from the back; β the same upper part of the clam enlarged from the interior side; γ but from the exterior side; δ the interior shell, previously not known, from the inner side, but under ε he delineates the same from the outer side.

2151. ANOMIA *squamula* [*Heteranomia squamula* (Linnaeus, 1758). Eng. Prickly jingle or Smallest saddle oyster, Sw. Mindre sadelostron; Fam. Anomiidae, Eng. Saddle oysters or Jingle shells, Sw. Sadelostron], shell orbicular, absolutely entire, flat, with the other margin gibbous, smooth.

It. W:goth. 171. Patella.

Occurs along with seaweeds and crabs[1463] in the ocean.

2152. ANOMIA *patelliformis* [*Pododesmus patelliformis* (Linnaeus, 1761). Eng. Ribbed saddle-oyster, Sw. Ribbat sadelostron; Fam. Anomiidae, Eng. Saddle oysters or Jingle shells, Sw. Sadelostron],[1464] shell obovate, convex, subdiaphanous, striate; posterior part of vertex curved backwards, smooth.

Occurs in the Norwegian Sea. *A. R. Martin*.

DESCR. Shell very similar to a deep yellow patella so that if one of the two shells were watched, it would be impossible not to take it for a true patella.

The shell size is as that of the outermost phalanx, whitish, oval, and almost orbicular, slightly convex, striate with longitudinal striae that are convex, numerous, strikingly minute, transverse, and barely visible to the naked eye. The shell is thin, fragile, and almost diaphanous. Edge rather indistinct at the umbones towards hinge, and smooth, recurved. Lower valve flat, smooth, very slender, with a somewhat larger, obovate, aperture at hinge.

[1462] Phylum Brachiopoda and Mollusca.

[1463] Linnaeus only refers to *Cancer*, see nos. 2026–2043.

[1464] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

2153. ANOMIA *retusa* [*Terebratulina retusa* (Linnaeus, 1758). Eng. Lamp shell; Fam. Cancellothyrididae],[1465] shell obovate, striate, apically notched, with a longitudinal, hollow, and perforated umbo.
Occurs among the Dead man's fingers in the Norwegian Ocean.

2154. ANOMIA *caput serpentis* [*Terebratulina retusa* (Linnaeus, 1758). Eng. Lamp shell; Fam. Cancellothyrididae],[1466] shell obovate, striate, tomentose; the one valve perforated at the rather long umbo.
Occurs in the Norwegian Ocean.

2155. ANOMIA *terebratula* [*Terebratula terebratula* (Linnaeus, 1758). Fam. Terebratulidae],[1467] shell obovate, smooth, convex; the one valve triplicate, the other biplicate.
List. Angl. 240. t. 8. f. 46.
Occurs in the Norwegian Ocean.

Mytilus[1468]

2156. MYTILUS *edulis* [*Mytilus edulis* Linnaeus, 1758. Eng. Common mussel, Bay mussel, Blue mussel or Edible blue mussel, Sw. Blåmussla; Fam. Mytilidae, Sw. Blåmusslor], shell rather smooth, violet; valves oblique and posteriorly acuminate.
Concha, shell oblong, smooth, weakly violet. *Fn.* 1333. *It. W:goth.* 170.
Lang. Test. 24. Concha soleniformis laevis.
Gesn. Aqu. 277. Mytulus.
Rond. Aqu. 2. p. 48. Mytulus.
Aldr. Exsang. 512. Mytulus Rondeletii.
Bell. Aqu. 397. Mytulus.
Schonef. Icht. 54. Mytulus.
Merr. Pin. 193. Mytuli.
List. Hist. 3. t. 362. f. 200. Musculus subcaeruleus fere virgatus.
Angl. 182. f. 28. Musculus ex caeruleo niger.
Pet. Mus. 84. n. 820. Musculus maritimus vulgatissimus edulis.
It. Oel. 43. Concha Mytulus dicta.
Occurs abundantly in the sea; it is thrown up on the shores; eaten by the Dutch, but not by the Swedes.

[1465] Phylum Brachiopoda: Class Rhynchonellata. Eng. Brachiopods. Sw. Armfotingar. See no. 2154.
[1466] Phylum Brachiopoda: Class Rhynchonellata. Eng. Brachiopods. Sw. Armfotingar. See no. 2153.
[1467] Phylum Brachiopoda: Class Rhynchonellata. Eng. Brachiopods. Sw. Armfotingar.
[1468] Phylum Mollusca: Class Bivalvia. Eng. Molluscs: Bivalves. Sw. Blötdjur: Musslor.

2157. MYTILUS *barbatus* [*Modiolus barbatus* (Linnaeus, 1758). Eng. Bearded horse mussel or Bearded mussel; Fam. Mytilidae, Sw. Blåmusslor], shell rather smooth, rusty brown, apically barbate.

Gualt. Test. t. 91. f. H.

Occurs in the Norwegian Ocean.

DESCR. Very similar to the previous species, but red-brownish and apically barbate.

2158. MYTILUS *anatinus* [*Anodonta anatina* (Linnaeus, 1758). Eng. Duck mussel, Sw. Vanlig dammussla; Fam. Unionidae, Eng. Freshwater mussels, Sw. Målarmusslor], shell oval, slightly compressed, very fragile, with a membranous margin; umbones decorticated.

Concha, oblong, ovate, longitudinally slightly wrinkled, posteriorly compressed and somewhat prominent. *Fn.* 1332.

List. app. 9. f. 2. Musculus latus maximus, testa admodum tenui ex fusco viridescent, palustris.

In Sweden: Sjö-Musla. Musla.

Lives in lakes; abundant.

OBS. In the illustration by *Lister*, it seems to be a bit broader than our specimen.

Bulla[1469]

2159. BULLA *hypnorum* [*Aplexa hypnorum* (Linnaeus, 1758). Eng. Moss bladder snail, Sw. Större blåssnäcka; Fam. Physidae, Eng. Tadpole snails or Bladder snails, Sw. Blåssnäckor], shell ovate, pellucid, sinistral, with projecting spire and ovate-lanceolate aperture.

Cochlea, shell pellucid, light yellow, ovate, sinistral; aperture ovate-lanceolate; spire extended. *Fn.* 1303.

Lives on moist mosses.

DESCR. The length of an oat seed, but it is thicker. Shell pellucid, weakly light yellow, very delicate, projecting, oblong, less pointed, and with four sinistral spires or whorls; the aperture is oblong, since the breadth of the lowest spire exceeds the whole body of the upper shell.

2160. BULLA *fontinalis* [*Physa fontinalis* (Linnaeus, 1758). Eng. Common bladder snail, Sw. Trubbig blåssnäcka; Fam. Physidae, Eng. Tadpole snails or Bladder snails, Sw. Blåssnäckor], shell ovate, pellucid, sinistral; spire indistinct; aperture ovate-oblong.

Cochlea, shell pellucid, light yellow, ovate, ventricose, sinistral; aperture ovate-oblong, longitudinal; spire retracted. *Fn.* 1302. *It. W:goth.* 49.

Act. Ups. 1736. p. 41. n. 23. Cochlea testa flava pellucida acuminata: rictu obliquo.

Lives on aquatic plants.

[1469] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

DESCR. The size not quite that of a grain of barley. Shell ovate, pellucid, light yellow, very fragile so that it can hardly bear touching, and with an ovate-oblong, almost longitudinal, ventricose aperture; the outermost part almost alone is visible; other parts barely projecting; the edge is very blunt; spires sinistral.

Buccinum[1470]

2161. BUCCINUM *lapillus* [*Nucella lapillus* (Linnaeus, 1758). Eng. Atlantic dog whelk, Atlantic dogwinkle or Northern dog whelk, Sw. Purpursnäcka; Fam. Muricidae, Eng. Rock shells or Murex snails, Sw. Valksnäckor], shell ovate, pointed, striate, smooth, with a small, rather flat column.

Cochlea, shell thick, ovate, extended bilaterally; five spires spirally furrowed; aperture with an undulating lip-like projection. *Fn.* 1321. *It. W:goth.* 170.

List. Angl. 158. t. 3. f. 5. 6. Buccinum minus albidum asperum intra quinas spiras finitum.

Exerc. 2. p. 85. idem.

Occurs in the West Sea; very abundant; eats dead fish in the large fishing nets.

DESCR. It is often so covered with clay that the spires are hard to see; varying as to the subtomentose rather large shell, *List.* f. 5, which is also common. *It. W:goth.* 169.

2162. BUCCINUM *glaciale* [*Buccinum glaciale* Linnaeus, 1761. Eng. Glacial whelk; Fam. Buccinidae, Eng. Whelks or Buccinum whelks, Sw. Valthornssnäckor], shell smooth, weakly striated, ovate-oblong; lowest whorl subcarinate.

Occurs in the Norwegian Ocean all the way to Spitsbergen. *Martin.*

DESCR. Shell thick; size as that of the outermost phalanx of the thumb, pale; second whorl weakly striated, acuminate, conical above. Lowest whorl or the largest one is subcarinate, but in the other upper whorls this keel vanishes, when the attenuated suture of the whorls evades. Base gibbous, emarginate. Aperture ovate. Lip-like projection externally thick, wide open, with incumbent striae.

2163. BUCCINUM *undatum* [*Buccinum undatum* Linnaeus, 1758. Eng. Common whelk or Waved buccinum, Sw. Valthornssnäcka; Fam. Buccinidae, Eng. Whelks or Buccinum whelks, Sw. Valthornssnäckor], shell oblong, rough, transversely striate with curved, polygonal whorls.

List. Angl. 156. t. 3. f. 2. 3. Buccinum crassum rufescens striatum, & undatum.

Occurs in the Norwegian Ocean.

DESCR. Stature of *Murex despectus*,[1471] but the groove is very short and barely projecting. Shell varies in respect of the rounded swellings.

[1470] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

[1471] See no. 2166.

Strombus[1472]

2164. STROMBUS *pes pelecani* [*Aporrhais pespelecani* (Linnaeus, 1758). Eng. Common pelican's foot, Sw. Pelikanfotsnäcka; Fam. Aporrhaidae, Eng. Pelican foot snails, Sw. Pelikanfotsnäckor], shell with a tetradactyl lip-like projection that is palmate, angular, and has digits; pharynx smooth.

Cochlea, shell long, acuminate; lip-like projection of aperture, dilated; two striae curved at front. *Fn*. 1323.

Bonan. Recr. 3. n. 85. 87.

Occurs in the Atlantic Ocean.

DESCR. Shell thick, long, in form of a drill, flesh-coloured; base slightly hooked, with 8 coiled whorls; rounded and flattened projections that are arranged in a single row. Aperture of shell is stretched out with a very broad lip-like projection that is angular and has two elevated striae. This lip-like projection is extended anteriorly (at tip) into a rather pointed angle; inside this angle and shell there is a crescent-shaped curve.

Murex[1473]

2165. MUREX *antiquus* [*Neptunea antiqua* (Linnaeus, 1758). Eng. Ancient neptune, Ancient whelk, Buckle or Common spindle snail, Sw. Neptunussnäcka; Fam. Buccinidae, Eng. Whelks or Buccinum whelks, Sw. Valthornssnäckor], shell patulous, caudate, oblong, with eight smoothly rounded whorls.

Gualt. Test. t. 46. f. E.

Occurs in the ocean.

2166. MUREX *despectus* [*Neptunea despecta* (Linnaeus, 1758). Fam. Buccinidae, Eng. Whelks or Buccinum whelks, Sw. Valthornssnäckor], shell patulous, subcaudate, oblong; eight whorls, each with two elevated lines.

It. W:goth. 200. t. 5. 8. Cochlea, spiris octo, oblonga utrinque producta, lineis duabus elevatis.

List. Angl. 155. t. 3. f. 1. Buccinum album laeve maximum septem spirarum.

Occurs along with the preceding species.

[1472] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

[1473] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor

Trochus[1474]

2167. TROCHUS *cinereus* [*Steromphala umbilicalis* (da Costa, 1778). Eng. Flat top shell, Sw. Större puckelsnurrsnäcka; Fam. Trochidae, Eng. Top-snails or Top-shells, Sw. Virvelsnäckor], shell obliquely umbilicate, ovate, with rounded whorls.
Occurs at the shores of the ocean.

2168. TROCHUS *zizyphinus* [*Calliostoma zizyphinum* (Linnaeus, 1758). Eng. European painted topsnail, Painted topsnail or Painted topshell, Sw. Större pärlemorsnäcka; Fam. Calliostomatidae, Sw. Toppsnäckor], shell imperforate, conical, smooth, with subcarinate whorls.
List. Angl. 166. t. 3. f. 14. Trochus albidus maculis rubentibus sex spirarum.
Occurs at the shores of the ocean close to Norway.

Turbo[1475]

2169. TURBO *littoreus* [*Littorina littorea* (Linnaeus, 1758). Eng. Common periwinkle or Common winkle, Sw. Vanlig strandsnäcka; Fam. Littorinidae, Eng. Winkles, Periwinkles or Chink shells, Sw. Strandsnäckor], shell subovate, pointed, striate, with a pillar-like,[1476] flat margin.
It. W:goth. 169. 199. t. 5. f. 4. Cochlea testa ovata, spiris quinque striatis fasciatis, aperturae margine postico dilatato rotundato.
List. Angl. 162. t. 3. f. 9. Cochlea fusca fasciis crebris angustisque praedita.
In Sweden: Kupunge.
Occurs throughout the shores of the ocean which it almost covers. When it clings to rather high cliffs, the peasants believe it to be predicting sunny weather.

2170. TURBO *clathrus* [*Epitonium clathrus* (Linnaeus, 1758). Eng. European wentletrap, Common wentletrap or False wentletrap, Sw. Vindeltrappa; Fam. Epitoniidae, Eng. Wentle traps, Violet snails, Staircase shells or Bubble shells, Sw. Vindeltrappsnäckor], shell lattice-like, towered, with contiguous, smooth whorls.
Cochlea, with longitudinal, emarginate striae. *Fn.* 1325.
Pet. Mus. 66. n. 705. Buccinum album minus, costis eleganter elatis.
Occurs in the West Sea. Has it been sent from there to us?
DESCR. This cancellate shell is very easily distinguished from all the others; its eight or nine longitudinal quasi-membranous striae are elevated.

[1474] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.
[1475] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.
[1476] Lat. *columinari.*

2171. TURBO *terebra* [*Turritella terebra* (Linnaeus, 1758). Eng. Auger screw shell, Auger turretsnail or Tower screw shell; Fam. Turritellidae, Eng. Turret snails, Tower shells, Screw shells or Auger shells, Sw. Tornsnäckor], shell towered; whorls with six pointed ridges.

Cochlea, shell long, awl-shaped, with twelve striate coils. *Fn.* 1322.

List. Angl. 161. t. 3. f. 8. Buccinum tenue dense striatum, 12 minimum spiris donatum.

Occurs in the West Sea.

DESCR. Horn-coloured; shell formed like a drill; each coil spirally grooved with five furrows; aperture orbicular.

2172. TURBO *perversus* [*Balea perversa* (Linnaeus, 1758). Eng. Tree snail or Wall snail, Sw. Strimmig klippspolsnäcka; Fam. Clausiliidae; Eng. Door snails Sw. Spolsnäckor], shell tower-shaped, pellucid with contrary whorls and toothless aperture.

Cochlea, pellucid, oblong, with ten sinistral spires and roundish aperture. *Fn.* 1300.

Act. Ups. 1736. p. 41. n. 20. Cochlea testa oblonga obtusa, rictu rotundo, spiris octo, decem, duodecim.

List. Angl. 124. t. 2. f. 11. Buccinum alterum pellucidum subflavum, intra senas spiras mucronatum.

Occurs on mosses at tree roots, and on the old roofs of peasants' dwellings around Uppsala.

DESCR. Shell pellucid, weakly light yellow; the 8th, 10th and 12th spires become gradually smaller and are extended longitudinally; tip slightly blunt, gradually attenuated; furrows sinistral.

2173. TURBO *muscorum* [*Pupilla muscorum* (Linnaeus, 1758). Eng. Moss chrysalis snail, Moss snail or Widespread column snail, Sw. Ängspuppsnäcka; Fam. Pupillidae, Sw. Puppsnäckor], shell tower-shaped, blunt, pellucid, with many whorls and toothless aperture.

Cochlea, shell subpellucid; six spires rotated dextrally, subcylindrical, blunt. *Fn.* 1301.

List. Angl. 121. t. 2. f. 6. Buccinum exiguum flavum, mucrone obtuso sive cylindraceum.

It. Oeland. 99. Cochlea parva spiris septem.

Occurs in Uppsala among carpet mosses and thread mosses at tree roots and on the old roofs of peasants' dwellings.

DESCR. In size, that of a grain of rye. Shell dark brown, when the little animal is still fertile, otherwise horn-coloured, and pellucid, with 4, 5, or 6 spires; aperture ovate and pointed; edge blunt. Spires, as is customary, are rotated dextrally (attached to the aperture).

Helix[1477]

2174. HELIX *lapicida* [*Helicigona lapicida* (Linnaeus, 1758). Eng. Lapidary snail, Sw. Linssnäcka; Fam. Helicidae, Eng. Typical snails, Sw. Storsnäckor], shell carinate, umbilicate, bilaterally convex; aperture marginate, transverse, ovate.

Cochlea, bilaterally convex; perforated beneath; spire pointed; aperture ovate, transverse. *It. Oel.* 8. *W:goth.* 27.* *Fn.* 1298.

Act. Ups. 1736. p. 40. n. 9. Cochlea testa convexa subtus perforata, spira acuta.

Pet. Mus. 69. n. 734. Planorbis terrestris anglicus, umbilico minore, margine acuto.

List. Angl. 126. t. 2. f. 14. Cochlea pulla sylvatica, spiris in apicem depressis.

Hist. 1. p. 29. f. 62. Cochlea nostra umbilicata pulla.

Occurs on the steep cliffs of Dannemora, Älvkarleby, Öland, etc. Corrodes the chalky stones like a woodworm.

DESCR. Shell subpellucid, slightly convex above, more convex beneath; consists of five spines; pale or horn-coloured with transverse, rusty brown blotches at the spires. Tip of shell by no means projecting, but the umbilicus has a smoothly rounded, rather large aperture beneath; edge of spires everywhere strongly pointed. Aperture subovate, transverse, very smoothly dilated.

2175. HELIX *albella* [*Theba pisana* (O.F. Müller, 1774). Eng. White garden snail or White Italian snail, Sw. Dynsnäcka; Fam. Helicidae, Eng. Helicid snails, Sw. Storsnäckor], shell carinate, umbilicate, rather flat, gibbous beneath; aperture semi-cordate.

Cochlea, shell convexly flat above, convex, perforated beneath, with pointed whorl and semi-cordate aperture. *It. Oel.* 65. *Fn.* 1299.

Act. Ups. 1736. p. 40. n. 6. Cochlea testa depressa, supra planiuscula marginata, subtus convexa perforata.

Lives on steep cliffs; a very rare animal.

DESCR. Many times smaller than the preceding species. Shell is almost flat above, but very gibbous and perforated beneath by an umbilicus; in this species there is a sharp lateral edge on the flat side, contrary to the manner in the preceding species, where the margin is medially curved. Thus where the aperture of the preceding species is ovate, this one is semi-cordate or can be compared with a heart split in halves lengthwise; the margin is in no way dilated. It consists of three or four whorls, but the preceding species has five.

2176. HELIX *planorbis* [*Planorbis planorbis* (Linnaeus, 1758). Eng. Common ramshorn or Margined ramshorn, Sw. Kantskivsnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell subcarinate, umbilicate, flat and concave above, with an obliquely ovate, bilaterally pointed aperture.

Cochlea, shell flat, fuscous, concave above, with four whorls and a prominent margin. *Fn.* 1306.

[1477] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

List. Angl. 145. t. 2. f. 27. Cochlea fusca, altera parte planior & limbo insignita quatuor spirarum.

Hist. 2. t. 138. f. 42. Cochlea fusca, limbo circumscripta.

Pet. Gaz. 16. t. 10. f. 11. Planorbis minor fluviatilis, acie acuta.

Inhabits still water bodies, ditches, fishponds, swamps, and rivers.

DESCR. Shell consisting of 4 blackish whorls. When the animal hides inside the shell, it is opaque, otherwise pellucid and of a horn-like or membranous appearance; shell rendered striate, but striae in no way oblique; aperture obliquely ovate, bilaterally slightly pointed, with a prominent margin of whorls.

2177. HELIX *complanata* [*Hippeutis complanatus* (Linnaeus, 1758). Eng. Flat ramshorn, Sw. Linsskivsnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell downwardly carinate, umbilicate, convex, flat beneath, with a semicordate aperture.

C*ochlea*, shell flat, convex above, concave beneath; four whorls marginate downwardly. *Fn.* 1308.

Inhabits rivers and swamps; abundant on water violet.

DESCR. Very small. Shell palish ash-grey, subdiaphanous, thin, flat, convex above, slightly umbilicate, beneath entirely flat, but slightly hollowed towards the middle; the margin surrounding the whorls directed backwards at the rather flat or lower side; aperture is ovate-acuminate.

2178. HELIX *vortex* [*Anisus vortex* (Linnaeus, 1758). Eng. Whirlpool ramshorn, Sw. Skarpkölad skivsnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell carinate, flat, with a concave, oval aperture above.

C*ochlea*, shell flat, fuscous, concave above with five whorls; margin pointed. *Fn.* 1307.

List. Angl. 145. t. 2. f. 28. Cochlea exigua subfusca, altera parte planior sine limbo, quinque spirarum.

Inhabits ditches, swamps, and fishponds.

DESCR. This species is smaller than the common ramshorn,[1478] but there are more whorls; in the former the margin of the shell is extended outside the shell, but in the latter the very angle of the shell is pointed.

2179. HELIX *cornea* [*Planorbarius corneus* (Linnaeus, 1758). Eng. Great ramshorn, Sw. Posthornssnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell umbilicate above, flat, blackish, with four smoothly rounded whorls.

C*ochlea*, shell flat, dusky, umbilicate above, with four smoothly rounded whorls. *Fn.* 1304.

List. Angl. 143. t. 2. f. 26. Cochlea pulla, ex utraque parte circa umbilicum cava.

Exerc. 2. p. 59. Purpura sive Cochlea fluviatilis compressa major.

Inhabits rivers, rather large swamps, and ditches; very abundant.

[1478] See no. 2176.

DESCR. Shell spire or whorl is rather smoothly rounded with longitudinal, transverse, very small and elevated striae. It is entirely rusty brown or dusky, subpellucid, flat bilaterally; the spire is not prominent, but on the upper lateral concave side umbilicate, however hardly so at the lower.

2180. HELIX *spirorbis* [*Anisus spirorbis* (Linnaeus, 1758). Sw. Rundläppad skivsnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell concave bilaterally, flat, whitish, with five smoothly rounded whorls.

C*ochlea*, shell flat, white, concave bilaterally, with five smoothly rounded whorls. *Fn.* 1305.

Act. Ups. 1736. n. 40. n. 2. Cochlea testa depressa utrinque subaequali: spira tereti.

Lives in lakes.

DESCR. The size of a dill seed. Shell white, pellucid, with five whorls, flat, slightly concave bilaterally, yet hardly umbilicate; by no means marginate, whereas the following snails are marginate.

2181. HELIX *contorta* [*Bathyomphalus contortus* (Linnaeus, 1758). Eng. Twisted ramshorn, Sw. Remskivsnäcka; Fam. Planorbidae, Eng. Ramshorn snails, Sw. Skivsnäckor], shell slightly umbilicate, flat, equal on each side, with a linear, pointed aperture.

C*ochlea*, shell flat, on each side equal, umbilicate, with a crescent-shaped aperture. *Fn.* 1309.

Act. Ups. 1736. n. 40. n. 5. Cochlea testa depressa: spira arctissima, vix perforata.

Lives in ditches at the roots of water violet, often in the King's meadow[1479] at Uppsala.

DESCR. The size of a seed of cabbage, seldom larger. Shell consists of four whorls wrapped tightly towards each other; shell is almost equal and concave bilaterally; aperture resembles the letter C or the moon in the first quarter. Body black, with small awl-shaped, long horns. When the shell moves around in the water and the little animal creeps out of its shell alive, the shell appears gilded when seen from a distance.

2182. HELIX *hispida* [*Trochulus hispidus* (Linnaeus, 1758). Eng. Bristly snail or Hairy snail, Sw. Skäggsnäcka; Fam. Hygromiidae, Eng. Leaf snails, Sw. Lövsnäckor], shell umbilicate, convex, hispid, diaphanous, with five whorls and crescent-shaped, roundish aperture.

C*ochlea*, convex on both sides, hispid, with five roundish spires, beneath perforate. *Fn.* 1296.

Lives in trees and plants.

DESCR. Small, horn-coloured, convex, rounded, beneath perforate; it is hispid with very short, rare hairs and with a roundish, moon shaped aperture.

[1479] I.e. Sw. Kungsängen.

2183. HELIX *pomatia* [*Helix pomatia* Linnaeus, 1758. Eng. Roman snail, Burgundy snail, Edible snail, Escargot or Vineyard snail, Sw. Vinbergssnäcka; Fam. Helicidae, Eng. Helicid snails, Sw. Storsnäckor], shell umbilicate, subovate, blunt, drab and with a roundish, crescent-shaped aperture.

Cochlea, shell ovate with five spires, called "pomatia". *Fn.* 1293.

Gesn. Aquat. 255. Pomatia.

Aldr. Exsang. 389. Cochlea terrestris gypso obserata.

List. Angl. 111. t. 2. f. 1. Cochlea cinerea edulis, cujus apertura operculo crasso velut gypseo per hyemem clauditur.

Exercit. Anat. 1. p. 162. t. 1. Cochlea pomatia edulis gesneri.

Hist. 1. n. 46. Cochlea cinereo rufescens fasciata leviter umbilicata.

Dal. Pharm. 394. Cochlea terrestris, Limax terrestris.

Merr. Pin. 207. Cochlea alba major, cum suo operculo.

Pet. Mus. 4. n. 12. Cochlea alba major.

In Sweden: Trägårds-Snäcka.

Inhabits gardens; brought here from German speaking countries;[1480] hardly appears spontaneously; some people eat it.

2184. HELIX *arbustorum* [*Arianta arbustorum* (Linnaeus, 1758). Eng. Copse snail, Sw. Fläcklundsnäcka; Fam. Helicidae, Eng. Helicid snails, Sw. Storsnäckor], shell umbilicate, convex, acuminate, with a suborbicular, bimarginate aperture that is anteriorly elongated.

Cochlea, shell convex bilaterally, palish ash-grey with solitary, grey fascia and lip-like projection turned backwards. *Fn.* 1295.

List. Angl. 119. t. 2. f. 4. Cochlea maculata, unica fascia pulla angustioreque per medium anfractus insignita.

Hist. 1. n. 53. Cochlea maculata, unica fascia fusca per medium orbem insignita.

Pet. Mus. 5. n. 15. idem.

Inhabits small woods, shady meadows, and groves.

DESCR. Varies greatly in colour. Shell slightly convex, consisting of five spires, and with a lunate opening; a grey fascia in the middle of the spire whorls, otherwise entirely palish grey with five oblong, transverse, white spots.

2185. HELIX *vivipara* [*Viviparus viviparus* (Linnaeus, 1758). Eng. Common river snail or Trapdoor snail, Sw. Trubbsumpsnäcka; Fam. Viviparidae, Eng. River snails or Mystery snails, Sw. Sumpsnäckor], shell imperforate, subovate, blunt, horn-coloured, with darkened girdles and suborbicular aperture.

Cochlea, shell rather oblong, blunt; whorls smoothly rounded, with three dark bluish grey lines. *Fn.* 1312.

[1480] See the com. to no. 453.

List. Angl. 133. t. 2. f. 17. Cochlea maxima fusca sive nigricans fasciata.
Hist. 2. t. 126. f. 26. Cochlea vivipara fasciata.
Exerc. 2. p. 17. t. 2. Cochlea maxima viridescens fasciata vivipara.
Swam. Bibl. t. 9. f. 3. Cochlea vivipara.
Pet. Mus. 84. n. 814. Cochlea fluviatilis vivipara londinensis.
Act. Ups. 1736. p. 40. n. 14. Cochlea testa producto-convexa fluviatilis.
Commonly called "a bovine head".
Inhabits swamps, lakes, and rivers, especially abundant in the Sala River,[1481] particularly at places full of clay.
DESCR. Shell pale and blunt. Whorl decorated longitudinally with three indistinct curved lines: aperture ovate, covered by a membranous operculum.

2186. HELIX *nemoralis* [*Cepaea nemoralis* (Linnaeus, 1758). Eng. Grovesnail, Brown-lipped snail, Lemon snail or Larger banded snail, Sw. Parksnäcka; Fam. Helicidae, Eng. Helicid snails, Sw. Storsnäckor], shell imperforate, roundish, smooth, diaphanous, fasciate, with a roundish and crescent-shaped aperture.
Cochlea, shell bilaterally convex, light yellow, with an almost solitary fascia and lip-like projection, turned backwards. *Fn.* 1294.
List. Angl. 116. t. 2. f. 3. Cochlea citrina aut leucophaea, non raro unicolor, interdum tamen unica, interdum etiam duabus, aut tribus, aut quatuor, plerumque vero quinque fasciis pullis distincta.
Hist. t. 1. n. 54. Cochlea interdum unicolor, interdum variegata, item variis fasciis depicta.
Merr. Pin. 207. Cochlea vulgaris, testa variegata.
Pet. Mus. 5. n. 14. Cochlea vulgaris, testa variegata.
Inhabits small woods. *It. Oel.* 127.
OBS. The snail with a pellucid shell barely differs from this species. *It. Oel.* 155.

2187. HELIX *fragilis* [*Lymnaea stagnalis* (Linnaeus, 1758). Eng. Great pond snail, Sw. Större dammsnäcka; Fam. Lymnaeidae, Eng. Pond snails, Sw. Dammsnäckor],[1482] shell imperforate, ovate and awl-shaped, smoothly rounded, pellucid with an ovate and oblong aperture.
Cochlea, shell extended, acuminate, pellucid with six whorls and an ovate and oblong aperture. *Fn.* 1311.
Act. Ups. 1736. p. 41. n. 24. Cochlea testa alba pellucida acuminata, rictu obliquo.
Inhabits swamps.
DESCR. Shell pellucid, long, but so sensitive that it hardly stands to be touched. Whereas the preceding shell is solid and hard, this one can barely be crumbled into small pieces by your fingers; as to its shape it is rather similar to the preceding species, but only a third of its size.

[1481] See the com. to no. 361.
[1482] See no. 2188.

2188. HELIX *stagnalis* [*Lymnaea stagnalis* (Linnaeus, 1758). Eng. Great pond snail, Sw. Större dammsnäcka; Fam. Lymnaeidae, Eng. Pond snails, Sw. Dammsnäckor],[1483] shell imperforate, ovate and awl-shaped, subangulate, with an ovate aperture.

C*ochlea*, shell stretched out, acuminate, opaque, with six subangulate whorls and an ovate aperture. *Fn.* 1310.

Pet. Mus. 82. n. 805. Buccinum fluviatile nostras oblongum majus.

List. Angl. 137. t. 2. f. 21. Buccinum longum, sex spirarum, omnium & maximum & productius subflavum pellucidum in tenue acumen ex amplissima basi mucronatum.

Hist. 2. t. 123. f. 21. Buccinum subflavum pellucidum sex orbium, clavicula admodum tenui productiore.

Aldr. Test. 3. p. 359. n. 3. Turbo laevis in stagnis degens.

Act. Ups. 1736. p. 41. n. 21. Cochlea testa producta acuminata striata cinereo-alba.

List. Angl. 139. t. 2. f. 22. Buccinum minus fuscum sex spirarum, ore angustiore. *fig. mal.*

Pet. Mus. 82. n. 306. Buccinum fluviatile nostras oblongum minus.

β *Act. Ups.* 1736. p. 41. n. 22. Cochlea testa producta acuminata atra.

Lives ubiquitously in ditches, swamps, rivers, and still water bodies.

DESCR. It can be counted among the largest of our aquatic snails; lacks all kinds of pattern of coloration, but the colour varies much; in some the colour is entirely jet-black, in some ash-grey, in others whitish, in yet others palish grey; on all specimens there are very fine, transverse striae on the whorls or longitudinal shells that are scarcely visible to the naked eye; on either side a transverse macula on the whorl or a longitudinal macula on the second spire, which macula is whitish, as if the snail could be distinguished by this character over the whole year.

2189. HELIX *putris* [*Succinea putris* (Linnaeus, 1758). Sw. Common European amber snail, Large amber snail or Rotten amber snail, Sw. Större bärnstenssnäcka; Fam. Succineidae, Eng. Amber snails, Sw. Bärnstenssnäckor], shell imperforate, ovate, blunt, light yellow, with an ovate aperture.

C*ochlea*, shell membranous, weakly light yellow, oblong; edge blunt, with three whorls. *Fn.* 1317.

List. Angl. 140. Buccinum subflavum pellucidum, trium spirarum, (Figura *non quadrat, an haec*?).

Hist. 3. t. 123. f. 23. Buccinum subflavum pellucidum, trium orbium?

Bonan. Recr. 119. f. 54. n. 1. (*an*?).[1484]

Pet. Mus. 83. n. 808. Buccinum fluviatile nostras, testa praetenui fragili (*an*?).

Inhabits rivers and lakes.

[1483] See no. 2187.

[1484] See the com. to no. 130.

DESCR. Shell wax-coloured, pellucid, almost membranous, with very thin, parallel, oblique streaks and consisting of three whorls; edge rather blunt with an ovate aperture and a straight and undilated margin. The shell is more light yellow than on any of our other species.[1485]

2190. HELIX *limosa* [*Ampullaceana balthica* (Linnaeus, 1758). Eng. Wandering pond snail, Sw. Oval dammsnäcka; Fam. Lymnaeidae, Eng. Pond snails, Sw. Dammsnäckor],[1486] shell imperforate, slightly oblong, pellucid, with an ovate aperture.

Cochlea, shell slightly oblong, with five whorls, pellucid; mouth ovate. *Fn.* 1314.

Inhabits rivers.

DESCR. Shell pellucid, very thin and pointed.

2191. HELIX *tentaculata* [*Bithynia tentaculata* (Linnaeus, 1758). Eng. Common bithynia, Faucet snail or Mud bithynia, Sw. Stor snytesnäcka; Fam. Bithyniidae, Eng. Mud snails, Sw. Snytesnäckor], shell imperforate, ovate, blunt, impure, with a subovate aperture.

Cochlea, shell oblong, blunt, with four ample, ash-grey, opaque whorls and a subovate aperture. *Fn.* 1313.

Act. Ups. 1736. p. 41. n. 16. Cochlea palustris, testae hiatu rotundo contracto; spiris laxis.

List. Angl. 135. t. 2. f. 19. Cochlea parva subflava, intra quinque spiras finita.

Lives along with the preceding species.

DESCR. This snail is only a quarter of the size of the preceding species and the spire is ample, more elongated and not so ventricose; it is entirely covered with clay, from which it cannot be cleaned, and also closed with a little operculum.

2192. HELIX *auricularia* [*Radix auricularia* (Linnaeus, 1758). Eng. Big-ear radix or Ear pond snail, Sw. Örondammsnäcka; Fam. Lymnaeidae, Eng. Pond snails, Sw. Dammsnäckor], shell imperforate, ovate, blunt, with pointed, very short spire and ampliate aperture.

Cochlea, shell diaphanous, with four whorls, pointed, very short edge, and strongly pointed aperture. *Fn.* 1315.

List. Angl. 139. t. 2. f. 23. Buccinum pellucidum flavum, quatuor spirarum, mucrone amplissimo, testae apertura omnium maxima.

Hist. 2. t. 123. f. 32. Buccinum subflavum pellucidum, quatuor orbium, ore amplissimo: mucrone acuto.

Exerc. 2. p. 54. Buccinum fluviatile pellucidum subflavum, quatuor spirarum, mucrone acuto, testae apertura patentissima.

Pet. Mus. 83. n. 807. Buccinum fluviatile nostras breve, ore patulo.

Inhabits rivers and still water bodies.

[1485] Lat. *in ulla aila alia* should be written as *in ulla alia*, see *Fn. Su.* (1746), no. 1317.

[1486] See no. 2193.

DESCR. It is the largest of our snails living in lakes and rivers. Lowest spire very large, ventricose; very minutely, transversely striated along the whorl. Our specimen is made of two parts: one more, the other less apically notched at the part facing the edge. The shell is internally entirely snow-white. Edge of aperture curved.

2193. HELIX *balthica* [*Ampullaceana balthica* (Linnaeus, 1758). Eng. Wandering pond snail, Sw. Oval dammsnäcka; Fam. Lymnaeidae, Eng. Pond snails, Sw. Dammsnäckor],[1487] shell imperforate, ovate, acuminate, with elevated wrinkles and ovate, ampliate aperture.

Cochlea, shell pellucid, with four whorls and an ovate, ample aperture; surface with elevated wrinkles. *Fn.* 1316. *It. Gotl.* 261.

Occurs throughout the shores of Gotland.

DESCR. It is small. Shell ventricose with three spires, but the fourth spire at tip scarcely visible, and aperture with a dilated margin; surface of shell with three elevated well spaced striae that descend obliquely to margin of aperture. Exceptional in this species is that the shell, medially gibbous, is enlarged with a kind of suture. The small animal was black.

Nerita[1488]

2194. NERITA *fluviatilis* [*Theodoxus fluviatilis* (Linnaeus, 1758). Eng. Common freshwater nerite or River nerite, Sw. Båtsnäcka; Fam. Neritidae, Eng. Nerits, Sw. Båtsnäckor], shell wrinkled, with toothless lips.

Cochlea, called *Nerita fluviatilis. Fn.* 1318.

List. Angl. 136. t. 2. f. 20. Nerita fluviatilis e caeruleo virescens maculatus, operculo subrufo lunato & aculeato donatus.

Hist. 2. p. 1. f. 38. Nerita fluviatilis e caeruleo virescens maculatus, operculo subcroceo aculeatoque donatus.

Pet. Mus. 67. n. 718. Nerita thamesis exiguus reticulate variegatus.

Inhabits rivers; found at the Ulva Mill[1489] in Uppsala and elsewhere.

DESCR. Shell subovate, horn-coloured, weakly bluish; surface uneven and with cavities that are disfigured by clay. Aperture almost of the same size as the shell; inner lip flat, with a semi-ovate operculum.

2195. NERITA *littoralis* [*Littorina obtusata* (Linnaeus, 1758). Eng. Flat periwinkle or Yellow periwinkle, Sw. Trubbig strandsnäcka; Fam. Littorinidae, Eng. Periwinkles, Sw. Strandsnäckor], shell smooth, with a vertex full of cavities and toothless lips.

Cochlea, called *Nerita marina. Fn.* 1320.

List. Angl. 164. t. 2. f. 3. Nerita reticulatus.

Hist. 1. 4. f. 8. f. 39. Nerita coloris castanei.

[1487] See no. 2190.

[1488] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

[1489] I.e. Sw. Ulva Kvarn by Fyrisån.

Pet. Mus. 67. n. 717. Nerita anglicus maritimus fuscus vulgaris.
It. Gotl. 261. Nerita.
Lives in the sea; abundant.
DESCR. Shell rather small, smooth, operculate. All the same the animal on both sides extends two leg-like setae.

β *Cochlea*, called *Nerita lacustris*. *Fn.* 1319.
Occurs in the lake at the village Tibble in Uppland; abundant.
DESCR. Similar to the previous and the following species. Shell smaller than that of the preceding species, larger than the following one, glabrous, and of different colours.

2196. NERITA *lacustris* [*Nomen dubium*], shell rather smooth, corneous, with an exquisitely fine tip; lips toothless.
Inhabits lakes.

2197. NERITA *glaucina* [*Nomen dubium*], shell umbilicate, smooth; spire rather blunt, umbilicate, half-closed; lobe gibbous, of two colours.
Cochlea, roundish, blunt, umbilicate; five fasciae with rusty brown, sagittate maculae; second fascia with undulate lines. *Fn.* 1324.
List. Angl. 163. t. 3. f. 10. Cochlea rufescens, fasciis maculatis, maxima ad imos orbes distincta.
Occurs in the ocean; it was brought to me once.
DESCR. The size of a hazelnut; shell roundish, blunt, with four whitish whorls; base perforate or umbilicate; whorls (especially the lowest one) decorated with five fasciae, of which the first or upper fascia consists of rusty brown, sagittate maculae; second fascia of rusty brown, oblong, undulating maculae; third, fourth, and fifth fasciae consist of maculae, as on the first.

Haliotis[1490]

2198. HALIOTIS *tuberculata* [*Haliotis tuberculata* Linnaeus, 1758. Eng. European edible abalone, Common ormer, Ear shell, Green ormer or Lamellated haliotis; Fam. Haliotidae, Eng. Abalones, Sw. Havsöron or Öronsnäckor], shell subovate, with transverse, tuberculate folds.
Haliotis, striate, wrinkled. *Fn.* 1326.
Rond. Aqu. 5. Auris marina.
Bellon. Aqu. 395. Patella altera major.
Gesn. Opit. 224. f. 1. 2. Auris marina.
Aldr. Exsang. 551. f. 1. 2. Patellae ferae sive Aures marinae.
Jonst. Aqu. t. 17. f. 4. 5.
Bonan. Recr. 91. f. 1. 2. Auris marina.
List. Angl. 167. t. 3. f. 16. Auris marina quibusdam.

[1490] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

Hist. 4. f. 7. t. 611. f. 2. Auris marina major, latior, plurimis foraminibus eorumque vestigiis ad 40 circiter conspicua, clavicula elata.

Pet. Mus. 81. n. 801. Auris marina anglica.

Sibb. Mus. 130. n. 2. Auris marina nostras.

Grew. Mus. 139. Auris marina.

Occurs in the West Sea,[1491] since we have shells that have been found on the shores.

Patella[1492]

2199. PATELLA *vulgata* [*Patella vulgata* Linnaeus, 1758. Eng. Atlantic limpet or Common European limpet, Sw. Stor skålsnäcka; Fam. Patellidae, Eng. True limpets or Marine limpets, Sw. Strandskålsnäckor], shell subangulate, with fourteen outgrown corners; margin dilated, pointed.

Patella, shell ovate, grooved with fourteen corners. *Fn.* 1291.

List. Angl. 195. t. 5. f. 40. Patella ex livido cinerea striata.

Sibb. Mus. 125. n. 1. Patella vulgaris ex livido cinerea.

Pet. Mus. 85. n. 827. Patella vulgaris anglica.

Occurs ubiquitously on stones in the West Sea.

DESCR. Shell conical; grooved with 14 elevated, tuberculate corners, between which just as many smaller corners are found. Tip is slightly blunt and closer to the narrower margin and not in the centre. Margin blackish beneath with white denticles.

2200. PATELLA *lacustris* [*Acroloxus lacustris* (Linnaeus, 1758). Eng. Lake limpet or Shield snail, Sw. Europeisk dammhättesnäcka; Fam. Acroloxidae, Eng. River limpets, Sw. Dammhättesnäckor], shell absolutely entire, oval, membranous; vertex mucronate, curved.

Patella, shell membranous, oval; edge curved. *Fn.* 1292.

List. Angl. 151. t. 2. f. 32. Patella fluviatilis fusca, vertice mucronato inflexo.

Inhabits our lakes; fairly abundant; rests on subaquatic plant leaves; enjoys especially the leaves of water soldiers.

[1491] Occurs only in the Mediterranean and the Atlantic.

[1492] Phylum Mollusca: Class Gastropoda. Eng. Molluscs: Snails and slugs. Sw. Blötdjur: Snäckor.

Dentalium[1493]

2201. DENTALIUM *entalis* [*Antalis entalis* (Linnaeus, 1758). Eng. Common tusk shell, North European elephant tusk or Common elephant tusk, Sw. Vanlig tandsnäcka; Fam. Dentaliidae], shell smoothly rounded, subarcuate, continuous.
Testa dentalium, subcylindrical, smooth, oblique; hence rather narrow. *Fn.* 1327.
Rond. Pisc. 2. p. 110. Tubulus dentatus laevis.
Gesn. Aqu. 348. Dentales.
Charl. Exerc. 63. Dentalium.
Dal. Pharm. 393. Dentalium.
Lang. Test. Tubulus dentalis laevis.
List. Hist. 4. f. 2. n. 2. Dentale laeve album, altera extremitate rufescens.
Bonan. Recr. 91. Dentales alii ejusdem formae minores.
Occurs in the West Sea; abundant.

Serpula[1494]

2202. SERPULA *planorbis* [*Nomen dubium*], shell regular, orbicular, flat, equal.
Lives attached to clams in the ocean.

2203. SERPULA *spirillum* [*Circeis spirillum* (Linnaeus, 1758). Fam. Serpulidae, Eng. Serpulid tubeworms, Sw. Kalkrörsmaskar], shell regular, spiralling, orbicular, pellucid; whorls smoothly rounded becoming gradully smaller.
Planc. Conch. t. 1. f. 8.
Ginnan. Mar. 2. t. 1. f. 7.
Lives attached to zoophytes of the ocean.

2204. SERPULA *spirorbis* [*Spirorbis spirorbis* (Linnaeus, 1758). Eng. Sinistral spiral tubeworm or Spirorbis tube worm, Sw. Spiralrörsmask; Fam. Serpulidae, Eng. Serpulid tubeworms, Sw. Kalkrörsmaskar], shell regular, spiralling, orbicular; whorls inwardly weakly grooved above, becoming gradually smaller.
It. W:goth. 170. Dentalium testa spirali plana adhaerente.
Ginnan. Mar. 2. t. 1. f. 8.
Lives attached to brown algae in the ocean; very abundant.

[1493] Phylum Mollusca: Class Scaphopoda. Eng. Molluscs: Tusk shells. Sw. Blötdjur: Tandsnäckor.

[1494] Phylum Annelida: Class Polychaeta. Eng. Segmented worms: Bristle worms. Sw. Ringmaskar: Havsborstmaskar.

2205. SERPULA *contortuplicata* [*Nomen dubium*], shell is smoothly semi-rounded, wrinkled, glomerate.
Occurs in the ocean.

2206. SERPULA *triquetra* [*Spirobranchus triqueter* (Linnaeus, 1758). Eng. Keeled tubeworm, Sw. Trekantmask; Fam. Serpulidae, Eng. Serpulid tubeworms, Sw. Kalkrörsmaskar], shell abruptly crooked, triangular.
Testa dentalium, adhering, crooked, triangular. *It. W:goth.* 7.
Lives attached to crabs and oysters, etc., in the ocean.
OBS. Aperture of shell, in perfect specimens, has a tridentate tip; one upper tooth, straight, and two lower ones closer together, nodding.

2207. SERPULA *glomerata* [*Petaloconchus glomeratus* (Linnaeus, 1758). Fam. Serpulidae, Eng. Serpulid tubeworms, Sw. Kalkrörsmaskar], shell smoothly rounded, decussated, wrinkled, glomerate.
Testa dentalium, cylindrical, unequal, crooked, contorted. *Fn.* 1328.
Argenv. Nat. 352. t. 29. f. 8.
Occurs throughout the shores of the ocean, often attached to oysters.

2208. SERPULA *ringens* [*Floscularia ringens* (Linnaeus, 1758). Fam. Flosculariidae],[1495] shell smoothly rounded, straight, punctate, sandy.
Inhabits lakes; abundant.
OBS. I remain uncertain as to whether this species should belong to this genus.

[1495] N.B. Phylum Rotifera, Eng. Rotifers or Wheel animals, Sw. Hjuldjur.

IV. LITHOPHYTA[1496]

Madrepora[1497]

2209. MADREPORA *turbinata* [*Nomen dubium*], simply slightly turbinate, cone-shaped, smooth; a concave stella.[1498] *Amoen. Acad.* 1. p. 87. t. 81. f. 1. 2. 3. 4. 7.
Occurs in the Baltic Sea; abundantly washed up on the shores of Gotland.

2210. MADREPORA *truncata* [*Cyathophyllum truncatum* (Linnaeus, 1758). Fam. Cyathophyllidae], composite, with proliferous bodies, most of them united at disc margin; stellae[1499] truncated, medially cylindrical, excavated. *Amoen. Acad.* 1. p. 93. t. 4. f. 10.
Occurs rather sparingly along with the preceding coral.[1500]

2211. MADREPORA *stellaris* [*Nomen dubium*], composite, with proliferous central, solitary bodies; stellae[1501] dilated marginally, united. *Amoen. Acad.* 1. p. 94. t. 4. f. 11.
Occurs along with the preceding corals.

2212. MADREPORA *favosa* [*Nomen dubium*], composite, with angular, concave, united stellae.[1502] *Amoen. Acad.* 1. p. 96. t. 4. f. 16.
Occurs along with the preceding corals.

2213. MADREPORA *organum* [*Nomen dubium*], composite, with striate cylinders, combined with a striate membrane that is turned downwards. *Amoen.* 1. p. 96. t. 4. f. 6.
Occurs along with the preceding corals; less abundant.

2214. MADREPORA *flexuosa* [*Nomen dubium*], composite, with cylindrical, crooked, rough stellae[1503] that are distinct and fastigiate above. *Amoen. Acad.* 1. p. 96. t. 4. f. 13.
Occurs along with the preceding corals.

[1496] Linnaeus's order including corals.

[1497] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Anthozoans. Sw. Nässeldjur: Koralldjur.

[1498] Lat. *stella*. In zoology, a star-shaped projection on the surface of a coralline; also, a star-shaped sponge-spicule (*OED*).

[1499] See the com. to no. 2209.

[1500] Fossil only. See also Linnaeus's comment in no. 2215.

[1501] See the com. to no. 2209.

[1502] See the com. to no. 2209.

[1503] See the com. to no. 2209.

2215. MADREPORA *ananas* [*Favia fragum* (Esper, 1793). Fam. Faviidae], composite, from the middle with many proliferous bodies that are united all over; stellae[1504] convex striate, medially concave. *Amoen. Acad.* 1. p. 22. t. 4. f. 9.

Occurs along with the preceding corals.

DESCR. There can be no doubt that all the preceding corals, thrown up everywhere on the shores of Gotland and Öland, have inhabited Sweden and the Baltic Sea in ancient times. But whether they truly still live and reproduce deep down in this sea, eludes me.

2216. MADREPORA *ramea* [*Dendrophyllia ramea* (Linnaeus, 1758). Eng. Orange tree coral; Fam. Dendrophylliidae], branched, pinnate, undulate, striate; stellae[1505] terminal.

Corallium album pumilum nostras. Raj. Angl. 3. p. 32.

Occurs in the Norwegian Ocean. *A. R. Martin.*

DESCR. Our coral is very similar to the remaining species, but in size it is not larger than the white coral at the chemist's and besides the branches from stella to stella[1506] are also more flexible.

Millepora[1507]

2217. MILLEPORA *eschara* [*Nomen dubium*], membranous, with spots arranged in the form of quincunxes[1508] all over. *Amoen. Acad.* 1. p. 105. t. 4. f. 19.

Loefl. Act. Stockh. 1752. p. 111. f. 1–4.

Lives throughout the sea on brown algae, corals, shells, and stones, which it covers[1509] like a crust.

DESCR. Membrane perforated by contiguous, oval spots; these spots bear 8 or 10 setaceous, awl-shaped teeth in an orbit.

Tubipora[1510]

2218. TUBIPORA *urceus* [*Nomen dubium*], coral urn-shaped, almost unbranched, with a six-toothed mouth.

Schaeff. Monogr. 1755. t. 2. f. 7–9.

Inhabits lakes.

[1504] See the com. to no. 2209.

[1505] See the com. to no. 2209.

[1506] See the com. to no. 2209.

[1507] Phylum Cnidaria: Class Hydrozoa. Eng.: Cnidarians: Hydrozoans. Sw.: Hydrozoer or Hydror.

[1508] A pattern used for planting trees in which they are arranged in one or more groups of five, so placed that four occupy the corners of a square (*OED*).

[1509] Lat. *abducit* should be written as *obducit*.

[1510] Phylum Bryozoa. Eng. Bryozoans or Moss animals. Sw. Mossdjur.

2219. TUBIPORA *repens* [*Plumatella repens* (Linnaeus, 1758). Eng. Creeping bryozoan; Fam. Plumatellidae], creeping, filiform, dichotomous coral; tubes curved, cylindrical, upright, well spaced.
Polypus, with cordate, campanulate, radiate stellae.[1511] *Amoen. Acad.* 2. p. 63.
Baeck. Act. Stockh. 1746. t. 6. f. 4?
Lives on the leaves of water lilies, on the averted side of the leaf; abundant in lakes.

V. ZOOPHYTA[1512]

Isis[1513]

2220. ISIS *hippuris* [*Isis hippuris* Linnaeus. 1758. Eng. Golden sea fan; Fam. Isididae, Eng. Bamboo corals], stirp coralline; segments striate; knee-like joints attenuate.
Sertularia, strongly branching; segments sulcate. *Hort. Cliff.* 430. *Mus. Tess.* 118.
Occurs in the Norwegian Sea, from where *A. R. Martin* has brought it.

2221. ISIS *anastatica* [*Nomen dubium*], stirp capillary, paniculate, remarkably minute.
Polypus, resembling *Anastatica. Amoen. Acad.* 2. p. 64.
De Geer. Act. Stockh. 1747. t. 6. f. 4. 5.
Lives attached to shells in lakes; abundant.

Gorgonia[1514]

2222. GORGONIA *flabellum* [*Gorgonia flabellum* Linnaeus, 1758. Eng. Venus sea fan or Common sea fan; Fam. Gorgoniidae], reticulate; branches internally compressed.
Lithoxylon, netlike; branches compressed in parallel, with initial ones thicker. *Hort. Cliff.* 480.
Occurs in the Norwegian Ocean. *A. R. Martin.*

2223. GORGONIA *placomus* [*Paramuricea placomus* (Linnaeus, 1758). Eng. Flattened sea fan coral, Sw. Sjöris; Fam. Plexauridae], tufted; branches swaying, tomentose; calyces eight-toothed.
Occurs in the ocean where it surges against Bohuslän.

[1511] See the com. to no. 2209.

[1512] An obsolete and abandoned term for an organism thought to be intermediate between animals and plants. The term was created by Edward Wotton in 1552 and adopted by Linnaeus in *Syst. nat.* (1758).

[1513] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Anthozoans. Sw. Nässeldjur: Koralldjur.

[1514] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Anthozoans. Sw. Nässeldjur: Koralldjur.

2224. GORGONIA *pinnata* [*Leptogorgia pinnata* (Linnaeus, 1758). Fam. Gorgoniidae], somewhat compressed; branches distichous, compressed.

Lithoxylon, pinnate, branched, straight, compressed, curved, with setaceous branches. *Hort. Cliff.* 480.

Occurs in the Norwegian Ocean. *A. R. Martin.*

DESCR. Cortex deep yellow, as if constructed of an ochre-coloured crust.

Alcyonium[1515]

2225. ALCYONIUM *arboreum* [*Paragorgia arborea* (Linnaeus, 1758). Eng. Bubblegum coral, Sw. Sjöträd; Fam. Paragorgiidae], stirp tree-like, blunt branches.

Lithoxylon norvegicum. Mus. Tessin. 120. t. 10.

Occurs in the depths of the Norwegian Ocean.

DESCR. Stirp suberose; the length almost of a human being; outermost branches often as thick as a finger and resembling a needle-less pine.

2226. ALCYONIUM *digitatum* [*Alcyonium digitatum* Linnaeus, 1758. Eng. Dead man's fingers, Sw. Död mans hand; Fam. Alcyoniidae], no stem, coriaceous, oblong, wrinkled.

Ellis. Corallin. 82. t. 32. f. A. a. Alcyonium ramoso digitatum molle, asteriscis undique ornatum.

Occurs in the Norwegian Ocean where it surges against Norway.

2227. ALCYONIUM *rubrum* [*Nomen dubium*], formless, red.

Occurs in the Norwegian Ocean. *A. R. Martin.*

2228. ALCYONIUM *gelatinosum* [*Nomen dubium*], formless, jelly-like.

Lives attached to brown algae in the ocean; abundant.

DESCR. Body amorphous, as if consisting of jelly, diaphanous; inside there are these animals which appear with a stella[1516] resembling a stony coral. Whether it is a true species of this genus I dare not say.

Tubularia[1517]

2229. TUBULARIA *ramosa* [*Eudendrium ramosum* (Linnaeus, 1758). Eng. Stick hydroid or Tree hydroid; Fam. Eudendriidae], with branched cylinders and contorted knee-like joints.

Ellis. Corall. 31. t. 16. f. A. a. t. 17. f. A.

Occurs in the ocean.

[1515] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Anthozoans. Sw. Nässeldjur: Koralldjur.

[1516] See the com. to no. 2209.

[1517] Phylum Cnidaria: Class Hydrozoa. Eng.: Cnidarians: Hydrozoans. Sw.: Hydrozoer or Hydror.

2230. TUBULARIA *muscoides* [*Coryne muscoides* (Linnaeus, 1761). Fam. Corynidae], cylinders subdichotomous, entirely annulate, wrinkled.
Occurs in the ocean where it surges against Bohuslän.
DESCR. Stirp filiform, very short, markedly branched, almost dichotomous, horn-coloured, tubulose, wrinkled all over, covered with rings.

Flustra[1518]

2231. FLUSTRA *foliacea* [*Flustra foliacea* (Linnaeus, 1758). Eng. Greater horn wrack; Fam. Flustridae], foliaceous, branched, with cuneiform, rounded laciniae.
Millepora, membranous, curved, strongly branched; branches distinct, flat, blunt, dilated above. *Hort. Cliff.* 480.
Ellis. Corall. 70. t. 79. f. A.
Occurs in the ocean.
OBS. I have changed the name *Eschara* to *Flustra*, since the first one is a homonym of a disease.[1519]

2232. FLUSTRA *fistulosa* [*Cellaria fistulosa* (Linnaeus, 1758). Fam. Flustridae], ramose, dichotomous, fistulose, distinctly segmented, smoothly rounded.
Ellis. Corall. 46. t. 23. f. A.
Occurs in the ocean.

2233. FLUSTRA *pilosa* [*Electra pilosa* (Linnaeus, 1767). Eng. Thorny sea mat; Fam. Electridae], bipinnate, pilose.
Ellis. Corall. 73. t. 31.
Occurs in the Norwegian Ocean; not uncommon.
DESCR. Appearance as that of the hypnum moss with branches that are bipinnate or decomposed above and these in turn have smaller clavate and compressed branches; soft and entirely perfused with pores. A soft seta beneath each pore.

Corallina[1520]

2234. CORALLINA *officinalis* [*Corallina officinalis* Linnaeus, 1758. Sw. Korallalg; Fam. Corallinaceae], trichotomous, with cylindrical segments, the terminal one ovate.
Ellis. Corall. 48. n. 2. t. 24. f. A.
Occurs in the ocean; very abundant.

[1518] Phylum Bryozoa. Eng. Bryozoans or Moss animals. Sw. Mossdjur.
[1519] I.e. a black crust over a wound caused by a skin burn, necrosis or certain infections.
[1520] Kingdom Plantae: Phylum Rhodophyta. Eng.: Plants: Red algae. Sw. Egentliga växter: Rödalger.

2235. CORALLINA *squamata* [*Jania squamata* (Linnaeus) J.H. Kim, Guiry & H.-G. Choi, 2007. Eng. Creeping coral weed; Fam. Corallinaceae, Eng. Coralline algae], bipinnate, with obovate, flattened segments.
Ellis. Corall. 49. n. 4. t. 24. f. C.
Lives along with the preceding coral; not uncommon.

2236. CORALLINA *corniculata* [*Jania rubens var. corniculata* (Linnaeus) Yendo, 1905. Fam. Corallinaceae, Eng. Coralline algae], dichotomous, with two-horned segments having distinctly segmented cornicles.
Ellis. Corall. 50. n. 6. t. 24. f. D.
Occurs ubiquitously in the ocean.

2237. CORALLINA *rubens* [*Jania rubens* (Linnaeus) J.V. Lamouroux, 1816. Eng. Slender-beaded coral weed, Sw. Gaffelkrasing; Fam. Corallinaceae, Eng. Coralline algae],[1521] dichotomous, capillary, with cylindrical, very short segments with a subclavate dichotomy.
Ellis. Corall. 59. n. 5. t. 24. f. E.
Occurs in the ocean.

2238. CORALLINA *cristata* [*Jania rubens* (Linnaeus) J.V. Lamouroux, 1816. Eng. Slender-beaded coral weed, Sw. Gaffelkrasing; Fam. Corallinaceae, Eng. Coralline algae],[1522] dichotomous, capillary, with all segments subclavate.
Ellis. Corall. 51. n. 7. t. 24. f. E.
Occurs in the ocean.

Sertularia[1523]

2239. SERTULARIA *pumila* [*Dynamena pumila* (Linnaeus, 1758). Eng. Garland hydroid, Minute garland hydroid, Garland sea fir or Sea oak; Fam. Sertulariidae], denticules opposite, mucronate, recurved; calyces obovate; branches swaying.
Ellis. Corall. 9. n. 8. t. 5. f. A.
Lives attached to shells and brown algae in the ocean.

2240. SERTULARIA *tamarisca* [*Tamarisca tamarisca* (Linnaeus, 1758). Eng. Sea tamarisk; Fam. Sertulariidae], denticules almost opposed, truncated, weakly denticulate; calyces obovate, bidentate; branches alternate.
Ellis Corall. 4. n. 1. t. 1. f. A.
Lives along with the preceding species.

[1521] See no. 2238.

[1522] See no. 2237.

[1523] Phylum Cnidaria: Class Hydrozoa. Eng.: Cnidarians: Hydrozoans. Sw.: Hydrozoer or Hydror.

2241. SERTULARIA *abietina* [*Abietinaria abietina* (Linnaeus, 1758). Eng. Sea fir, Sw. Julgranspolypen; Fam. Sertulariidae], denticules almost opposed, tubulose; calyces oval; branches alternate.
Ellis. Corall. 4. n. 2. t. 1. f. B.
Lives along with all the preceding species; rather rare.

2242. SERTULARIA *halecina* [*Halecium halecinum* (Linnaeus, 1758). Eng. Herring-bone hydroid, Sw. Sillbenshydroiden; Fam. Haleciidae], denticules alternate and indistinct; calyces oval; mouth oblique; caules united.
Ellis. Corall. 17. n. 15. t. 10.
Lives along with all the preceding species; rather rare.

2243. SERTULARIA *myriophylla* [*Lytocarpia myriophyllum* (Linnaeus, 1758). Eng. Pheasant's tail coralline or Pheasant-tail hydroid; Fam. Aglaopheniidae], second denticules pointed; calyces cylindrical, sessile; branches pinnate, incurved.
Ellis. Corall. 14. n. 13. t. 8. f. A.
Occurs deep in the ocean.

2244. SERTULARIA *falcata* [*Hydrallmania falcata* (Linnaeus, 1758). Eng. Sickle hydroid; Fam. Sertulariidae], second denticules tubulose; calyces ovate; branches alternate and pinnate.
Ellis. Corall. 12. n. 11. t. 7. f. A.
Lives along with the preceding species.

2245. SERTULARIA *pluma* [*Aglaophenia pluma* (Linnaeus, 1758). Eng. Podded hydroid; Fam. Aglaopheniidae], second denticules campanulate; calyces gibbous, cristate; small alternate, pinnate, lanceolate forks.
Ellis Corall. 13. n. 12. t. 7. f. B.
Lives along with all the preceding species.

2246. SERTULARIA *echinata* [*Sertularia argentea* Linnaeus, 1758. Eng. Sea fir or Squirrel's tail hydroid; Fam. Sertulariidae], denticules opposite, rather blunt; calyces obovate, flattened, reticulate, muricate; forks small, pinnate, bifid.
Occurs in the ocean where it surges against Sweden.
DESCR. Stirp pinnate, lanceolate; feathers well spaced, bifid, almost imbricate; teeth opposite, similar in structure to the previous species. Many calyces, which are oval or obovate, flattened, reticulate with elevated veins, and entirely muricate.

2247. SERTULARIA *antennina* [*Nemertesia antennina* (Linnaeus, 1758). Eng. Antenna hydroid or Sea beard; Fam. Plumulariidae], denticules vertillicate, setaceous; calyces subsessile, vertillicate; stirps unbranched.
Ellis. Corall. 13. n. 12. t. 7. f. B.
Occurs in our ocean; rather rare.

2248. SERTULARIA *lendigera* [*Amathia lendigera* (Linnaeus, 1758). Fam. Sertulariidae], indistinct denticules; second calyces cylindrical, parallel, scattered all over; stirps filiform.
Ellis. Corall. 27. n. 24. t. 15. f. B.
Occurs in the ocean; abundant.

2249. SERTULARIA *geniculata* [*Obelia geniculata* (Linnaeus, 1758). Eng. Bell hydroid, Kelp fur, Knotted thread hydroid or Zigzag wine-glass hydroid, Sw. Häftstiftsmedusa; Fam. Campanulariidae], denticles alternate, contorted; calyces ovate, partially rostrate; stirp geniculate, flexible, unbranched.
Ellis. Corall. 22. n. 19. t. 12. f. B.
Occurs in the ocean where it surges against Bohuslän.

2250. SERTULARIA *polyzonias* [*Sertularella polyzonias* (Linnaeus, 1758). Eng. Great tooth hydroid; Fam. Sertularellidae], denticles alternate, weakly denticulate; calyces obovate, girdled; stirp slightly branched.
Ellis. Corall. 5. n. 3. t. 2. f. A. B.
Occurs in the ocean.

2251. SERTULARIA *flexuosa* [*Nomen dubium*], denticles indistinct; calyces alternate, ovate, sessile; stirp unbranched, flexuous.
Loefl. Act. Stockh. 1752. p. 114. t. 3. f. 5–10.
Ellis. Corall. t. 38. f. 1. A.
Occurs in the ocean and the Baltic Sea.

2252. SERTULARIA *bursaria* [*Epistomia bursaria* (Linnaeus, 1758). Fam. Epistomiidae],[1524] denticles opposed, flattened, fastigiate; branches dichotomous.
Ellis. Corall. 41. n. 8. t. 22. f. A.
Lives attached to brown algae in the ocean.

[1524] Phylum Bryozoa. Eng. Bryozoans or Moss animals. Sw. Mossdjur.

2253. SERTULARIA *loricata* [*Eucratea loricata* (Linnaeus, 1758).[1525] Eng. Paired bryozoan; Fam. Eucrateidae], denticles opposed, truncated, indistinct.
Ellis. Corall. 40. n. 7. t. 21. f. B.
Occurs in the ocean.

2254. SERTULARIA *fastigiata* [*Crisularia plumosa* (Pallas, 1766). Eng. Feather bryozoan; Fam. Bugulidae], denticles alternate, pointed; branches dichotomous, fastigiate.
Ellis. Corall. 31. n. 1. t. 18. f. A.
Occurs in the ocean; abundant.

2255. SERTULARIA *scruposa* [*Scrupocellaria scruposa* (Linnaeus, 1758). Fam. Candidae],[1526] denticles alternate, angular, spinose; branches dichotomous.
Ellis. Corall. 38. n. 4. t. 20. f. C.
Occurs in the ocean along with many others which I have not been able to examine, since I live far away from the sea.

Hydra[1527]

2256. HYDRA *polypus* [*Hydra circumcincta* Schulze, 1914. Fam. Hydridae], naked; with seven capillary tentacles.
Hydra, green; body equal; tentacles shorter than body. *Fn.* 1283.
Baeck. Act. Stockh. 1746. t. 6. f. 1. 2.
Ellis. Corall. t. 26. f. C.
Inhabits freshwater bodies and fishponds; abundant.

2257. HYDRA *socialis* [*Nomen dubium*], naked, without spines, fleshy, wrinkled.
Roes. Ins. 3. t. 95. 96. 94. f. 4.
Lives along with the preceding species; not uncommon.

2258. HYDRA *umbellaria* [*Nomen dubium*], capsule ciliate, globose; corpuscle without spines.
Roes. Ins. 3. t. 100.
Inhabits freshwater bodies.

[1525] Phylum Bryozoa. Eng. Bryozoans or Moss animals. Sw. Mossdjur.
[1526] Phylum Bryozoa. Eng. Bryozoans or Moss animals. Sw. Mossdjur.
[1527] Phylum Cnidaria: Class Hydrozoa. Eng.: Cnidarians: Hydrozoans. Sw.: Hydrozoer or Hydror.

2259. HYDRA *triticea* [*Nomen dubium*], capsule oval, truncated; the size of a wheat grain.

Lives attached to oyster shells in the ocean; not uncommon. *A. R. Martin.*

DESCR. Capsules almost pedicellate and of a great number, membranous; the size and form of red ant pupae, apically truncated. I have not seen it in its prime.

Pennatula[1528]

2260. PENNATULA *phosphorea* [*Pennatula phosphorea* Linnaeus, 1758. Eng. Phosphorescent sea-pen or Luminescent sea-pen, Sw. Röd fjäderpenna; Fam. Pennatulidae], stirp with pennate rachis bilaterally.

Pennatula, phosphorescent, rachis entirely pennate on both sides.

Amoen. Acad. 4. p. 256.

Penna marina. Mus. Ad. Fr. 1. p. 69. *Seb. Mus.* 3. t. 16. f. 8.

Occurs rather sparsely in the Norwegian Ocean.

2261. PENNATULA *mirabilis* [*Virgularia mirabilis* (O.F. Müller, 1776). Eng. Slender sea-pen, Elegant sea-pen, Common sea-pen or Sea-rush, Sw. Mindre piprensare; Fam. Virgulariidae], stirp filiform; pens crescent-shaped, pectinate, well spaced, with two opposed lines.

Polypus mirabilis. Mus. Ad. Fr. 1. p. 96. t. 19. f. 4. *Amoen. Acad.* 4. p. 257.

Occurs in the Norwegian Ocean.

Taenia[1529]

2262. TAENIA *vulgaris* [*Nomen dubium*], double lateral suckers. *Amoen. Acad.* 2. p. 7. t. 1. f. 2.

Taenia, distinctly segmented, flat. *Fn.* 1266.

Gadd. Satag. 88.

Lives rarely at springs; small. Very common in dogs, often in people.

2263. TAENIA *lata* [*Diphyllobothrium latum* (Linnaeus, 1758). Eng. Broad fish tapeworm, Broad tapeworm or Fish tapeworm, Sw. Bred binnikemask or Fiskbinnikemask; Fam. Diphyllobothriidae], lateral suckers solitary. *Amoen. Acad.* 2. p. 80. t. 1. f. 3.

Lives in dogs; not uncommon; in man rare.

[1528] Phylum Cnidaria: Class Anthozoa. Eng. Cnidarians: Anthozoans. Sw. Nässeldjur: Koralldjur.

[1529] Phylum Platyhelminthes: Class Cestoda. Eng: Flatworms: Tapeworms. Sw. Plattmaskar.

2264. TAENIA *solium* [*Taenia solium* Linnaeus, 1758. Eng. Pork tapeworm, Sw. Svinbandmask; Fam. Taeniidae], marginal suckers solitary. *Amoen. Acad.* 2. p. 74. t. 1. f. 1.
Taenia, distinctly segmented, smoothly rounded. *Fn.* 1267.
Lives in dogs, people, and fish.

2265. TAENIA *canina* [*Dipylidium caninum* (Linnaeus 1758). Eng. Flea tapeworm, Double-pored tapeworm or Cucumber tapeworm, Sw. Loppbandmask; Fam. Dipylidiidae], marginal suckers opposed. *Amoen. Acad.* 2. p. 81. t. 1. f. 4.
Occurs along with all the preceding worms.

Volvox[1530]

2266. VOLVOX *globator* [*Volvox globator* Linnaeus, 1758. Sw. Rullklot; Fam. Volvocaceae], globose.
Roes. Ins. 3. f. 1–3. Globo-animal.
Inhabits lakes; abundant.

It is shameful to live in one's country and be ignorant of it (Lancius).[1531]

[1530] Kingdom Plantae: Phylum Chlorophyta. Eng: Plants: Green algae. Sw. Egentliga växter: Grönalger.

[1531] The first time the Latin sentence *Turpe est in Patria vivere & Patriam ignorare* (Lancius) appears is in *Fn. Su.* (1746). Later scientists have not been able to identify this Lancius, wherefore Linnaeus himself has been considered the real author. And rightly so, but Linnaeus has in fact paraphrased a device by Franciscus Lancius (16th c.), Bishop of Fermo and papal nuncio. See Pietrasanta, *De Symbolis Heroicis* ["On Heroic Emblems"], 1. 6, p. 283: *Franciscus Lancius habuit pro symbolo anserem ovis incubantem, cum hac inscriptione, NON ALIENA. Anser sua semper fovet; ita ipse suis semper intentus rebus, miscere aliena numquam voluerat* ("Franciscus Lancius had as his symbol a goose hatching its eggs with the inscription: NOT SOMEBODY ELSE'S [EGGS]! A goose always favours its own. Therefore, Lancius always focused on his own, he never wanted to get involved with others"); in this book there is also a picture of a stately goose hatching its eggs.

DISREGARDED

Animals, once collected, but then not found by us for further examination

INSECTA

2267. SCARABAEUS, bluish black. *Fn.* 359.
Occurs in Skåne. *Mr Leche.*
DESCR. It hardly attains the size of a flea; entirely bluish black above; entirely jet-black beneath.

2268. DERMESTES, jet-black; pectus and elytra weakly black; legs red. *Fn.* 371.
Lives on slightly rotten cabbage that is kept in cellars during winter.
DESCR. Body ovate, twice the size of a louse, agile. Head jet-black. Head and elytra reddish black; elytra slightly projecting along the dorsal margin, where they are joined together; femora and feet blackish red. Pectus not smoothly rounded, but almost having the distinct margin of the tortoise beetle, since it resembles the leaf beetles in many respects.

2269. DERMESTES, jet-black, legs red-brown. *Fn.* 372.
Inhabits water bodies among duckweeds.
DESCR. Twice as large as a louse. Head, thorax, and elytra jet-black. Each elytron with 9 striae, punctate, and with a somewhat projecting lateral margin. Legs and base of antennae red-brown tending to rusty brown. Thorax convex, but not smoothly rounded. (Perhaps *Silpha aquatica* 461.)

2270. DERMESTES, dusky black; elytra with shining spots. *De Geer. Fn.* 374.
Lives in wood.
DESCR. The size of a rather large louse, cylindrical, almost glabrous. The non-truncated elytra vary between a fuscous and black colour.

2271. COCCINELLA, sheath wings light yellow, with four rounded maculae, of which three are oblong. *De Geer. Fn.* 393.
Inhabits forests.
DESCR. Oblong; first intermediate macula common to both elytra; the other two transverse, longish.

2272. CHRYSOMELA, oblong, fuscous; elytra with a white letter S. *Fn.* 433.
Occurs in Skåne. *Mr Leche.*
DESCR. Thorax grey with whitish hairs. Elytra dusky grey with a white rhombic macula, pointed on each side medially on the suture, followed by a trigonal macula with its tip facing posteriorly; then a transverse fascia, and finally a macula medially across the suture; all these maculae are white. The size of the whole beetle as that of a caraway seed.

2273. CHRYSOMELA, brick-red, oblong, with acuminate elytra. *Fn.* 442.
Lives in trees.
DESCR. It is the smallest of all beetles so that it is only a quarter of the size of a louse. Entirely brick-red. Antennae filiform, less capitate than in no. 434. Then the elytra are not blunt but acuminate, covering the tail. Thorax almost marginate as in the ground beetles.

2274. CURCULIO, ash-grey, with longitudinally rather watery fasciae. *Fn.* 472.
Lives among gravel.
DESCR. Larger than a louse; entirely dark ash-grey in all parts. Longitudinal line, watery ash-grey, running from rostrum to elytra medially on dorsum, yet it does not touch the elytra. There is another line on each side, whitish ash-grey, running from the eye through thoracic and elytral sides straight to the anus. Beneath the whole animal is more watery ash-grey. Eyes black. Antennae ash-grey, capitate; lowest segment long. On the head a jet-black thin line going to base of antennae. Rostrum short, not markedly stretched out. (It seems to be a pea leaf weevil, *Curculio lineatus*.[1532])

2275. LEPTURA, black; elytra brick-red, with two spots, a cross, and black fasciae. *Fn.* 508.
Occurs in Skåne. *Mr Leche.*
DESCR. Body black. Elytra pale brick-red with a black spot on each elytron; then a crescent longitudinally bent backwards on the actual elytral suture; moreover, a macula at the outer margin of each elytron; both elytra are joined together by a transverse line; finally a broad, black fascia, a tip with a black fascia, and a black crescent near tip; a black line running longitudinally through the suture. Femora and tibiae light yellow above, black beneath.

2276. CARABUS, black; with red-brown legs. *Fn.* 521.
Act. Ups. 1736. p. 21. n. 9. Buprestis corpore nigro, pedibus rufis.
Lives also around us; common.
DESCR. In size and form almost most similar to no. 800,[1533] but entirely black. Thorax the width of the sheath wings. Elytra striate; tibiae and antennae red-brownish towards base; eight striae on each elytron, of which the second one (at the suture) is small, oblique, interrupted.

2277. CARABUS, grey; head, abdomen, and elytral base blackish. *Fn.* 533.
Lives – – –[1534]
DESCR. Scarcely larger than a louse. Thorax, elytra, antennae, and legs weakly grey. Abdomen and head black, with elytral base blackish at scutellum.

2278. CHRYSOMELA, jumping, roundish, jet-black, opaque. *Fn.* 537 (under: *Mordella*).
Act. Ups. 1736. p. 18. n. 4. Gyrinus nigricans minor.
Occurs among vegetables.

[1532] See no. 630.
[1533] I.e. CARABUS *caerulescens*.
[1534] Incomplete sentence.

DESCR. Similar to no. 426,[1535] but half the length, entirely jet-black; thorax not shining. Jumps as the others. Elytra a little shorter than abdomen, blunt.

2279. CHRYSOMELA, roundish, jet-black, shining; tibiae and antennae light yellow. *Fn.* 538 (under: *Mordella*).

Occurs among forest plants.

DESCR. The size of a rather large louse. Entirely jet-black, shining. Elytra striate. Antennae filiform, pale light yellow, with blackish tips. Femora black; tibiae light yellow (perhaps a variety of *Chrysomela helxines*[1536]).

2280. MORDELLA, oblong, black; a rusty brown macula medially on the sheath wings; sides rusty brown at base. *Fn.* 541.

Lives in the soil.

DESCR. Body entirely fuscous; the size of a louse. Head blunt, curved. Thorax ovate, rather smoothly rounded, narrower at abdomen. Elytra ovate, convex; medially on sheath wings a red-brown or rusty brown crescent-shaped macula with its cavity directed back towards anus, at the same time overlapping the two elytra; at the base of each elytron it is red-brownish laterally at both ends; beneath entirely black including legs and antennae, which are filiform, distinctly segmented, and a little longer than thorax.

2281. CICINDELA, thorax green; elytra rusty brown, posteriorly blue-black. *Fn.* 553.

Occurs in Skåne. *Mr Leche.*

DESCR. Appearance as that of a ground beetle,[1537] but thorax not marginate. Antennae black. Head and thorax blue, bright. Thorax subglobose. Elytra rusty brown, with a large black macula posteromedially, shining with a blue colour; this macula covers half of the elytra, but exterior margin entirely rusty brown. Legs light yellow. Body dark rusty brown beneath. (Could it perhaps be *Carabus vaporariorum*, no. 796?)

2282. DYTISCUS, ovate, *fuscous*; head and thorax red. *Fn.* 571.

Act. Ups. 1736. p. 15. n. 5. Dytiscus ovatus, collari ventreque rubro, alis fuscis.

Lives in springs along with *Monoculus*;[1538] abundant.

DESCR. The size of a rice seed or a little larger than a flea. Elytra fuscous. Abdomen red. Thorax and head red-brownish. Eyes black. (Related to *Dytiscus erythrocephalus*, no. 774.)

2283. GRYLLUS, tail ensiferous, recurved. *Fn.* 622.

Goed. Belg. 2. p. 165. t. 40. Sprinckhanen.

List. Goed. p. 301. t. 121. Acrigoneus.

Frisch. Germ. 2. t. 2. f. 4. *an*?[1539]

[1535] I.e. DERMESTES *murinus*.

[1536] See no. 540.

[1537] Linnaeus only refers to *Carabus*, see nos. 780–814.

[1538] See nos. 2044–2050.

[1539] See the com. to no. 130.

Lives in lindens, in which it sings in the month of August, in great numbers especially on the Fullerö estate, which belongs to *Count Jac. Cronstedt*, member of the Council of the Realm. (I have heard this insect, but not seen it in our country.)

2284. COCCUS, attached to sheath-winged insects. *Fn.* 724.

Frisch. Germ. 4. p. 19. t. 9. Pediculus Scarabaeorum canali adfixus.

Lives on various sheath-winged insects; especially very numerous on scarab beetles.[1540]

DESCR. Body oval with a pointed margin and slightly convex, red-brownish. Since it is not possible to accurately discern the various parts, I have written this after having looked at it only superficially. But others must investigate more closely as to genus, whether it really belongs to this genus, whether it is a species of a mite or a louse. It seems as if this insect is always attached to the body of a large insect through a seta, that is often at hand; or is it an egg? (I do not yet know what it is.)

2285. PHALAENA, antennae comb-shaped; tongue coiled; wings outspread, ash-grey, with two fuscous fasciae. *Fn.* 843.

Inhabits shady places.

DESCR. Upper wings ash-grey; fuscous small fascia at base, and another large, undulate fascia in the middle; if inspected through a lens, the whole surface is scattered with white spots; the antennal rachis is white; lower wings with a single pale fascia that is indistinct in the middle; beneath this wing it enjoys a black, indistinct spot in the middle. Abdomen almost ash-grey.

2286. PHALAENA, antennae setaceous; tongue coiled; wings outspread, grey-white, with two or three ash-grey fasciae and a black spot. *Fn.* 848.

Roes. Phal. 3. p. 31. t. 8.

Inhabits meadows planted with trees.

DESCR. The size of a horsefly.[1541] Upper wings grey-white with two or three fasciae; sides equal, transverse, palish ash-grey. Lower wings grey-white, at posterior margin more ash-grey. All wings beneath hawk-coloured or ash-grey, with the hue of a red-brownish colour that is hardly obvious; a distinct blackish spot on exterior wings of each side. The antennae of male are pectinate, but those of female setaceous.

2287. PHALAENA, antennae setaceous; tongue coiled; wings outspread, whitish yellow tending to snow-white and with linear black fasciae. *Fn.* 858.

Inhabits grassy meadows.

DESCR. All wings concolorous, snow-white both above and beneath with a whitish yellow hue; veins black, branched; on upper wings a transverse, black line, then similar to the preceding line with a hook, after that slightly pointed, finally resembling a double arch; lower wings with a transverse, thin line, then slightly pointed, thereupon resembling a double arch; all posterior margins white with black teeth.

[1540] Linnaeus only refers to *Scarabaeus*, see nos. 378–407.

[1541] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

2288. PHALAENA, antennae setaceous; tongue coiled; wings outspread; larva green, rod-shaped. *Fn.* 867.

Frisch. Germ. 7. p. 27. t. 19. Papilio erucae spithametrae luteo-viridis erectae stantis.

Lives on the plum tree. (Perhaps it is *Phalaena tristata*, no. 1277.)

2289. PHALAENA, antennae setaceous; tongue coiled; wings incumbent, grey, reticulate with white and red-yellow maculae. *Fn.* 871.

Goed. Belg. 1. p. 126. t. 68.

List. Goed. p. 136. f. 55.

Lives on elderberry. On 11 June, 1742, I saw it flying in great numbers at the path near Sandvikskällan[1542] at Uppsala.

DESCR. The size of a rather large fly. Wings flat, deflexed, fuscous, scattered all over with various round, rusty brown maculae tending to red-yellow.

2290. PHALAENA, antennae setaceous; tongue coiled; wings deflexed, rusty brown tending to ash-grey, with white and light yellow maculae; anus bearded, rusty brown. *Fn.* 872.

Raj. Ins. 165. n. 20. Phalaena media, corpore brevi crasso, alis exterioribus e pulvereo rubentibus, maculis nigris variis?

Frisch. Germ. 7. p. 29. t. 21. Papilio erucae atriplicinae nigrae linea laterali lutea?

In Småland: Askepiesk.

Lives on nettle, spinach, and saltbush; during summer abundant indoors; burning itself in lighted candles.

DESCR. Posterior wings with a thin, white line with two indistinct maculae, anterior white, posterior light yellow. Anus very large, with 3 valves, remarkably monstrous, covered with a red beard. Upper wings blackish rusty brown with indistinct and whitish maculae and thin lines. Wings pale beneath with a blackish spot medially.

2291. PHALAENA, antennae setaceous; tongue coiled; wings depressed, fuscous, with a bilateral rusty brown line; shoulders gibbous; fascicle medially on dorsum. *Fn.* 876.

Lives on hops.

DESCR. Moth falling among the rather large species or equal to a Silver Y.[1543] Wings dusky cloudy above; upper wings with a curved, thin line at base, and weakly rusty brown (in front of this one there is another paler line), transverse, and then another rusty brown, transverse line at tip. Wings pale beneath with a black spot medially. Forelegs longer, bearded. Collar protruding at the thoracic back and an ash-grey fascicle of hairs at the thoracic rear; very small fascicle of blackish hairs medially on dorsum.

Larva glabrous, curved, posteriorly obliquely truncated, green; shoulders marked with a light yellow triangle.

[1542] Eng. "The Sandvik Spring", was a natural spring, located in the current Ulleråkersparken.

[1543] See no. 1171. PH. NOCTUA *gamma*.

2292. PHALAENA, antennae setaceous; tongue coiled; wings bent backwards, pale grey, with a more saturated fascia. *Fn.* 885.

Inhabits gardens.

DESCR. The size of the common greenbottle.[1544] Tongue very short. Upper wings grey or whitish yellow, in the middle with a saturated grey fascia facing interior margin; at alar base a similar macula and at outer margin a small macula, also saturated grey at tip; wings medially furrowed beneath. Lower wings almost white at the thicker margin. Upper wings apically notched posteriorly.

2293. PHALAENA, antennae setaceous; tongue coiled; wings bent backwards, fuscous above and sending out a thin, white line at margin. *Fn.* 886.

Inhabits tree plantations in Stockholm.

DESCR. The size of a horsefly.[1545] Upper wings fuscous above, white at the thicker margin, medially a line or a white branch directed backwards towards posterior parts and a transverse, whitish fascia at posterior margin; lower wings ash-grey; all wings greyish blue beneath.

2294. PHALAENA, antennae setaceous; tongue coiled; two cornicles, curved backwards on themselves, cristate at base; wings flat and incumbent. *Fn.* 887.

Reaum. Gall. 1. t. 18. f. 11. 12. 13. 14. 15.

Lives indoors; abundant at springtime.

DESCR. Form oblong, rather flat; the size of the common flesh fly.[1546] Rostrum coiled. Upper wings grey and shining, scattered with tiny, indistinct spots, and striated with longitudinal cavities. Lower wings white, shining; all villous posteriorly at margin. Legs spinose. Antennae setiform. In front at the position of the somewhat prominent jaws, there are two awl-shaped cornicles that are pointed, curved backwards towards antennae, and verrucose or cristate at base. Abdomen with 5 bilateral, longitudinal, black spots beneath, placed on the sides. Body otherwise entirely of the same colour as upper wings. Colour of wings varies a little; hence some are grey and others greyish blue; each of the exterior wings with 2 white spots together with a black spot in front.

2295. PHALAENA, antennae setaceous; tongue coiled; two awl-shaped, recurved cornicles; wings blackish, maculate with white above. *Fn.* 888.

Inhabits small woods.

DESCR. It is very small, oblong, blackish. Upper wings dorsally with three whitish, longitudinal maculae that darken. Wings posteriorly with black beard, on the sides fuscous. Three maculae or fasciae medially on dorsum, arranged longitudinally, blackish. Cornicles recurved, awl-shaped, not cristate.

2296. PHALAENA, antennae setaceous; tongue coiled; two awl-shaped, recurved cornicles; wings incumbent, cloudy black and ash-grey. *Fn.* 889.

Lives on trunks of aspen, on the leaves of which the larva feeds, and also rolls together.

[1544] See no. 1828.

[1545] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.

[1546] See no. 1832.

DESCR. The size of the common flesh fly,[1547] anteriorly acuminate; body depressed. Upper wings incumbent, cloudy fuscous and grey-white, posteriorly a black row of spots. Cornicles unbranched, recurved. Antennae almost the length of the body.

2297. PHALAENA, antennae setaceous; tongue coiled; nasute, grey, cloudy black. *Fn.* 898.

Lives indoors; rather rare.

DESCR. Small, semi-cylindrical; wings villous at upper margin. The wings are grey above, but cloudy with a dusky blackish colour. Legs grey. Eyes black. Antennae shorter than wings, setaceous, black.

2298. PHALAENA, antennae setaceous; tongue coiled, nasute, blackish; thin, deep yellow lines, white, undulating at margin. *Fn.* 913.

Lives on bird cherry.

DESCR. The size of the house fly.[1548] Antennae black, half the length of the body. Upper wings blackish above, with thin, undulating, deep yellow lines that are so richly painted that it is difficult to determine which colour prevails; alar margin thicker, undulating posteriorly with 5 or 6 thin, whitish or silvery lines. Lower wings blackish with the thicker margin white laterally.

2299. PHALAENA, antennae setaceous; wings incumbent, linear, pilose. *Fn.* 919.

? *Reaum. Ins.* 1. t. 12. 13.

Occurs at marshes, for example, at Brahelund and Fredrikshof outside Stockholm, where it flies over the waters like mosquitoes[1549] around evening time.

DESCR. Antennae setaceous, long. The size and appearance as those of the very common stinging mosquito. Upper wings linear, lower ones awl-shaped; all hirsute with long hairs; a bilateral, white macula is seen on both sides while the wings are closed. Legs pilose. Is it a caddisfly.[1550]

2300. TENTHREDO, of the aspen. *Fn.* 934.

Lives on aspen. *J. Moraeus.*

DESCR. I have not seen the sawfly itself, but only a larva in Falun. Larva greenish. Head jet-black. Neck in front of feet as well as tail whitish yellow. 4 rows of longitudinal, black maculae consisting of 11 maculae or spots on each side with an unequal, terminal macula. β smaller double maculae above each leg. Six pairs of secondary legs, except for the oblique tail legs.

2301. TENTHREDO, of gall of willow leaves. *Fn.* 945.

Welsch. Hecast. 1. p. 128. t. 128. Verrucae foliorum Salicis.

Frisch. Germ. 4. p. 22. t. 4. Ichneumon foliorum Salicis.

Reaum. Gal. 3. t. 37. f. 1–5.

Lives on various kinds of willows, on the leaves of which there are nodes or nodose galls, inside which it lives.

[1547] See no. 1832.

[1548] See no. 1833.

[1549] Linnaeus only refers to *Culex*, see nos. 1890–1894.

[1550] Linnaeus only refers to *Phryganea*, see nos. 1481–1503.

2302. ICHNEUMON, black; legs rusty brown, with anterior tarsi black; antennae unicoloured. *Fn.* 956.

Inhabits meadows.

DESCR. This ichneumon should not be considered to fall among the largest ones. Antennae, head, thorax, and abdomen jet-black. Antennae almost the length of the body, entirely black. Sting the length of the abdomen, setaceous, black. Legs rusty brown including femora, tibiae, and tarsi, except for the black-tipped tibiae of forelegs.

2303.[1551] ICHNEUMON, black; frons pale; legs red-brown. *Fn.* 961.

Act. Ups. 1736. p. 50. n. 20. Ichneumon cauda inermi, abdomine tereti atro, pedibus filiformibus rubris.

Lives around us; abundant.

DESCR. Rather small. Antennae black. Frons pale. No spots on frontal part of wings and none on abdominal segments. Wings red-brown. Hindlegs with apically blackish tibiae. Wings membranous with a marginal weakly greyish blue spot, of a hyaline colour. The abdomen is cylindrical.

2304. ICHNEUMON, black; legs red-brown; posterior tibiae apically black; antennae white medially. *Fn.* 962.

Act. Ups. 1736. p. 50. n. 21. Ichneumon antennis spiralibus, corpore atro, ventre subfalcato, pedibus luteis.

Occurs ubiquitously in the countryside.

DESCR. Abdomen jet-black, by no means cylindrical, but lanceolate, depressed. Head and thorax black. Wings weakly greyish blue, with a marginal, pale spot. Antennae spiralling, almost the length of the body, black, with a white ring in the middle. Femora, tibiae, and tarsi all rusty brown, but hind tibiae, especially at tips, and their tarsi are black. But the rather long femora are rusty brown on hindlegs, as in other parts.

2305. ICHNEUMON, black; legs rusty brown; posterior tibiae variegated with white and black. *Fn.* 963.

Lives in Skåne. *Mr Leche.*

DESCR. Slightly larger than a mosquito.[1552] Antennae pale. Frons light yellow. Head, thorax, and abdomen without maculae, black. Abdomen cylindrical. The two anterior pairs of legs rusty brown; third pair with dark rusty brown femora. Tibiae marked with two white rings and just as many reciprocal black ones.

2306. ICHNEUMON, black; abdomen anteriorly rusty brown, posteriorly black, with five light yellow maculae; hence antennae white. *Fn.* 979.

Occurs along with the preceding ichneumon.

DESCR. Antennae black; the other side entirely white. Legs red-brown. Head black; frons light yellow. Thorax apically black and deep yellow at alar insertion. Abdominal segments black, marked with a light yellow macula on dorsum, but second and third segments rusty brown. Wings greyish blue.

[1551] Wrong number in the original: 2323.

[1552] Linnaeus only refers to *Culex*, see nos. 1890–1894.

2307. ICHNEUMON, black; abdomen medially and forelegs red-brown; posterior tarsi white. *Fn.* 982.

Inhabits small woods.

DESCR. It is middle-sized. Head and antennae entirely black. Abdomen red-brown; base and tip black. The 4 forelegs red-brown; the two hindlegs longish, black; only tarsi of legs white. Wings with a membranous marginal, blackish spot.

2308. APIS, glabrous, bronze black, without maculae; legs rusty brown. *Fn.* 1005.

Occurs in Skåne. *Mr Leche.*

DESCR. The following description is written by *Leche*: Wasp[1553] small, the colour of smoky quartz. Antennae broad, capitate, equal, angled at one point and hanging downwards. Head broader than thorax. Thorax rather long, medially rather stout. Abdomen broad, depressed, round, with an umbo inferiorly in the middle. Wings longer than abdomen, colourless, with a single small, marginal, black channel that does not reach the margin. Legs dusky red-yellow, small. The size of a louse. Antennae those of a wasp; no coloured circles on the abdomen.

2309. ASILUS, black, hirtous; wings white; femora rusty brown. *Fn.* 1035.

Fl. Lapp. 359. n. 517. Musca atra villosa oblonga, pedibus longis, femoribus rubris. *Act. Ups.* 1736. p. 34. n. 64. idem.

Inhabits the meadows of Luleå in Lapland.

DESCR. The size of the house fly,[1554] but more slender. Entirely jet-black; hispid with hairs and not shining. Femora rusty brown. Wings white with black veins.

2310. MUSCA, blackish; wings anteriorly variegated with white and black. *Fn.* 1056.

DESCR. The appearance of a cranefly.[1555] Body blackish. Abdomen slender. Legs long. Antennae awl-shaped. Wings of a membranous colour, with 7 or 8 blackish veins; maculae, at anterior margin, especially medially, variegated with white and black. Eyes black. No denticle at alar margin.

2311. MUSCA, white wings with four fuscous fasciae; five pairs of spots at abdominal dorsum. *Fn.* 1062.

It. Oel. 118. Musca pallida, oculis viridibus.

Occurs in Öland.

DESCR. Much smaller than the house fly.[1556] Eyes green. Abdomen with four rows of jet-black spots on the back; five spots in each row. Wings white, with four fuscous fasciae, narrower at lower margin. Tail acuminate.

[1553] Linnaeus only refers to *Vespa*, see nos. 1670–1683.

[1554] See no. 1833.

[1555] Linnaeus only refers to *Tipula*, see nos. 1735–1778.

[1556] See no. 1833.

2312. MUSCA, hirsute; thorax red-yellow; wings with a fuscous macula. *Fn.* 1074.
Occurs on the flowers of Skåne. *Mr Leche.*
DESCR. It falls among the large flies. Eyes fuscous. Frons light yellow. Antennae red-yellow. Thorax strongly pilose, red-yellow. Abdomen black, covered with light yellow hairs. Legs black. Abdomen black beneath; margins of segments whitish; abdominal sides protrude with a deep yellow margin, outside the lower surface.

2313. MUSCA, pilose, ash-grey; wings rusty brown with a fuscous macula. *Fn.* 1075.
Act. Ups. 1736. p. 32. n. 34. Musca fusca; alis testaceis macula ferruginea.
Inhabits small woods.
DESCR. It falls among the largest flies of its genus; appearance as that of a horsefly[1557] in a certain way. Wings pale rusty brown, medially with a macula, especially at outer margin, more saturated rusty brown or dusky rusty brown. Body with fine ash-grey hairs and a little more covered with grey on abdomen. Tibiae whitish above, beneath black.

2314. MUSCA, black; abdominal segments, except for the first one, light yellow, medially black. *De Geer. Fn.* 1079.
Occurs in Östergötland.
DESCR. The size of the house fly.[1558] The abdominal segments are 6 in number and light yellow with a transverse, black line, but first one entirely black. On thorax, two bilateral light yellow maculae.

2315. MUSCA, black; abdomen snow-white; two black fasciae. *Fn.* 1082.
Appears on cinquefoils and other rather rare flowers.
DESCR. Half as large as the house fly.[1559] Eyes fuscous. Thorax jet-black, shining. Abdomen ovate, snow-white; first segment black medially at base; second entirely white, third and fourth black at posterior margin; anal tip white, black. Entirely jet-black beneath, but tibiae pale and first abdominal segment white beneath.

2316. MUSCA, fuscous; abdominal margins of segments ash-grey; wings rusty brown. *Fn.* 1088.
Act. Ups. 1736. p. 32. n. 38. Musca glabra, abdomine annulis fuscis pallidisque cincto.
Appears on flowers; especially common in gardens.
DESCR. Much longer than the house fly,[1560] dusky ash-grey, but abdominal segments quite grey-white; hence three abdominal rings are quasi-grey-white; tibiae black at tips, otherwise white. Wings rusty brown with hyaline tips. It is scarcely hirsute.

[1557] Linnaeus only refers to *Tabanus*, see nos. 1882–1889.
[1558] See no. 1833.
[1559] See no. 1833.
[1560] See no. 1833.

2317. MUSCA, grey; four black spots on abdominal back.
Fn. 1095.
Occurs in Skåne. *Mr Leche.*
DESCR. The size of the house fly[1561] and the appearance of a robber fly[1562] or a yellow dung fly.[1563] Head blackish. Wings membranous, anterior margin paler. Thorax grey-white. Abdomen soft, dark bluish grey, at anus fuscous. Four black spots, arranged longitudinally on the abdominal back, one on each segment. Femora dark bluish grey; tibiae and legs fuscous.

2318. MUSCA, grey; thorax shining green; abdomen shining blue. *Fn.* 1100.
Act. Ups. 1736. p. 33. n. 55. Musca carnivora viridi aenea, abdomine acuminato.
Lives in carcasses.
DESCR. As that of no. 1858, but smaller. Legs longer. Wings darker. Head and thorax bronze green. Abdomen blue, shining, rather narrow.

2319. MUSCA, jumping, naked, with antennae and setariae; abdomen fuscous above; thorax with three black striae. *Fn.* 1113.
Inhabits grasslands; jumps like a leafhopper.[1564] *F. Logie.*
DESCR. The size of a louse. Head light yellow. Eyes black. Vertex covered with a triangular, black macula. Thorax with three longitudinal black lines on the back, of which the intermediate one adjoins closely to the head, but lateral ones separated from head. Scutellum light yellow. Abdomen fuscous above with two yellowish lines. Hind femora stout.

2320. PODURA, common by paths. *Fn.* 1179.
In Sweden: Jordkrut.
Occurs in Småland; common by the actual paths; scattered over the soil like gunpowder; it is certainly very gregarious. Is it perhaps aquatic?

2321. ARANEA, light yellow; abdominal tip with a cordate, jet-black macula. *Fn.* 1239.
Inhabits swampy places, often also found on flowers.
DESCR. I just saw young spiders aggregated in great numbers in the web, but then they changed colours. Abdomen roundish, entirely sulphur-coloured; above anus a beautiful macula exactly cordate. Mouth forcipate; thorax of a waterlike colour. When moving forwards, it pulls a thread behind itself.

[1561] See no. 1833.
[1562] Linnaeus only refers to *Asilus*, see nos. 1908–1917.
[1563] See no. 1861.
[1564] Linnaeus only refers to *Cicada*, see nos. 879–902.

VERMES

2322. NAUTILUS *orthocera*, straight-shelled; whorls carinate, striate.
Nautilus, straight-shelled, subcylindrical, more slender towards tip. *Fn* 1330. *It. Oel.* 140.
Occurs accidentally in the Baltic Sea.
DESCR. We have not[1565] seen the actual shell or animal. However, it is a common fossil ubiquitously found, not only throughout Öland, but also in all our provinces.

2323. CONCHA, shell transversely oblong and barely longitudinally striate. *Fn.* 1334.
Occurs in the sea.

2324. CONCHA, shell roundish, with twenty deep furrows and crenate at margin. *Fn.* 1341.
Occurs in the sea.
DESCR. Shell roundish, thick; scored with twenty or more deep, transverse furrows. Between these furrows there is a margin curved backwards, but the shell margin is inwardly crenate or denticulate, through which character this shell differs greatly from the following shell.

2325. CONCHA, shell roundish, with transverse, numerous striae; margin smooth. *Fn.* 1342.
Occurs in the sea.
DESCR. Shell roundish, thick, pellucid; rather pointed at base; striae transverse, numerous, more than 20, very soft, barely distinguishable when looked at, pointed, turned backwards; inside the shell, at its base, quite often an oblong furrow; margin is by no means denticulate.

2326. CONCHA, shell aurite, red-brownish, with 20 striae. *Fn.* 1344.
List. Angl. 185. t. 5. f. 30. Pecten tenuis subrufus maculosus, circiter 20 striis majoribus at laevibus donatus.
Occurs in the West Sea; abundant.

2327. CONCHA, shell aurite, with around forty striae. *Fn.* 1345.
List. Angl. 186. t. 5. f. 31. Pecten minimus angustior inaequalis fere & asper, sinu ad cardinem cylindraceo, creberrimis minutissimisque striis donatus.
Occurs in the West Sea; abundant.
DESCR. The striae in this species score the shell with 30 or 40 remarkably minute furrows, through which it easily differs from the others; then the shell is also white.

[1565] Lat. *vidi* should be written as *non vidi*. See *Fn. Su.* (1746), no. 1330.

2328. CONCHA, shell convex on each side; four horn-coloured whorls and with a weakly rusty brown fascia. *Fn.* 1297.

Occurs on the Island of Liljeholmen[1566] in Uppsala.

DESCR. Rather small. Body of animal very slender, entirely jet-black.

[1566] I.e. Sw. Liljekonvaljeholmen.

NEW PLANTS FOR THE SWEDISH FLORA

1. PANICUM *sanguinale* [*Digitaria sanguinalis* (L.) Scop. Eng. Hairy finger-grass or Hairy crabgrass, Sw. Blodhirs; Fam. Poaceae, Eng. Grasses, Sw. Gräs]. *Osbeck, P.* Halland, Hasslöv.
2. POA *bulbosa* [*Poa bulbosa* L. Eng. Bulbous bluegrass or Bulbous meadow grass, Sw. Knölgröe; Fam. Poaceae, Eng. Grasses, Sw. Gräs]. *Törnros, J.* Södermanland, Nyköping.
3. STIPA *pennata* [*Stipa pennata* L. Eng. European feather grass, Sw. Fjädergräs; Fam. Poaceae, Eng. Grasses, Sw. Gräs]. *Falk, J. P.* Västergötland, Åsaka, Vartofta; abundant.
4. PULMONARIA *maritima* [*Mertensia maritima* (L.) Gray. Eng. Oysterplant or Oysterleaf, Sw. ostronört; Fam. Boraginaceae, Eng. Borage or Forget-me-not family, Sw. Strävbladiga växter]. *Martin, A. R.* Norway, Herlö, on the sandy sea shore.
5. PRIMULA *veris acaulis* [*Primula vulgaris* Huds. Eng. Cowslip or English primrose, Sw. Jordviva; Fam. Primulaceae, Eng. Primrose family, Sw. Viveväxter]. *Martin.* Norway, Bergen; abundant.
6. CAMPANULA *rapunculoides* [C*ampanula rapunculoides* L. Eng. Creeping bellflower, Lygurian bellflower or Rampion bellflower, Sw. Knölklocka; Fam. Campanulaceae, Eng. Bellflower family, Sw. Klockväxter]. *Osbeck.* Halland, rather rare; at only one place in Närke.
7. GENTIANA *aurea* [*Gentianella aurea* (L.) Harry Sm. Eng. Golden dwarf gentian, Sw. Blekgentiana; Fam. Gentianaceae, Eng. Gentian family, Sw. Gentianaväxter]. *Solander, D.* C. The mountains of Lapland.
8. SCANDIX *odorata* [*Myrrhis odorata* (L.) Scop. Eng. Sweet cicely or Anise, Sw. Spansk körvel; Fam. Apiaceae, Eng. Parsley family, Sw. Flockblommiga växter]. *Martin.* Norway, Bergen, at sandy places.
9. SCANDIX *pecten* ♀ [*Scandix pecten-veneris* L. Eng. Shepherd's-needle, Sw. Nålkörvel; Fam. Apiaceae, Eng. Parsley family, Sw. Flockblommiga växter]. *Falk, J. P.* Gotland, Klinte.
10. BUNIUM *bulbocastanum* [*Bunium bulbocastanum* L. Eng. Great pignut or Earth-nut, Sw. Jordkastanj; Fam. Apiaceae, Eng. Parsley family, Sw. Flockblommiga växter]. *Martin.* Norway, Bergen, at sandy mountains.
11. TAMARIX *germanica* [*Myricaria germanica* (L.) Desv. Eng. German tamarisk, Sw. Klådris or Tysk tamarisk; Fam. Tamaricaceae, Eng. Tamarisk family, Sw. Tamariskväxter]. *Martin.* Norway, Sördalen River.

12. LILIUM *bulbiferum* [*Lilium bulbiferum* L. Eng. Bulb-bearing lily or Orange lily, Sw. Brandlilja; Fam. Liliaceae, Eng. Lily family, Sw. Liljeväxter]. I have seen it myself. Södermanland, Aspön, very abundant on a hill or in an oak thicket.
13. JUNCUS *stygius* [*Juncus stygius* L. Eng. Moor rush, Sw. Dytåg; Fam. Juncaceae, Eng. Rush family, Sw. Tågväxter]. I have seen it myself ubiquitously in grass swamps in Sweden.
14. RUMEX *obtusifolius* [*Rumex obtusifolius* L. Eng. Broad-leaved dock, Sw. Tomtskräppa; Fam. Polygonaceae, Eng. Knotweed family, Sw. Slideväxter]. I have seen it myself at the illustrious Count Tessin's Åkerö estate, Södermanland.
15. OENOTHERA *biennis* [*Oenothera biennis* L. Eng. Common evening-primrose, Sw. Äkta nattljus; Fam. Onagraceae, Eng. Evening primrose or Willowherb family, Sw. Dunörtsväxter]. *Tidström.* Västergötland. Kinnekulle.
16. DIANTHUS *prolifer* [*Petrorhagia prolifera* (L.) P. W. Ball & Heywood. Eng. Proliferous pink or Childing pink, Sw. Hylsnejlika; Fam. Caryophyllaceae, Eng. Pink or Carnation family, Sw. Nejlikväxter]. *Falk, J. P.* Gotland, Lilla Karlsö.
17. CRATAEGUS *hybridus* [*Hedlundia hybrida* (L.) Sennikov & Kurtto.[1567] Eng. Oakleaf mountain ash or Finnish Whitebeam, Sw. Finnoxel; Fam. Rosaceae, Eng. Rose family, Sw. Rosväxter]. *Falk, J. P.* Gotland: Ekstad, Östergarn, Fårö, and Stora Karlsö. *Kalm P.* Finland, Turku.[1568]

    Hybrid species of *Sorbus* 435 and *Crataegus* 433, but I could hardly say which of them it is closer to.
18. DIGITALIS *rubra* [*Digitalis purpurea* L. Eng. Common or Purple foxglove, Sw. Fingerborgsblomma; Fam. Plantaginaceae, Eng. Plantain family, Sw. Grobladsväxter]. *Martin, A. R.* Norway, Bergen, ubiquitous.
19. DRABA *hirta* [*Draba glabella* Pursh. Eng. Smooth draba or Smooth whitlowgrass, Sw. Fjälldraba; Fam. Brassicaceae, Eng. Mustard or Cabbage family, Sw. Korsblommiga växter]. *Solander, D.* C. Lapland, the mountains.
20. CARDAMINE *parviflora* [*Cardamine parviflora* L. Eng. Small-flowered bittercress or Sand bittercress, Sw. Strandbräsma; Fam. Brassicaceae, Eng. Mustard or Cabbage family, Sw. Korsblommiga växter]. *Törnros, J.* Södermanland, Nyköping, Djurgården.
21. SISYMBRIUM *supinum* [*Erucastrum supinum* (L.) Al-Shehbaz & Warwick. Eng. Prostrate rocket, Sw. Kalkkrassing; Fam. Brassicaceae, Eng. Mustard or Cabbage family, Sw. Korsblommiga växter]. *Falk, J. P.* Gotland, the wetlands of Ar, at the mill.
22. LAVATERA *thuringiaca* [*Malva thuringiaca* (L.) Vis. Eng. Garden tree-mallow, Sw. Gråmalva; Fam. Malvaceae, Eng. Mallow family, Sw. Malvaväxter]. I have seen it myself. Uppland, Uppsala, at the fields of Valsätra.

[1567] Also known as *Sorbus hybrida* L.

[1568] See the com. to no. 450.

23. ASTRAGALUS *pilosus* [*Oxytropis pilosa* (L.) DC. Eng. Hairy milkvetch, Sw. Luddvedel; Fam. Fabaceae, Eng. Legume, Pea or Bean family, Sw. Ärtväxter]. *Falk*. Gotland, Västergarn, Skansholmen.
24. TRIFOLIUM *medium* [*Trifolium medium* L. Eng. Zigzag clover, Sw. Skogsklöver; Fam. Fabaceae, Eng. Legume, Pea or Bean family, Sw. Ärtväxter]. *Schreber*. Uppland, Uppsala, Jumkil.
25. HIERACIUM *leontodontis* [*Leontodon hispidus* L. Eng. Bristly or Rough hawkbit, Sw. Sommarfibbla; Fam. Asteraceae, Eng. Aster or Composite family, Sw. Korgblommiga växter]. *Solander*. The mountains of Lapland.
26. ORCHIS *odoratissima* [*Gymnadenia odoratissima* (L.) Rich. Eng. Short-spurred fragrant orchid, Sw. Luktsporre; Fam. Orchidaceae, Eng. Orchid family, Sw. Orkideer]. *Solander*. Västerbotten, ubiquitous.
Falk. Gotland, Sundre.
27. ARISTOLOCHIA *clematitis* [*Aristolochia clematitis* L. Eng. Birthwort, Sw. Hålrot or Pipranka; Fam. Aristolochiaceae, Eng. Birthwort family, Sw. Piprankeväxter]. *Forsskål P*. Skåne, Helsingborg, in the valleys.
28. HOLCUS *mollis* [*Holcus mollis* L. Eng. Creeping soft grass or Creeping velvet grass, Sw. Lentåtel; Fam. Poaceae, Eng. Grasses, Sw. Gräs]. *Osbeck*. Halland.
29. FONTINALIS *minor* [*Fontinalis antipyretica* Hedw. Eng. Antifever fontinalis moss, Willow moss or Greater water-moss, Sw. Stor näckmossa; Fam. Fontinalaceae]. *Gother*. Uppland, Uppsala.
30. LYCOPERDON *carpobolus* [*Sphaerobolus stellatus* Tode, nom. sanct. Eng. Cannon ball fungus, Sw. Slungboll; Fam. Geastraceae, Eng. Earthstars, Sw. Jordstjärnor]. *Forsskål*. Småland, Gränna, in the woods along the path.
31. LYCOPERDON *radiatum* [*Diderma radiatum* (L.) Morgan. Fam. Didymiaceae]. My son.[1569] Uppland, Uppsala, Sävja Kungspark.[1570]

[1569] I.e. Linnaeus the Younger.

[1570] I.e. the "King's Park of Sävja", which must be the Nåntuna lund with the older name Djurgården, i.e. the royal hunting park.

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Adlerheim, Per (1712–89). Swedish, official in mining. Linnaeus's disciple: 86, 179 (*bis*), 181, 219

Adolf Fredrik, Eng. Adolf Frederick (1710–71). King of Sweden from 1751 until his death: 21, 40, 42, 112, 300, 341

Alströmer, Clas (1736–94). Swedish industrialist. Linnaeus's disciple. Brother of Johan Alströmer: 1424, 1438, 1772

Alströmer, Johan (1742–86). Swedish industrialist. Brother of Clas Alströmer: 720, 1273, 1337, 1354, 1380, 1442, 1791

Åman, Nils (1731–83). Swedish physician. Linnaeus's student: 453 (*note*)

Artedi, Peter (1705–35). Swedish naturalist, known as the "Father of Ichthyology", Linnaeus's friend: (302), 374

Bacon, Francis (1561–1626). English philosopher, statesman: *Preface* (*note*)

Berger, Alexander Malachias (1737–1804). Swedish physician. The respondent to Linnaeus's *Calendarium Florae* (1756): 1228

Bergius, Peter Jonas (1730–90). Swedish physician, botanist, the founder of the Bergius Botanic Garden: 1457, 1968

Bergman, Torbern Olof (1735–84). Swedish chemist, mineralogist: 597, 1130, 1145, 1160, 1183, 1198, 1204, 1210, 1231, 1263, 1330, 1412, 1433, 1437, 1526, 1535, 1626, 1762

Bergquist, Carl (1711–81). Swedish, appointed engraver in 1739 at the Royal Swedish Academy of Sciences; performed a number of copper engravings for Linnaeus's dissertations. See *Plates*.

Bierkén, Pehr af (1731–74). Swedish physican: 2104

Blom, Carl Magnus (1737–1815). Swedish physician. Linnaeus's disciple: 552, 1047, 1227, 1436, 1594

Cederfelt, Johan (1730–77). Swedish. Auscultant at Bergskollegium, clerck at the Customs Directorate (Sw. "Tulldirektion"): 331

Celsius the Elder, Olof (1670–1756). Swedish botanist, philologist. Professor of Theology in Uppsala. Linnaeus's mentor: 1141, 1994

Clerck, Carl Alexander (1709–65). Swedish entomologist, arachnologist. Linnaeus's disciple: 942, 1121, 1148, 1213, 1249, 1296, 1411, 1449

Cronstedt, Axel Fredrik (1722–65). Swedish mineralogist, chemist: 893

Cronstedt, Jacob (1668–1751). Swedish Count, Privy Councillor: 2283

Diogenes the Cynic (d. 323 BC). Greek philosopher. Lived his life in poverty and often slept in a ceramic barrel: 2032

Ekeblad the Younger, Claes (1708–71). Swedish. Member of the National Council (Sw. "Riksråd"), President of the Royal Chancery (Sw. "Kanslipresident") 1761–65 and 1769–71: *Dedic. page*.

Ekelund, Erik. Swedish student. Mentioned in Linnaeus's journey to Skåne: 547

Erwast, Isaac (1700–57). Finnish-Swedish vicar in Kemi in Finland: 2070

Falk, Johan Peter (1732–74). Swedish botanist. Linnaeus's disciple: *Fl. Su. Nov.*: 3, 9, 16, 17, 21, 23, 26

Forsskål, Johannes (1691–1761). Finnish-Swedish priest, Member of Parliament. The father of Peter Forsskål: 742

Forsskål, Peter (1732–63). Finnish-Swedish explorer, naturalist, orientalist. Linnaeus's disciple: 433, 728, 890, 1587, 1722, 1724, 1726, 1840; *Fl. Su. Nov.*: 27, 30

Frisch, Johann Leonard (1666–1743). German entomologist and ornithologist: 1171 (*bis*), 1432, 1676 (*bis*), 2023, 2065

Gadd, Per Adrian (1727–97). Finnish-Swedish. Professor of Chemistry in Turku in 1761: 13

Geer, Charles de (1720–78). Swedish industrialist, entomologist. Linnaeus's friend: 430, 500, 508, 531, 547, 570, 579, 585, 681, 705, 868, 911, 983, 1029, 1102, 1322, 1470, 1755, 1833, 1883, 1934, 1970, 2270, 2271, 2272, 2275, 2281, 2314

Gerber, Traugott (1710–43). German botanist: 1023

Gmelin, Johan Georg (1709–55). German naturalist, botanist, professor: 300

Goedaert, Jan (1617–68). Dutch naturalist, painter, entomologist: 1147, 1876

Gother, Engelbert (1708–75). Swedish councillor. Member of Parliament: *Fl. Su. Nov.*: 29

Haartman, Johan (1725–87). Finnish-Swedish physician. Professor of medicine in Turku in 1765. Linnaeus's disciple: 338, 880, 912, 1133

Hasselquist, Fredrik (1722–52). Swedish traveller, naturalist. Linnaeus's disciple: 1549

Hast, Barthold Rudolf (1724–84). Finnish-Swedish physician. Doctor of medicine in 1747 in Uppsala; physician in Österbotten: 152, 684, 879, 1590, 1631

Holm, Georg Tycho or Jörgen Tyge (1726–59). Danish botanist, physician, professor of Economics in Copenhagen. Linnaeus's disciple: 1203

Höpken, Anders von (1712–89). Swedish statesman. Privy councillor (Sw. "Riksråd") in 1746, Chancellor of Uppsala University 1760–1764, one of the founders of the Royal Swedish Academy of Sciences in 1739: *Dedic. page*

Johan III, Eng. John (1537–92). King of Sweden 1569–92: 2034

Kallenberg, Bengt (1712–74). Swedish, Uppsala: 454, 847

Kalm, Per or Peter (1716–79). Finnish-Swedish naturalist, explorer, botanist. Professor of Economy in Turku. Linnaeus's disciple: 799, 850, 948, 1686, 1694, 1973; *Fl. Su. Nov.*: 17

Klase, Lars Magnus (1722–66). Swedish. The respondent to *De Betula nana* (1743), the first dissertation published by Linnaeus as a professor. Provincial doctor in Jönköping: 813

Kramer, Wilhelm Heinrich (1724–65). German physician, naturalist: 236, 237

Lancius, Franciscus (16th c.), Italian bishop, papal nuntius: See the com. to the quotation at the end of *Fn. Su.* (after 2266).

Leche, Johan (1704–64). Swedish naturalist. Linnaeus often used his specimens, especially in the study of birds. Professor of medicine in Turku in 1748: 59, 84, 102, 169, 186 (*bis*), 227, 228, 232, 246, 379, 437, 450, 482, 487, 508, 531, 541, 582, 657, 698, 813, 816, 856, 879, 899, 911, 1161, 1317, 1318, 1485, 1613, 1708, 1763, 1869, 2151, 2267, 2272, 2275, 2281, 2305, 2308 (*bis*), 2312, 2317

Leeuwenhoek, Antonie van (1632–1723). Dutch microscopists, microbiologist, known as the "Father of Microbiology": 2123

Linnaeus the Elder (1707–78), Carl. Swedish naturalist, explorer, physician, professor, the founder of modern taxonomy, scientific writer in systematic botany and zoology, author of travel accounts, prolific letter-writer.

Linnaeus the Younger (1741–83), Carl. Swedish naturalist, professor. The son of Carl Linnaeus the Elder: 1102; *Fl. Su. Nov.*: 31

Lister, Martin (1639–1712). English naturalist, physician: 523, 1147, 2023, 2158

Loesel, Johann (1607–55). German botanist: 1023

Logie, Frédéric (1739–85). Swedish army officer. Son of the Swedish consul in Algier. Linnaeus's disciple: 1514, 2319

Löfling, Pehr (1729–56). Swedish botanist, traveller. Explored Venezuela, where he also died. Linnaeus's disciple: 407, 1508

Malmborg. Mentioned in Linnaeus's *Skånska Resa* (p. 40) and *The Linnaean Correspondence*. Possibly Jonas Malmborg (1696–1756). Swedish official: 687, 773

Marteville, Lodewijk van (1706–60). Dutch ambassador to Sweden: 1151

Martin, Anton Rolandsson (1729–85). Swedish botanist, arctic researcher. Linnaeus's disciple: 149, 296, 1964, 2029, 2035, 2036, 2045, 2062, 2077, 2093, 2094, 2097, 2104, 2112, 2118, 2119, 2121, 2124, 2152, 2162, 2216, 2220, 2222, 2224, 2227, 2259; *Fl. Su. Nov.*: 4, 5, 8, 10, 11, 18

Modéer, Adolph (1739–99). Swedish economic historian, naturalist: 483, 539, 550, 563, 574, 595, 598, 639, 671, 702, 742, 821, 831, 910, 914, 1584, 1607, 1653

Moraeus, Johan (1672–1742). Swedish mountain doctor. Linnaeus's father-in-law: 550, 1858, 2300

Osbeck, Pehr (1723–1805). Swedish explorer, naturalist. Linnaeus's disciple: 1577; *Fl. Su. Nov.*: 1, 6, 28

Palmstierna, Nils (1696–1766). Swedish baron. Privy councillor (Sw. "Riksråd") in 1746: *Dedic. page*

Petiver, James (1665–1718). English apothecary, Fellow of the Royal Society: 605, 1079

Pliny the Elder (23/24 AD–79 AD). Roman author, naturalist: 244

Quintilian, Marcus Fabius (35–ca. 100 AD). Roman orator: *Introd. poem.*

Ray, John (1627–1705). English naturalist. Regarded as the "Father of English Natural History": See the *Preface* to the *Fauna* and 429, 1044, 1459, 1464

Reamur de, René Antoine Ferchault (1683–1757). French entomologist: 1163

Renström, Carl Fredrik (ca. 1730–ca. 86). Swedish. Clerk at the Royal Swedish Academy of Sciences 1762–76: 1425

Rheede van tot Drakenstein, Hendrik Adriaan (1636–91). Dutch naturalist. Administrator of the Dutch East India Company: 1878, 1970

Rinman, Sven (1720–92). Swedish chemist, mineralogist, inspector of mines (Sw. "Bergsråd"): 104

Rolander, Daniel (1723–93). Swedish biologist. Famous for his botanical and zoological observations published in his *Diarium Surinamicum* (1754–56). Linnaeus's disciple: 734, 957, 1265, 1617, 1680

Rudbeck the Younger, Olof (Rudbeckius) (1660–1740). Swedish botanist, zoologist, ornithologist, explorer of Lapland: 73, 97, 133 (*note*), 168, 244, 378 (*note*)

Salvius, Lars (1706–73). Swedish printer: *Dedic. page*

Schreber von, Johann Christian Daniel (1739–1810). German naturalist, entomologist. Linnaeus's disciple: 453, 831, 1102; *Fl. Su. Nov.*: 24

Sell (Sellius), Gottfried (ca. 1704–67), German academic: 2087

Solander, Carl (1699–1760). Swedish priest, member of the Parliament. The father of Daniel Solander: 111, 549, 557, 594, 745, 932, 1269, 1448, 1478, 1527, 1565, 1657, 1661, 1668, 1791, 1898, 1922, 2054, 2068, 2070

Solander, Daniel (Carlsson) or Daniel Charles Solander (1733–82). Swedish naturalist. Linnaeus's disciple. Travelled on *Endeavour* with Joseph Banks on James Cook's first voyage to the Pacific Ocean to Australia, landed at what today is *Botany Bay*. Linnaeus's disciple: 639, 811; *Fl. Su. Nov.*: 7. 19. 25, 26

Starck, Carl Magnus (1735–84). Swedish military, captain: 450

Stobaeus, Kilian (1690–1742). Swedish physician, natural scientist, historian. Linnaeus's tutor in Lund: 2151

Tessin, Carl Gustaf (1695–1770). Swedish count, politician, ambassador: 894; *Fl. Su. Nov.*: 14

Theel, Daniel (1744–95). Swedish surgeon: 1107

Theophrastos (370 BC–ca. 285 BC). Greek philosopher: 47

Tidström, Anders (1723–79). Swedish mineralogist: *Fl. Su. Nov.*: 15
Törnros, Johan (1714–50). Swedish official: *Fl. Su. Nov.*: 2, 20
Uddman, Isaac (1731–81). Swedish physician, entomologist: 409, 673, 1778
Wahlbom, Johan Gustaf (1724–1808). Swedish physician, naturalist. Linnaeus's disciple: 290, 1111
Wallerius, Johan Gottschalk (1709–85). Swedish professor of chemistry, mineralogist: 172
Westman, Johan (1714–85). Swedish physician. Doctor of Medicine in Uppsala in 1743: 182
Willughby, Francis (1635–72). English ornithologist, ichthyologist: 127, 128, 264

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Abbreviations

Fn. Su. (1746) = Linnaeus, C., *Fauna Suecica sistens animalia Sueciae regni: quadrupedia, aves, amphibia, pisces, insecta, vermes, distributa per classes & ordines, genera & species. Cum differentiis specierum, synonymis autorum, nominibus incolarum: locis habitationum, descriptionibus insectorum*. Leiden 1746.

Fn. Su. (1761) = *Linnaeus,* C., *Fauna Suecica sistens animalia Sueciae regni: mammalia, aves, amphibia, pisces, insecta, vermes, distributa per classes & ordines, genera & species. Cum differentiis specierum, synonymis autorum, nominibus incolarum, locis natalium, descriptionibus insectorum*. Stockholm 1761.

Fn. Su. (1761), *Addenda,* p. 559 (in the Latin edition).

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GBIF. Global Biodiversity Information Facility (on line edition).

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PLATES

Two plates illustrated by Johan Leche and engraved by Carl Bergquist.

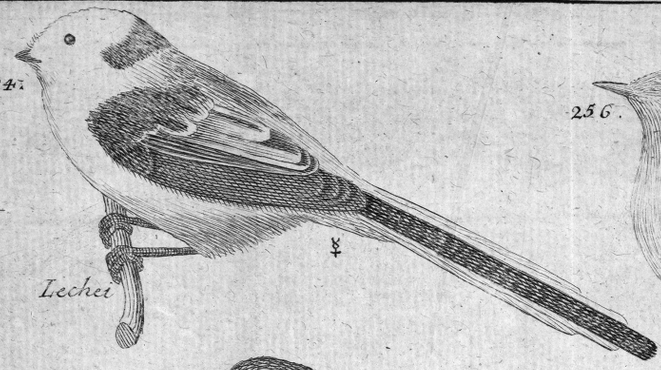
Plate 1 (*Tab.* I): 97 ♀; 84 ♀ *Lechei*; 256, ♀256 ♂; [*second row*] 651; 182; 227 α (wingfeathers 1–16), 227 α, 227 β (wingfeathers 1–12).

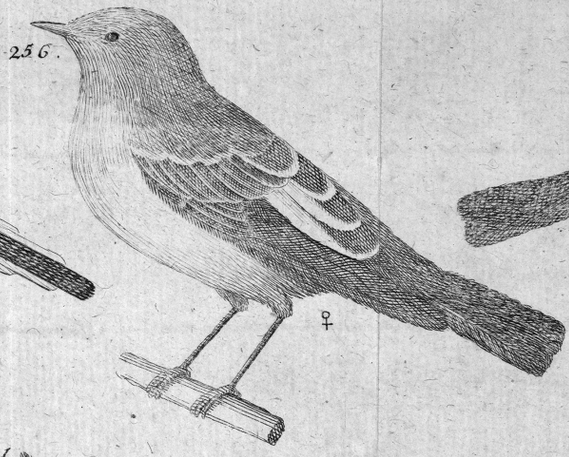
Plate 2 (*Tab.* II): 81 ♂; 233; 819; *Cyprinus auratus* [cf. *Fn. Su.* (1746), *Tab.* II: *Cyprinus pinna ani duplici* 331[1577]]; [*second row*] 81 ♀; 143; 232; 1141; [*third row*] 831; 2150 α–ε; 2100; 1545.

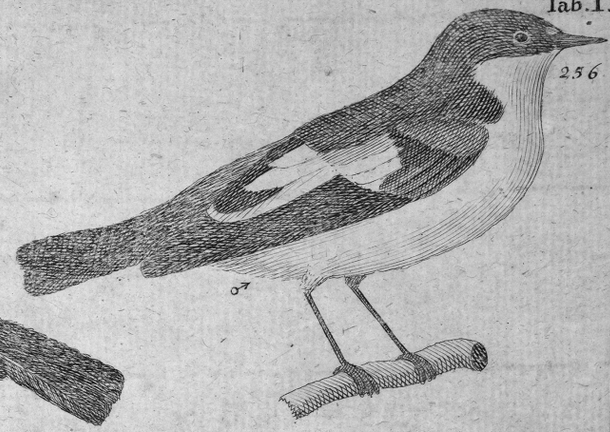
Cf. the plates (with texts) in *Fn. Su.* (1746), pp. 390 (*Tab.* I) and 392 (*Tab.* II).

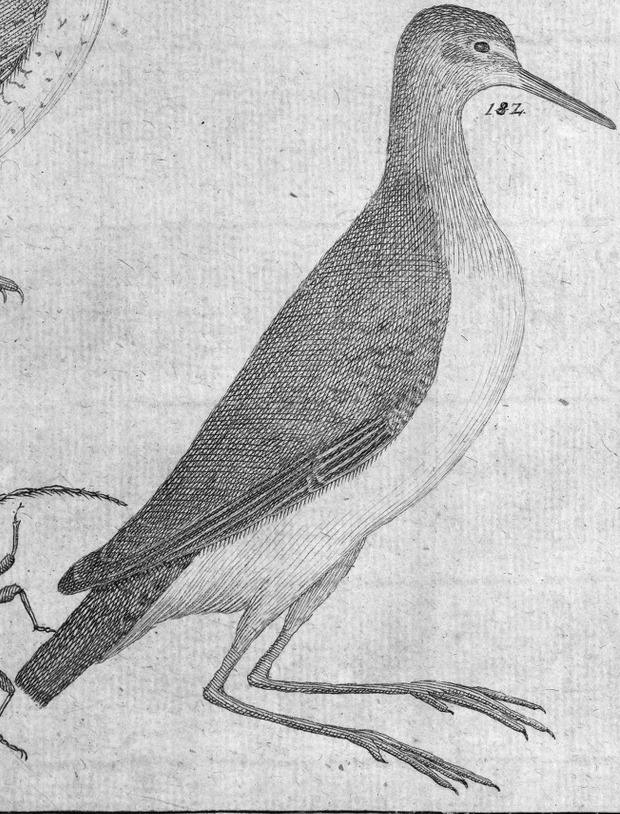
[1577] Incorrect statement. No. 331 corresponds to no. 374 in *Fn. Su.* (1761). However, it cannot be a minnow. Therefore, later corrected to *Cyprinus auratus*, valid as *Carassius auratus* (Linnaeus 1758), Eng. Goldfish, in plate 2, *Fn. Su.* (1761).

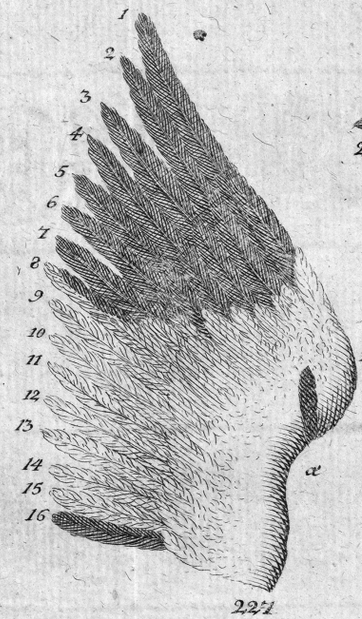


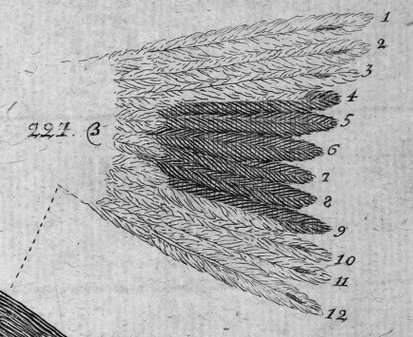


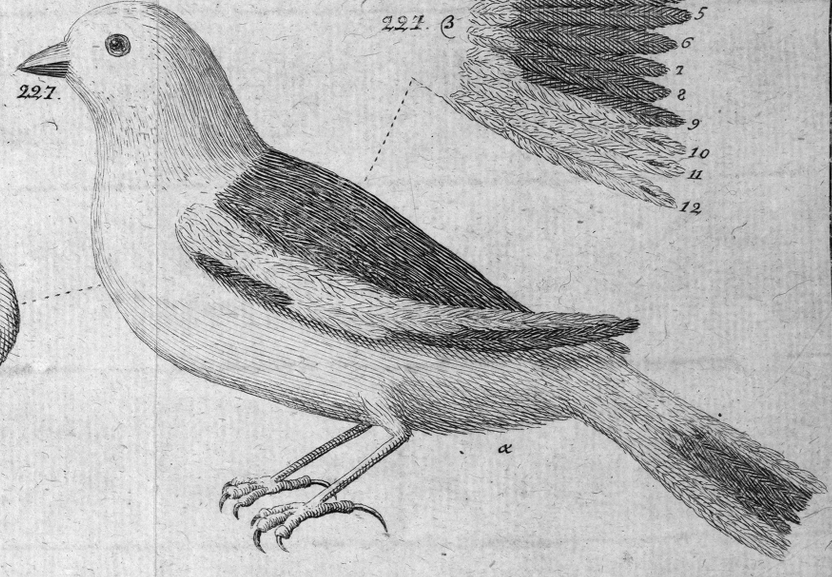


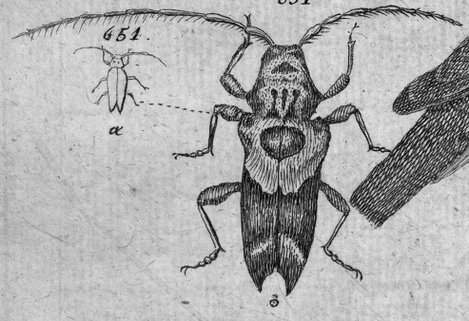






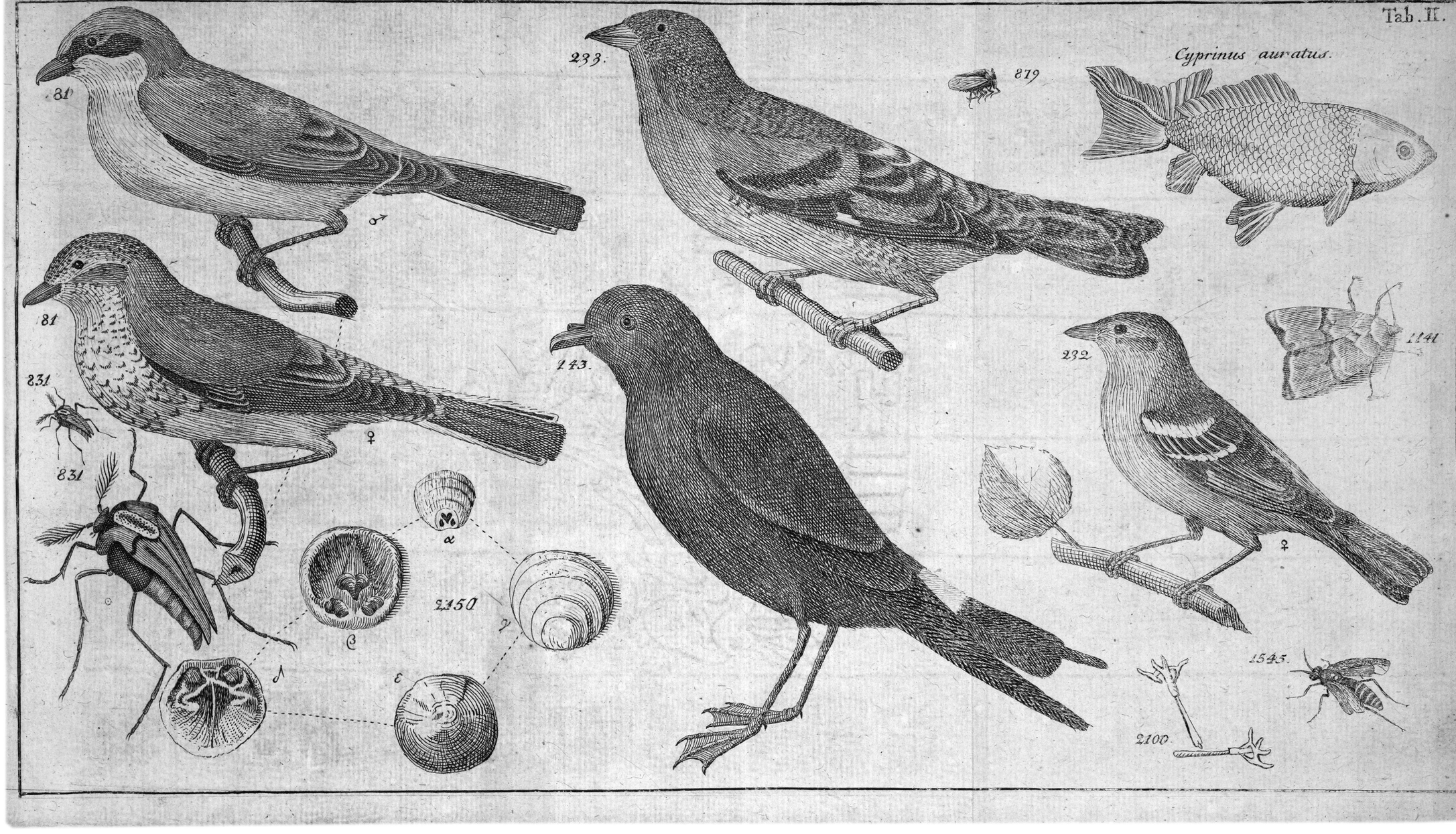






I. Leche pinxit.

C. Bergquist sculpsit.


81
♂
81
831
♀
831
2150
α
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233.
819
Cyprinus auratus.
143.
232
♀
1141
1545.
2100.