DOBREE COLLECTION OF EUROPEAN NOCTUAE.
(Reprinted from 'The Naturalist' for February 1908).
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A DESCRIPTIVE CATALOGUE
OF THE DOBREE COLLECTION
OF EUROPEAN NOCTUAE

COMPiled BY
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PREFACE.

When the late N. F. Dobrée presented his collection of European Noctuae to the Hull Museum, it was promised him that in due course a Catalogue of the collection should be issued. A remark to this effect made by the Curator of the Museum in conversation with myself two years ago led to my undertaking the preparation of the promised Catalogue, and, incidentally, enabled me to fill in with pleasurable, and, I hope, useful, work some of the leisure hours which custom places at the disposal of a schoolmaster.

What I have attempted in the preparation of this Catalogue is to give an exact record of the collection as it now is, showing when, where, and by whom the specimens contained in it were obtained, describing briefly the varietal and aberrational forms of each species, and giving references to corresponding figures in Barrett's 'Lepidoptera of the British Islands,' South's 'Moths of the British Isles,' and the yearly volumes of 'The Entomologist.' By such means I have hoped to make the unique collection more widely known, and more useful to students in other parts of the country, as well as to those living in our remote corner of Holderness.

The order in which the species are here given is that in which they occur in the collection, where the exigencies of space have, in some cases, interfered with the placing of the species in their proper scientific order. Those species which are not to be found in their expected places can easily be discovered—if examples are contained in the collection—on reference to the Specific Index given at the end of the volume. The order in which the different specimens of a series are placed is that adopted by the donor before the collection left his hands.

The collection being formed—with two exceptions—between the years 1871 and 1889, the nomenclature adopted in it is, generally speaking, that of the 1871 edition of Dr. Staudinger's 'Catalog.' Since then, however, the largely-revised edition of 1901 has been
published, and I have here employed the generic names used in it, adding in brackets those of the earlier 'Catalog' when these are different. In dealing with Staudinger’s huge and unwieldy genera of Agrotis, Hadena, and Mamestra I have employed the generic divisions and names adopted in the ‘Synonymic List of British Lepidoptera,’ and commonly in use among British entomologists. The specific names adopted are those of Dr. Staudinger’s ‘Catalog,’ 1901, and the synonyms used by Guenée, Hübner, Barrett, South, Kirby, and Newman have also been given.

The preparation of the Catalogue in this form would have been altogether impossible but for two things:—(1) The existence of a carefully-recorded diary, in which Mr. Dobrée entered the source of each specimen in his collection; and (2) The publication of Mr. J. W. Tutt’s ‘British Noctuae and their Varieties,’ to which book I owe more than can be easily expressed.

For defraying the cost of publication of the Catalogue, and for the interest taken in its preparation, I have to record my thanks to the Museums Committee of the Hull Corporation. To Major de S. Dobrée I am indebted for the loan of such of his father’s annotated books as I required, and to Mr. Thomas Sheppard, F.G.S., for exceptional privileges of access to the collection under his charge, as well as for clerical assistance in the initial stages of the work.

Lastly, I wish to express a student’s thanks to Mr. William Lawton, the Chief Librarian of the Hull Public Libraries, for his unfailing readiness to bring before the Libraries Committee the requests of students, and notably those of the members of the Hull Scientific and Field Naturalists’ Club.

HORACE B. BROWNE.

Hull,
October 1909.
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A Memoir

OF

NICHOLAS FRANK DOBREE

(1830—1908)

AND

An Introduction to his Collection of European Noctuae.

Mr. N. F. Dobree, of the New Walk, Beverley, the donor of the Collection of European Noctuae that is one of the treasures of the Hull Museum, was a native of Guernsey, and belonged to an ancient and distinguished family. He came to Hull in early life under the charge of Sir William Wright, and about 1850 started in business as a grain and seed merchant, his business offices being situated in the fine old Elizabethan house in High Street, Hull, which was the birthplace of William Wilberforce. There he remained till towards the close of 1906, when "Wilberforce House" was acquired by the Corporation for use as a museum of local antiquities.

Mr. Dobree travelled largely on the Continent, and was an able linguist in German, French, Swedish, and Italian. On these travels he made the acquaintance of many of the leading Continental entomologists, including Dr. Staudinger and Herr Louis Graeser. Mr. Dobree's inclinations had always lain in the direction of natural history pursuits, and about 1871 his attention became directed to the wide field open for observation among the European Noctuae. With his friend, the late George Norman, he therefore set about forming such a collection of this group of the lepidopterous fauna as would show the geographical distribution of the various forms.

From 1871 to 1888 'his amusement consisted'—to use his own words—'in collecting specimens of our insular Noctuae from different parts of Europe,' * and the collection so formed became

* Used in the sense as understood by Dr. Staudinger in his definition of the range of European Lepidoptera.
generally recognised as the best private collection of Noctuae in this country.

In taking up the study of the Continental forms of British insects and the forms closely allied to them, he showed himself to be ahead of his generation; for whereas this branch of study is now general among our foremost lepidopterists, there was in Britain, thirty years ago, an 'insular prejudice against insects of Continental origin.' The following extract from a short article contributed by him to 'The Entomologist's Monthly Magazine' in 1877 formed a strong appeal to British collectors to enlarge their range of study, and to do away with the 'want of interest in all things continental,' that was then 'justly a reproach to them.'

'Amongst the general body of collectors, how lamentable is the ignorance on any point not purely of insular interest; and yet, by a slight study of the European Fauna, how much those who have some little deeper aim than merely the desire of acquiring a number of insects, would find their means enlarged of taking an extended and comprehensive view of their favourite subject! There is much to interest in the comparison of foreign with English specimens of the same species, and also in finding the gradual passage from one genus to another much more completely illustrated than can be seen by the limited British list. Amongst the Noctuidae, for instance, how little the beauty of some species is known to the ordinary British collector. Few are aware that our sober coloured Cucullia pass by steady gradations to the brilliant light green and silver of the common South German Cucullia argentea; that the genus Heliothis includes the rich magenta-tinted, but equally common German delphinii, or the rarer delicate rose-pink of Treitschkii; that our handsome Plusia are rivalled by several common French and German species, or that the large subdivision of the yellow-underwinged Catocalae will bear contrast with our own richly coloured species. All this and much more they might learn if they would enlarge their present limited range of study.'

The collection formed by Mr. Dobrée consists of a magnificent series of specimens obtained from almost every district of the entire Palaearctic Region from Iceland to Vladivostock. Many of these were collected by Herr Louis Graeser, of the Hamburg Museum, during a five years' tour in Amurland and Russian Turkistan, and duplicates of some are not to be found in any other British collection. They are supplemented by a small but interesting series of specimens collected by the late Mr. George Norman in Canada West,* and by other specimens from Labrador.

The Dobrée Collection is thus very rich in interest to the student of geographical variation, for it contains no fewer than

* i.e., the Province of Ontario.
654 species, and more than 300 named varietal and aberrational forms, besides others that have not received that distinction.

The Continental species in families of which we have British representatives, such as *Cucullia*, *Plusia*, and *Catocala*, are especially worthy of attention.

Of melanic and melanochroic forms the collection contains a large number. These are all noted and described in the following pages. Many of these forms, and of the corresponding light forms, were referred to in Mr. Dobrée's paper 'On Melanism,' in 'The Entomologist' for February 1887.

In addition to these numerous examples of the imaginal stage of the insect, the collection contains exactly 720 examples of preserved larvae. In the preservation of larvae Mr. Dobrée was a pioneer, and by his invariable kindness and courtesy helped many other students to a knowledge of the somewhat difficult processes involved. Nothing short of a life-like appearance of the larvae when 'stuffed' would satisfy him, and to obtain this he resorted to a special method of stuffing each empty skin, when 'blown,' with tiny pieces of Berlin wool, the colour of the wool used varying with the colour of the skin of the larva during its life. For this purpose he made it a practice to have by him some fifty different shades of wool. To the student of the purely British Lepidoptera the chief interest probably lies in these larvae, and one is safe in affirming that no provincial museum contains such a beautiful series of preserved larvae as is here to be seen.

That many of our British Lepidoptera exhibit most wonderful schemes of colouring is well known to everyone who is interested in nature study, but how beautiful the larvae of the Lepidoptera may be is not so generally known. The lover of the beautiful in nature is recommended to see the larvae of *Agrotis agathina* and *praecox* in Drawer 16; *Hadena piniperda* in Drawer 21; *Polia flavicincta* in Drawer 26; *Dichonia aprilina* in Drawer 27; *Aplecta occulta* in Drawer 28; and, especially, those of the *Cucullidae* in Drawers 33 and 34. Specially beautiful forms of the perfect insect are those of the various species of *Plusia* in Drawers 38 and 39, *Cucullia* in Drawers 33 and 34, and *Catocala* in Drawers 41 and 42.

The knowledge thus gained by Mr. Dobrée of the Continental forms of our British Noctuae gave rise to frequent contributions of small articles and notes to the pages of the entomological magazines,* but his most important contribution to entomological science was his paper 'On Melanism,' that appeared in 'The Entomologist' for February 1887. The causes of the phenomenon of Melanism had then for some years been a matter of discussion. and, in fact, 'so much had been written on the subject, that it

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* A full list of these will be found in Appendix II., p. 147.
might be considered thread-bare'—to quote the opening words of the article referred to. But 'it had always been treated from a purely insular point of view,' and Mr. Dobrée took up the subject once more, 'to examine it from the broader basis of its bearing on European insects generally.'

The facts adduced by Mr. Dobrée from a comparison of the geographical forms exhibited by the Noctuae in his collection put the subject in an entirely new light, and certainly 'tended to disprove more than one of the theories which then passed current among British entomologists.

How valuable were the results attending Mr. Dobrée's keen study of the European Noctuae is well shown in the following extracts from Mr. J. W. Tutt's 'Melanism and Melanochroism in British Lepidoptera,' written in 1891:

'In these discussions [on the origin and distribution of melanism], the subject was generally treated from an insular point of view, until Mr. Dobrée ('Entomologist,' xx., pp. 25-28) endeavoured, by comparing our melanic forms with the forms of the same species obtained on the Continent, to correlate the facts obtained, and to show the real relation that not only our melanic, but also our ordinary forms, bore to the Palaearctic lepidopterous fauna, and to deduce reasons for the melanism so prevalent in our British forms.'

'Our greatest authority on Continental Noctuae, Mr. N. F. Dobrée, wrote an article ('Entomologist,' xx., pp. 25-28), previously referred to, disproving the general notion that melanism was characteristic of high latitudes, and pointing out the following facts:

1. That melanism scarcely ever occurred in such latitudes;
2. That, at any latitude, dry open areas produced more brightly and clearly marked forms of lepidoptera; and
3. That the North of Europe produced, practically, no melanic forms, neither did the South, but that the melanism of the Continent was confined almost entirely to certain Alpine districts.'

Mr. Dobrée used in former days to attend regularly the excursions of the Yorkshire Naturalists' Union, and Mr. G. T. Porritt, who knew him well, has described him as being one of the most pleasant and genial companions in field work. For several years he was accustomed to write the Reports for the Entomological Section on the occasion of these excursions, and during the years 1881 to 1886 he was the President of the Hull Field Naturalists' Society, delivering a Presidential Address on the subject of Variation in Lepidoptera.

In the year 1890 Mr. Dobrée was elected a Fellow of the Entomological Society of London, but he resigned this honour in the following year.
With advancing years came, naturally, a disinclination for further collecting, and in 1890 the collection was advertised for sale in 'The Entomologist.' The authorities of the South Kensington Natural History Museum were anxious to become its possessors; but, to the benefit of the City of Hull and of all Yorkshire lepidopterists, the purchase was not effected, and in the month of December, 1902, the collection was formally transferred to the keeping of the Museums Committee of the Hull Corporation.

Mr. Dobrée's connection with Hull was severed by the purchase, on the part of the Corporation, of 'Wilberforce House' in 1906, and he lived in retirement at his house in the New Walk, Beverley, from that time till his death, at the age of seventy-seven, on January 8th, 1908.
### ABBREVIATIONS USED.

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EXPLANATORY NOTES.

1. † placed after the data of a specimen denotes that the captor or breeder was Mr. Dobrée himself.

2. * denotes a larva.

3. Where specimens are bracketed together, the description which follows applies to each of those within the bracket.

4. Where no bracket occurs, a description applies only to the one preceding specimen.

5. Specimens of which no description is given are type specimens, according to the definitions given in Tutt's 'British Noctuae and their Varieties' for species occurring in Britain, and in Kirby's 'Butterflies and Moths of Europe' for species of purely Continental habitat.

6. In Continental species where sexual difference is markedly noticeable the sex of the specimens is shown. This is shown also in the case of the rarer varietal and aberrational forms, especially those from the Eastern Palaearctic Region.

7. Where a specimen is not in good 'cabinet condition,' that fact is noted within square brackets.

8. The names of species of purely American habitat are enclosed within square brackets.

9. Throughout the Catalogue the use of the unnecessary digraphs æ and œ has been avoided, in accordance with the practice adopted by German and American entomologists.
A DESCRIPTIVE CATALOGUE
OF THE
DOBREE COLLECTION OF EUROPEAN NOCTUAE.

DRAWER I.

Habrosyne (Gonophora) derasa Linn.

4540 Beverley, bred 1880 †.
4536 " " †.
4538 " " [Wings at rest].
*5456a Germany, 1883 ((Staudinger).)
*5456
t*5650 London, x. 1884 (Russell).

White spots on segments 5 and 6, but not on segment 7; that on segment 5 is the larger.

5061 Blagoweschtschensk, Amurland, 1882 (Staudinger).

Var. derooides Bull. A very fine variety, giving the impression of being a distinct species. With one exception all the white markings have become purplish-grey; the slope of first line altered, so that it meets the inner margin at its middle; the white stripe along the hind margin almost obsolete, and the white basal streak contracted into a conspicuous white spot.

6389 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).
6388 " " "
6251 Amurland, 1886 (Staudinger)."
6252 " Var. "intermedia" Brem. Slightly tending to var. derooides in that the white markings are tinged with pink, but otherwise typical.

Thyatira batis Linn.

635 Forres vii. 1872 (Norman).
2417 Molescroft, E. Yorks., vi. 1875 †.
118 Wolsingham, ix. 1871 (Pickard).

A very slight trace of the usual pink tinge.

4532 Beverley, bred 1880 †.
4533 " " "
4535 North of Ireland, 1889 (Salvage's expedition).

The usual pink tinge entirely absent, as in Barrett, Plate 116, fig. 26.

6369 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition). ♂
6370 " " " A second small, white spot above the large spot in anal angle. So also in 4535.

[Wings at rest].
*5181 Germany, 1882 (Staudinger).
*5259 Saxony, 1883
*4981 Germany, 1881 (Kricheldorff).
**Cymatophora duplaris** Linn.

1486 Grantham, vii. 1874 (Walpole).

Approaching ab. *argentea* Tutt. In general appearance very similar to the first specimen of *C. fluctuosa*.

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A series ranging from obscure markings to fairly distinct dark central band.

**Cymatophora fluctuosa** Hüb.

434 Germany, bred from pupa, 1871 (Staudinger).
4339 Germany, 1880 (Staudinger).
5062 1882
5064 1882
5065 1882
5063 The transverse whitish band almost obscured towards inner margin.

**Polyploca (Asphalia) ruficollis** Fab.

311 Dalmatia, 1887 (Staudinger).
312 The transverse markings more distinct than in the others.
313 Dalmatia, 1887 (Staudinger).
311a The fore wings darker in ground colour.

*4979 Hungary, 1881 (Kricheldorf).

**Polyploca (Asphalia) diluta** Fab.

5125 Huddersfield (?)
5126
5127
5128 Ab. *nubilata* Robs. Fore wings marked with four dark brown bands.

1368 Retford, 1881 (Pegler).
1367 Nottingham, ix. 1873 (Ensor).
1731 Grantham, 1874 (Walpole).
*4980 Hungary, 1881 (Kricheldorf).

**Cymatophora or Fab.**

3624 Bred from pupa, vi. 1877 (Harwood).
3625
4929 Scotland, 1881 (Salvage).
Ground colour brownish-grey; the transverse bands very conspicuous.

4931 Scotland, 1881 (Salvage).
4932 Bred 1883 (Salvage).
5394 Var. *scotica* Tutt. Ground colour purplish-grey, but the lines forming the transverse bands separate and distinct; stigmata hardly visible (41 mm.). Cf. Barrett, Plate 117, fig. 2a.
3022 Germany, 1876 (Staudinger). The markings suffused.
3023 Zürich, 1889 (Rühl). Ground colour darker; a very distinct purplish tinge along costal margin.
6373 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).
6374 " Smaller than the preceding (35 mm.); the transverse bands not so distinct, and the costa not so distinctly purplish.

*5626 Rannoch, ix. 1884 (Salvage).
*5627 " " " *
*5628 " " " *

**Cymatophora octogesima** 
*Hüb.* = *ocularis* Guen.

3460 Germany, 1876 (Staudinger).
3461 " " " "
3459 " Central Germany, 1877 (Staudinger).
3763 " The stigmata especially distinct.
3845 Switzerland, 1877 (Tasker).
3846 " " " "
5066 Amurland, 1882 (Staudinger). }
5067 " A finely marked form. The transverse dark lines and central pale band very clear. Stigmata not so distinct as in the previous specimens.

**Cymatophora argenteopicta** 
*Ober.* = *viridimixta* Brem.

4501 Amurland, 1879 (Staudinger). ♂ ♂
4500 " " " "
6691 Amurland, 1888 (Tancré—taken by Graeser). ♂
Ground colour clear ashy-grey; transverse bands very dark at costa, shading off to lighter, and very narrow.

**Cymatophora ampliata** Butl.

6689 Amurland, 1888 (Tancré—taken by Graeser). ♂
5070 Amurland, 1882 (Staudinger). ♂
5069 " " " "

**Cymatophora albicostata** Brem.

6690 Amurland, 1888 (Tancré—taken by Graeser). ♂
5068 " 1882 (Staudinger). ♂

**Polyploca** (Asphalia) *ridens* 
*Fab.* = *xanthoceros* Hüb.

3286 Bathampton, Somerset, 1876 (Ross).
3285 " The pale markings white.
3556 Bred from pupa, 1877 (Harwood).
3557 " " " "
3558 " " " "
841 Germany, 1872 (Staudinger).
842 " The pale markings greenish-ochreous—the general form. In the last of this group these markings are very conspicuous, and the stigmata are clearly marked in dark central band. Cf. Barrett, Pl. 119, fig. 1c.
843 Germany, 1872 (Staudinger).
2196 " 1874 " The markings suffused brown, with little or no tinge of green.
2193 Germany, 1874 (Staudinger).
   A striking form. Ground colour pale greenish-grey, with darker transverse lines; stigmata clearly outlined in black.

*5886 vii. 1885 (Salvage).
*5887 " " "

Polyloca (Asphalia) flavicornis Linn.

2242 Bury, 20, iv. 1875 (Kay).
2243 " " " "
2239 " Fore wings tinged with yellowish-green.
4861 Scotland, 1880 (Salvage).
4863 " " "
4862 " " "
4860 "
5820 Rannoch, iv. 1885 (Salvage).
   Var. finnarchica Schöy. = var. scotica Tutt. Ground colour dark grey, with purplish tinge; orbicular stigma large, distinct, and greenish-yellow. In 5820 the orbicular stigma is extended towards base of wing as a streak across the first transverse double line. Cf. Barrett, Pl. 118, fig. 2c, and South, I. Pl. 39, fig. 8.

5819 Rannoch, iv. 1885 (Salvage).
   Ab. rosea Tutt. Fore wings strongly suffused with purple; the transverse bands very distinct; orbicular stigma clear greenish-yellow.

*6127 Lancashire, vi. 1886 (Harwood).
*6125 " Greenish-yellow; intermediate between 5246 and 6126, 6127a.
*6126 Lancashire, vi. 1886 (Harwood).
*6127a " Dorsal region greenish-black, with distinct white dots and pale dorsal line.

*4995 Norway, 1882 (Staudinger).
   Dark greenish-grey; the white dots indistinct; no black spots, and the dorsal line almost obsolete.

*5246 Hungary, 1883 (Staudinger).
   Pale greenish-yellow; the white dots absent.

**DRAWER II.**

Bryophila ravula Hüb.

5974 Germany, 1882 (Staudinger).
5972 " " " "
5973 " " "
5971 " " "
5970 " " " "
5975 " Var. ereptraicula Treit. Large (27 mm. as against 22 mm.) ; basal area whitish, and sharply defined; whitish markings also in anal angle.

*4994 Germany, 1882 (Staudinger).
   'B. ereptraicula' in Mr. Dobrée's diary.
Bryophila raptricula Hüb.
845 Germany, 1872 (Staudinger).
848 " " " "
847 " " " "
846 " " " "

Bryophila fraudatricula Hüb.
6028 Berlin, 1885 (Ribbe).
6029 " " " "
6026 Austria, 1885 (Staudinger).
6027 " The longitudinal black lines almost obsolete.

Bryophila receptricula Hüb. = strigula Bork.
2940 Germany, 1876 (Staudinger).
2942 " " " "
2943 " " " "
2941 " " A corresponding form to 6027 of the preceding species.

Bryophila algæ Fab. = spoliatricula Hüb.
803 Germany, 1872 (Staudinger).
804 " " " "
1972 " 1874 "
1973 Germany, 1874 (Staudinger).
1974 " " " "
3765 Central Germany, 1877 (Staudinger).
3764 " " " "
5274 Germany, 1883 (Staudinger).
5276 " [The left hind wing broken].
5273 Germany, 1883 (Staudinger).
5275 " Basal area bright pale green; very conspicuous in 5275.

Bryophila muralis Forst. = glandifera Hüb.
1693 Guernsey, vii. 1884 †.
1694 " " " "
1695 Guernsey, vii. 1884 †.
1696 " " " "
1697 " " " "
1698 Guernsey, viii. 1874 †.
Ab. pallida Tutt. Ground colour pale creamy-white.
5407 Brighton, 1883 (Salvage).
5404 " " " "
5405 " " " "
5406 " " Var. par Hüb. Ground colour of 5407 strongly ochreous; of 5404 and 5405 pale grey, and of 5406 brownish-grey; the markings almost obsolete in each case. Cf. South, I. Pl. 103, fig. 11.
5408 Cambridgeshire, 1883 (Warren).
Var. impar Warren.
*5301 Guernsey, vii. 1883 †.
*5439 Britain, 1883 (Watkins and Doncaster).
*4685 Germany, 1880 (Staudinger).
Cambridgeshire, bred 1885 (Warren).

Var. impar Warren. Ground colour brownish-white, thickly dusted with blackish; markings obscure. Cf. Barrett, Plate 249, fig. 11.

**Bryophila perla** Fab.

1708 Beverley, 1878 †.

Var. suffusa Tutt. A conspicuous creamy-white transverse band before the first line; remainder of wing suffused with dark grey. Cf. Barrett, Plate 250, fig. 1d.

1704 Beverley, 1874, †.

1705 †.

1706 †.

265 Droylesden, v. 1872 (White).

Ab. distincta Tutt. The grey markings greatly reduced and very conspicuous.

266 Droylesden, v. 1872 (White).

Intermediate between the type and ab. flavescens.

1709 Beverley, 1885 †.

1707 Guernsey, 1887 †.

Ab. flavescens Tutt. Ground colour strongly suffused with ochreous.

— [Wings at rest].

*5145 Strood, vi. 1882 (Ovenden).

*5144

*5020 Greenwich, i. 1882 (Tutt).

**Diphtera (Moma) alpium** Osb. = **orion** Esp.

816 Germany, 1872 (Staudinger).

818 †.

4511 †.

4512 †.

1754 Canterbury, 1874 (Parry).

1291 Germany, 1873 (Staudinger).

1290 †.

1288 †.

1289 †.

817 †.

Ab. rosea Tutt. The costa and two longitudinal streaks rosy-white; most conspicuously so is 1291.

*5433 Continent, 1883 (Watkins and Doncaster).

*5202 Brighton, 1882 (Salvage).

*5203

**Trichosea (Diphtera) ludifica** Linn.

12 Germany, 1872 (Staudinger).

13 †.

14 Zürich, 1888 (Rühl).

*6575 Berlin, 1888 (Gleissner).

**Panthea coenobita** Esp.

2207 Germany, 1874 (Staudinger).

2208 †.

2205 †.

*5702 Central Germany, 1883 (Staudinger).

Very much darker than the following; the yellowish markings almost obliterated. Marked 'Var. nigra' in Mr. Dobrée's diary.

*5701 Central Germany 1883 (Staudinger).
Oxycesta (Clidia) geographica Fab.
835 Continent, 1872 (Staudinger).
837
838 Zürich, 1888 (Rühl).
*660 Austria, 1888 (Staudinger).

Oxycesta (Clidia) chamaesyces Guen.
3033 Continent, 1876 (Staudinger).
3034
3037 Zurich, 1888 (Rühl).
*660 Austria, 1888 (Staudinger).

Diloba caeruleocephala Linn.
919 Germany, 1872 (Staudinger).
920 " Large (39 mm.).
5414 Beverley, 1883 †.
   [Wings at rest].
*5870 Beverley, reared from egg, 1885 †. [Half-grown].
*5870a " " " " †.
*5869 " " " " †.
   [The colour gone].

Demas coryli Linn.
2190 Norwich, bred 1877 (Wheeler).
2191
2187 Germany, 1874 (Staudinger).
2186 " Larger than the preceding (36 mm. as against 30 mm.).
*5950 x. 1885 (Harwood).
   Dorsal region dark purplish-brown; faint indications of two yellow sub-dorsal lines.
*5952 x. 1885 (Harwood).
   Dorsal region reddish-brown; dorsal stripe and sub-dorsal lines black.
*5167 Germany, 1882 (Staudinger).
   Yellow; a very distinct black dorsal stripe.
*5951 x. 1885 (Harwood).
   Yellow dorsal stripe broken and nearly obsolete.
6362 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).
6363 " " " " †.
6364 " Var. mus Ober. (31 mm.). Suffused with purplish-grey; the transverse band indistinct.

Acronycta alni Linn.
5949 Chichester, bred 1885 (Anderson).
5948
5374 Beverley, bred 1883 †.
3706 Wharncliffe, West Yorks., 5 vi. 1875 (Bloor).
5373 Bought at Stevens’, 1883.
   There is a slight variation in the hind wings, from unspotted white to white with incipient brown band at the outer angle, and faint indications of the nervures.
6781 Beverley, vi. 1901 †.
6780 " " †.
   [The right fore wing damaged].
*6143 Chichester, vii. 1886 (Anderson).

Acronycta tridens Schiff.
587 Beverley, vi.-vii. 1872 †.
584 " " " " †.
581 " " " " †.
   Hind wings suffused with brown. [Named by Henry Doubleday].
8

586 Epping, reared from the egg, 1872 (Doubleday).
2309 Rotterdam, v. 1875, bred by an old man.
Hind wings clear white.
2308 Rotterdam, v. 1875, bred by an old man.
All the wings suffused with a peculiar shade of fawnish-brown: a striking form.
*5358 Beverley, x. 1883 †.
*5407 Germany, 1883 (Staudinger).
*5405 “ “ “
*5406 “ The dorsal stripe varying from orange to bright red.

Acronycta psi Linn.
590 Epping, reared from the egg, vii.1872 (Doubleday).
591 “ Var. "suffusa Tutt." Fore wings suffused with brownish-grey, and hind wings darker than in the type.
1820 Houghton, E. Yorks., vi. 1874 †.
1818 “ “ “ “
1819 “ [Named by Henry Doubleday].
2344 Beverley, bred from ovum, v. 1875 †.
6692 Kuldja, Turkistan, 1888 (Tancré—taken by Graeser).
6693 “ All the markings chocolate-brown instead of black.
[Wings at rest].
*5357 Beverley, ix. 1883 †.
*5356a “ “ “
*5356 “ “ “
*3949 Sheffield, x. 1878 (Doncaster).

**DRAWER III.**

Acronycta cuspis Hüb.
4006 Germany, 1878 (Staudinger).
4002 “ “ “
4003 “ “ “
4004 “ “ “
4005 “ “ “
2175 Germany, 1874 (Staudinger).
Ground colour lighter grey than in any of the preceding.
2176 Germany, 1874 (Staudinger).
4007 “ 1875
4008 “ Semi-melanic: ground colour suffused with brown, but the markings distinct.
*5559 Leipzic, 1884 (Héyne).

Acronycta leporina Linn.
6183 Romney, bred 1886 (Buckell).
6182 “ “ “
1017 Bred vi. 1872 ”Earl.”
5968 Bred 1885 (Harwood).
Var. bradyporina Treit. Semi-melanic: wings dusted with greyish-brown atoms. Cf. Barr., Pl. 120, fig. 1b.
2177 Germany, 1874 (Staudinger).
2180 “ Type form: pure white with black markings.
Var. leporella Staud. = eineracea Graes. White, very slightly dusted with grey atoms; the markings indistinct. Cf. South, I, Pl. 100, fig. 3.

Var. bradyporina Treit.

Var. turanica Staud. Formerly considered by Dr. Staudinger to be a distinct species. Mr. Dobrée pointed out that it was ‘nothing more than a light-coloured form’ of this species, suffused with pale brownish-grey. In Dr. Staudinger’s 1901 ‘Catalog’, however, it appears as a variety of A. rumicis.

Acronycta aceris Linn.

2338 Bred 1875 (Peters).
1748 Canterbury, bred 1874 (Parry).
1749
1750 Beverley, bred 1886 †.
2337 Bred 1875 (Peters).
1751 Bred from larva, 1888 †.

Ab. intermedia Tutt. The wings with an ochreous tinge; nervures of hind wings strongly marked.

5537 South Germany, 1883 (Staudinger).
5536

Ab. candelisquæ Esp. = infuscata Haw. Suffused uniformly with brown, the markings indistinct. Cf. Barrett, Plate 120, fig. 2a.

2327 London, bred from larva, 1875 (Wittick).
2328
2334
2331
2330
2325
2332

The general appearance darker; the light patch nearly obsolete.

5077 Russian Turkistan, 1882 (Staudinger).
1286 Andalusia, 1873 (Staudinger).

Var. turanica Staud. Formerly considered by Dr. Staudinger to be a distinct species. Mr. Dobrée pointed out that it was ‘nothing more than a light-coloured form’ of this species, suffused with pale brownish-grey. In Dr. Staudinger’s 1901 ‘Catalog’, however, it appears as a variety of A. rumicis.

Acronycta strigosa Fab.

3716 1876 (Jackson).
6410 Bred 1886 (Harrison—probably from Warren).
6411
6412
Cambridgeshire, 1881 (Warren).

Cambridgeshire, bred 1886 (Warren).

Cambridgeshire, bred 1886 (Warren).

Germany, 1876 (Staudinger).

Cambridgeshire, bred 1886 (Warren).

Cambridgeshire, bred 1886 (Warren).

Cambridgeshire, bred 1886 (Warren).

The reniform stigma almost obliterated by the pale grey apical suffusion.

Larger, but otherwise similar (31 mm. as against 27-28 mm.).

Craniophora (Acronycta) ligustri Fab.

Hunsley, E. Yorks., vi. 1877 f.

Hunsley, E. Yorks., vi. 1877 f.

Hunsley, E. Yorks., vi. 1876 f.

Ab. sundevalli Lamp. = olivacea Dobrée. ' A form in which the white markings are replaced by olive-green, and which is equally common with the type in East Yorkshire' (Dobrée). Cf. Barrett, Plate 123, fig. 2c. In 3137 the stigmata are almost entirely obliterated.

Hunsley, E. Yorks., vi. 1876 f.

Intermediate between the above and the type form.

Hunsley, E. Yorks., vi. 1876 f.

The white ring of the orbicular stigma very distinct.

Bavaria, 1887 (Staudinger).

France, 1883 (Staudinger).

Greyish-green; the yellow dorsal and sub-dorsal lines very distinct.

Acronycta rumicis Linn.

Beverley, vii. 1875 f.

Beverley, vii. 1885 f.

The inner-marginal area very dark blackish-brown.

Houghton, E. Yorks., vi. 1874 f.

Beverley, 1881 f.

Intermediate between the type and ab. salicis.

Beverley, 1881 f.

Ab. salicis Curt. The wings suffused with brownish-black; stigmata hardly traceable; the white spots close to anal angle and along the hind margin conspicuous. Cf. Barrett, Plate 123, fig. 1b.

Sligo, 1886 (Russ).  
Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).  
" A beautiful variety." Smaller (32 mm.) ; ground colour purplish-grey; one very conspicuous white crescent near anal angle; the hind-marginal line hardly traceable.

Sheffield, 1878 (Doncaster).
Beverley, bred from eggs laid by captured ♀, 1887 †.

The body entirely black with reddish-brown hairs, and faint reddish-brown sub-spiracular lines. This and 6446 (which is normal in colouring) were bred from the same batch of eggs.

**Acronycta auricoma** Fab.

- Madeley, Staffs., 1876 (Daltry).
- " " " "
- " " " "
- " " " "

Beverley, 1885 †.

The body entirely black with reddish-brown hairs, and faint reddish-brown sub-spiracular lines. This and 6446 (which is normal in colouring) were bred from the same batch of eggs.

**Acronycta menyanthidis** View.

- Bury, bred vi. 1875 (Kay).
- " " " "
- " " " "

Rannoch, bred 1879 (Salvage).

Ground colour more bluish-grey than in the rest; orbicular stigma obsolete, reniform hardly traceable.

**Acronycta abscondita** Treit.

- Germany, 1878 (Staudinger).
- " " " "
- " " " "

Black; the sub-spiracular markings red; hairs black.

**Acronycta euphorbiae** Fab.

- Germany, 1872 (Staudinger).
- " " " "
- " " " "

**DRAWER IV.**
827 Germany, 1872 (Staudinger). ♀
4015 " 1878 " ♀
4014 " " " ♀
1195 " 1873 " ♀
1190 " " " ♀
1198 " " " ♀
1197 " " " ♀
Var. montivaga Guen = euprasiae Frey. Larger than type (36 mm. as against 31 mm.); also darker, the fore wings and thorax slate-grey; markings indistinct.
*5690 Central Germany, 1883 (Staudinger).
*5998 Saxony, 1885 (Staudinger).
*5997 " " "

Acronycta myricae Guen.

This form is now considered to be a British semimelanic variety of the preceding species, from the type form of which it differs in its larger size (35-36 mm. as against 31 mm.), and in having the ground colour a darker slate-grey and the markings more distinct.

3144 Rannoch, vii. 1876 (Clark).
4123 " " bred 1879 (Salvage).
1126 Inverurie, 1873 (Tait).

Ground colour paler than in the others of the species.
3145 Scotland, 1887 (Salvage).
3040 Rannoch, vii. 1877 (Clark).

The hind-marginal area pale between the nervures; conspicuously so in 3145.
3639 Rannoch, vii. 1877 (Clark).
1127 Inverurie, 1873 (Tait).
4122 Rannoch, bred 1879 (Salvage).
3146 Bred 1885 (Salvage).
1128 " "

*4906 Aberdeen, ix. 1881 (Mundic).
*4907 " " vii. 1882 "
*5188 " " vii. 1882 "

Notwithstanding the opinion expressed above, there is a considerable difference between the larvae of myricae and euphorbiae here preserved. Each larva of euphorbiae has a most distinct semicircular pale mark curving backwards and joining each pair of the tubercular spots. These semicircular marks are entirely wanting in the larvae of myricae.

Acronycta euphorbiae Brahm.

This form is likewise now considered to be a variety of A. euphorbiae, and appears as such in Dr. Staudinger’s ‘Catalog,’ 1901.

4010 Continent, 1878 (Staudinger).
4011 " "
5772 Dalmatia, 1885 "

The markings more suffused than in the preceding. (?) ab. esulae Hüb.

Simyra nervosa Fab.

6562 Germany, 1887 (Staudinger).
6563 Germany, 1887 (Staudinger).
6564 '' '' ''
6565 '' Var. "argentacea" Herr.-Sch. Paler than the type form; the thorax and basal and costal areas of fore wings conspicuously powdered with silvery-white.

*6493 Central Germany, 1887 (Staudinger).

**Arsilonche albovenosa** G ze="venosa" Bork.
3147 Soham, bred from pupa, vi. 1876 (Wilton).
2499 Wicken Fen, bred from pupa, vi. 1875 (Wilton).
2407 '' '' '' ''
2410 '' '' '' ''
2408 '' '' '' ''
3638 '' vii. 1877 ''
3637 '' '' '' ''
3636 '' '' '' ''
3148 Soham, bred from pupa, vi. 1876 (Wilton).
828 Germany, 1872 (Staudinger).

Ab. centripuncta Herr.-Sch. A small black spot at end of discoidal cell, with, in this case, another between it and the costal margin.

*6457 Soham, ix. 1887 (Wilton).
*5686 Hungary, 1883 (Staudinger).
*5687 '' '' ''

**Simyra dentinosa** Frey.
3430 Continent, 1876 (Staudinger). ♀
3431 ♀
*6494 Sarepta, South Russia, 1887 (Staudinger).

Very large for the size of the moth.

**Tapinostola musculosa** Hüb.
3781 Hungary, 1877 (Staudinger).
3780 '' ''
4513 Germany, 1879 ''
4514 '' '' [All the wings badly sprung].

**Mythimna (Mithymna) imbicilla** Fab.
3035 Germany, 1876 (Staudinger). ♀
3036 '' '' '' ♀
3037 '' '' '' ♀
3038 '' '' '' ♀

**Eogena contaminei** Ever.
4773 Continent, 1880 (Staudinger). ♀
4774 '' 1882 '' ♀
*5002 '' 1882 ''

**Leucania conigera** Fab.
419 Forres, viii. 1871 †.
3980 Bred 1878 (Harwood).
3979 '' ''
3982 '' ''
3983 '' ''
3978 '' ''
3981 ''
1851 Hartlepool, 1874 (Gardner).
1853 *5173 Germany, 1882 (Staudinger).

Ground colour bright reddish-brown,

*5174 Germany, 1882 (Staudinger).

Ground colour bright green. [Colour gone near head].
Leucania vitellina Hüb.
921 Germany, 1872 (Staudinger).
3510 "" 1876 ""
3511 "" "" ""
4448 "" 1879 ""
4449 "" "" ""
4450 "" "" ""
4452 "" "" ""
4451 "" "" ""
4453 "" Central area of the fore wings slightly darker than the other portions, thus producing the effect of a pale band between the second and subterminal lines.

*5555 Leipzig, 1884 (Heyne).

Leucania turca Linn.
2571 New Forest, 1886 (Bright).
2574 "" "" ""
411 "" "" ""
2572 "" "" ""
2573 "" "" ""
6375 Chabarofka, Amurland, 1881-1886 (Gräser's expedition). ♀
Ground colour as in the following, but without the central dark cloud.
6293 Amurland, 1886 (Staudinger). ♀
'Var. grandis Bull.' Ground colour dull brown; "the small dark shade surrounding the white discal spot developed into a large dark grey cloud" (Dobrée).
6079 Mongolia, 1885 (Staudinger). ♀
A very distinct form. All the region from base to second line tinged with greyish ochreous; lines very distinct; the second line waved in large crescents with points towards the hind margin.

*6413 Huddersfield, 1887 (Porritt).
*6414
*6010 France, 1885, (Staudinger).
*5446 Germany, 1883 ""

Leucania lithargyria Esp. lithargyrea Hüb.
641 Guernsey, vii. 1885 †.
643 "" ""
2517 Molescroft, E. Yorks., vii. 1875 †.
Var. ferrago Hüb. Ground colour dark reddish.
2518 Molescroft, E. Yorks., vii. 1875 †.
Intermediate between preceding and the type.
640 Guernsey, vii. 1885 †.
2514 Molescroft, E. Yorks., vii. 1875 †.
1691 Beverley, 1875 (Bishoprick).
A distinct dark shade along hind margin, most pronounced in 1691.
5746 Dalmatia, 1885 (Staudinger).
5745 "" ""
Var. "argyritis" Ramb. All the wings pale grey with slightest possible tinge of red; reniform stigma paler than the ground colour; a discal row of black dots on hind wings.

*5811 v. 1885 (Harwood).
*5812 "" ""
*5813 "" ""
*5814 "" ""
**DRAWER V.**

**Leucania albipuncta** *Fab.*

925  Germany, 1872 (Staudinger).

925a

3848  Switzerland, 1877 (Tasker).

3847  "Large (38 mm. as against 31-36 mm.) ; 3847 darker, especially the hind wings. (?) ab. *flecki* Carad.

923  Germany, 1872 (Staudinger).

926  "  "  "

924  "  "  "

*4269  "  "  1880  "

**Leucania zeae** *Dup.*

2971  Continent, 1876 (Staudinger).

2972  "  "  "

**Leucania scirpi** *Dup.*

4072  Continent, 1878 (Staudinger).

4071  "  "  1880  "

4792  Labelled 'Var. *montium* Boisd.' , but I can distinguish no point of difference in 4792 and little in 4790, which is slightly darker than the preceding specimens.

**Leucania unipuncta** *Haw. = extranea* *Guen.*

1130  South Australia, 1873 (Cox). ♀

1129  ♂

Small (39 mm. as against 43 mm.) ; ' greyer and more coarsely powdered with black atoms than the specimens from Canada ' (Dobrée); the white spot in the reniform stigma hardly visible; basal area of hind wings whiter.

2835  Orillia, Canada West, 1875 (Norman).

2836  "  "  "  "

2838  "  "  "  "

2834  "  "  "  "

2837  "  "  "  "

Forest wings strongly tinged with red.

**Leucania putrescens** *Hüb.*

723  1872 (Norman).

[The wings chipped].

1777  Plymouth, bred 1874 (Johns).

1778  "  "  "  "

1779  "  "  "  "

1780  "  "  "  "

5383  Torquay, 1883 (Harwood).

5384  "  "  "  "

5385  "  "  "  "

5386  "  "  "  "

5387  "  "  "  "

5388  "  "  "  "

**Leucania obsoleta** *Hüb.*

2311  Rotterdam, 1875.

2170  Germany, 1874 (Staudinger).

2167  "  "  "  "

The 'transverse' row of black dots more conspicuous than in the others.
2169 Germany, 1874 (Staudinger).
   [Left fore wing broken].
4469 Germany, 1879 (Staudinger).
4464 " The black striations more plainly marked than in the others.
4468 Germany, 1879 (Staudinger).
2172 " 1874 " The wings of a more uniform buff than those of the others in the series.
4467 Germany, 1879 (Staudinger).
4465 " 1874 " A large black spot on the inner margin at end of the transverse line, and another nearer the base.
4686 Germany, 1880 (Staudinger).
   No trace of the dorsal and sub-dorsal lines.

**Leucania punctosa Treit.**
4461 Continent, 1879 (Staudinger).
4460 " [Badly greased].
4462 Continent, 1879 (Staudinger).
4463 " " "

**Leucania loreyi Dup.**
2174 Continent, 1874 (Staudinger).
2173 " " "

**Leucania littoralis Curt.**
2851 Spurn, E.Yorks., vi. 1875 †.
1603 " vii. 1874 †.
1596 " " †.
1598 " " †.
1599 " " †.
2468 " vi. 1875 †.
2849 " " †.
2850 " " †.
2852 North Ireland, 1889 (Salvage's expedition).
   The brown shading along the white median nervure less marked than in the others.
5816 Bournemouth, v. 1885 (McRae).
5818 " " "
5817 " " "
5815 " " "

**Leucania impudens Hüb. = pudorina Hüb.**
6137 Askham Bog, York, vii. 1886 (Walker).
3576 1876 (Harwood).
3575 " "
3573 " "
3574 " "
   The body, wings, and fringes strongly tinged with pink.
3578 1876 (Harwood).
   Ground colour of the wings pale grey, without reddish tinge.
2016 Germany, 1874 (Staudinger).
2014 " Pale greyish-ochreous; conspicuously paler than all others except 3578.
Leucania comma Linn.

4150 Beverley, 1879 †.
407 " 1871 †.
496 " vi. 1872 †.
497 " 1875 †.
1595 " vi. 1874 †.
2418 " vii. 1875 †.

All have the tiny black dot at end of discoidal cell which constitutes var. nigropunctata Tutt.

405 Beverley, 1871 †.
406 " 1871 †.

The costal and inner margins distinctly whitish.

Nonagria (Leucania) brevilinea Fenn.

5409 1883 (Salvage—taken by G. W. Bird).
5410 " " " " " "
5223 1882 (McArthur).
3921 Wicken Fen, 1878 (Wheeler).
3730 1877 (King).

The short black basal line hardly visible, the form being, therefore, almost ab. sinelinea Farn. Cf. Barr., Pl. 200, fig. 1b, and South, I. Pl. 144, fig. 10.

Leucania straminea Treit.

4288 Colchester, bred 1879 (Harwood).
4287 " " " " " "
4286 " " " " " "
5197 Lee, bred 1882 (Bower).
5198 " " " " " "
4074 Germany, 1878 (Staudinger).
4075 " " " " " "
4073 " " " " " "
2017 " 1874 " "
2018 " " " " " "

The specimens in the above series vary in size from 31 mm. (4073) to 39 mm. (2017).

*5186 Greenwich Marshes, vii. 1882 (Tutt).
*5187 " " " " " "
*5185 " " " " " "

Leucania l-album Linn.

930 Germany, 1872 (Staudinger).
929 " " " " " "
927 " " " " " "
928 " " " " " "

Leucania congrua Hüb.

4792 Continent, 1880 (Staudinger).
4793 " " " " " "
DRAWER VI.

Calamia phragmitidis Hüb.
3648 Weel, E. Yorks., 1878 †.
3649 " " " " " " " " " " †.
3650 " " " " " " " " " " †.
3659 Leven, E. Yorks., viii. 1874 †.
1606 " " " " " " " " " " †.
1608 Leven, E. Yorks., viii. 1874 †.
1607 " " " " " " " " " " †.
1613 " " " " " " " " " " †.
1616 " " " " " " " " " " †.
1610 " " " " " " " " " " †.
1611 " " " " " " " " " " †.
1644 Weel, E. Yorks., ix. 1878 †.

Leucania impura Hüb.
1670 Beverley, 1882 †.
401 " " " " " " " " " " †.
4585 " 1880 †.
400 " 1882 †.
1665 Spurn, E. Yorks., vii. 1874 †.
1666 " " " " " " " " " " †.
1667 " " " " " " " " " " †.
1669 Beverley, 1874 †.
All the above are of the common form, var. fulgosina H. Haw. Wings marked with three tiny black dots placed trianliqually.
1671 Beverley, 1874 †.
Approaching ab. punctilinea Tutt. A continuous row of dots parallel to the hind margin, but the hind wings not darker than usual.

*5884 Beverley, vi. 1885 †.
*5884a " " " " " " " " " " †.
*5883 " " " " " " " " " " †.
*5882 " " " " " " " " " " †.
*5881 " " " " " " " " " " †.

Leucania pallens Linn.
399 Beverley, 1877 †.
443 Beverley, vii. 1872 †.
1674 " 1874 †.
308 Forres, viii., 1871 †.
2485 Beverley, viii. 1875 †.
444 Weel, E. Yorks., 1883 †.
2484 Beverley, vii. 1875 †.
1676 " 1874 †.
2482 Weel, E. Yorks., 1879 †.
2483 " " " " " " " " " " †.
1677 " " " " " " " " " " †.
3651 " 1877 †.
Labelled ab. ectypa Hüb., but hardly reddish enough for that variety, and without the dark grey shade along the hind margin of the hind wings. (Vide Tutt's 'Brit. Noctuae'.)

Senta maritima Tausch. = ulvae Hüb.
4457 Germany, 1879 (Staudinger).
4456 " " " " " " 
Germany, 1877 (Staudinger).

Ab. *bipunctata* Haw. Both stigmata very conspicuous, rich dark brown; a thin line of the same colour projecting outwards from base of wing. Cf. Barrett, Plate 196, fig. 3b.

Germany, 1880 (Staudinger).

Ab. *wismariensis* Schm. A central dark brown streak, gradually widening, running outwards from base of wing almost to the hind margin. Cf. Barrett, Pl. 196, fig. 3c, and South, I. Pl. 145, fig. 8.

Central Germany, 1883 (Staudinger).

Labelled ab. *nigricostata* Staud., but apparently nothing more than a slighter paler form of the following.

Continent, 1882 (Staudinger).

Ab. *nigrostriata* Staud. The costal region marked between the nervures with numerous longitudinal dark brown lines.

*Meliana flammea* Curt.

Germany, 1874 (Staudinger).

Ab.

*Sesamia cretica* Led.

Continent, 1880 (Staudinger).

*Sesamia nonagrioides* Lef.

Continent, 1880 (Staudinger).

*Tapinostola fulva* Hüb.

Weel, E. Yorks., ix. 1876 †.

Beverley, ix. 1884 †.

ix. 1876 †.

ix. 1875 †.

viii. 1874 †.

ix. 1875 †.

A fairly variable series, ranging through various tones of ground colour, from pale greyish-chreous to light reddish-brown. Now resembles Hübner’s type apparently.

Beverley, ix. 1875 †.

ix. 1884 †.

Ab. *flava* Treit. reddish brown; nervures dusky.

*Tapinostola hellmanni* Ever.

1882 (Raynor).

Cambridgeshire, 1883 (Warren).
Germany, 1878 (Staudinger).

4019 4018 5231 5230

5231 1882 (Raynor).


Cf. Barrett, Plate 198, fig. 1b. [5231 has the left wings badly sprung].

**Nonagria neurica** Hüb.

5617 Cambridgeshire, 1884 (Warren).

3784 South Germany, 1877 (Staudinger).

3785

Tapinostola *bondii* Knaggs.

3279 Bathampton, Somerset, 1876 (Ross).

2853 Folkestone, 1875 (Meek).

3276 1876 (Wittick).

4156 Folkestone, viii. 1879 (Blackall).

4153

4152

4154

4155

**Nonagria dissoluta** Treit.

5616 Cambridgeshire, 1884 (Warren).

Fore wings with a purplish tinge.

2011 Germany, 1874 (Staudinger).

2012

2009

Coenobia *rufa* Haw. = *despecta* Treit.

5347 Forest Gate, London, 1883 (Bouttell).

5337

5335

5349

5345

5346

5345a

5332

5336

5333

5334

5348

Tapinostola *elymi* Treit.

934 Spurn, E. Yorks., viii. 1881 †.

2432

2435 vi. 1875 †.

2439 vii. 1879 †.

2438

4613 viii. 1880 †.

2440 vii. 1881 †.

4615 viii. 1889 †.

4616

2433 Weel, E. Yorks., 1879 †.

*5574 Lincolnshire, bred iv. 1884 (Treadgold).

*5573

**Nonagria geminipuncta** Hatch. = *paludicola* Hüb.

3916 Bred from pupa, Shoreham, 1878 (Salvage).

Ab. *palida* Tutt. Reddish-ochreous; reniform stigma obliterated.
Bred from pupa, Shoreham, 1878 (Salvage).

Ab. pallida-unipuncta Tutt. Ground colour as above, but reniform stigma showing as one white dot. Cf. Barrett, Plate 195, figs. 2, 2a.

Bred 1878 (Riding).

Ab. obsoleta Tutt. Fuscous; reniform stigma obliterated. Cf. South, I. Pl. 144, fig. 7.

Environs de Berlin, 1882 (Kricheldorf).

Ab. guttans Hüb. Fuscous; reniform stigma showing as two white spots.

Germany, 1874 (Staudinger).

Var. fusca-unipuncta Tutt. Fuscous; reniform stigma showing as one white dot. Cf. Barr., Pl. 195 fig. 2b.

**DRAWER VII.**

**Nonagria nexa** Hüb.

Germany, 1874 (Staudinger).

Nonagria cannae Ochs. = arundinis Hüb.

Germany, 1878 (Staudinger).

The central black lunule obsolete.

Nonagria sparganii Esp.

Germany, 1874 (Staudinger).

Ab. obsoleta Tutt. The wings sprung.

Environs de Berlin, 1882 (Kricheldorf).

[The wings sprung].

Environs de Berlin, 1882 (Kricheldorf).

Hungary, 1888 (Staudinger).

Ab. obsoleta Tutt. [Badly greased].

Hungary, 1888 (Staudinger).

No trace of the row of black dots parallel to the hind margin.

Hungary, 1888 (Staudinger).

Ab. rufescens Tutt. Ground colour reddish-brown. [The abdomen greased].

**Nonagria typhae** Thun. = arundinis Fab.

Wicken Fen, bred from pupa, 1887 (Wilton).
2522 Wakefield, viii. 1875 (Wilson).
2622 Wicken Fen, bred from pupa, 1887 (Wilton).
6482 Intermediate between the type and ab. fraterna Treit.
6484 Wicken Fen, bred from pupa, 1887 (Wilton).
4973 Brighton, bred 1881 (Salvage).
5729 Kent, 1884 (Salvage).

Ab. fraterna Treit. Ground colour brown, with a slight reddish tinge. Cf. Barrett, Plate 195, fig. 1b.

*5871 vii. 1885 (Salvage).

**Calamia lutos **Hüb.

2736 Weel, E. Yorks., x. 1884 †.
Ab. crassicorns Haw. Three longitudinal dark shades.
Cf. Barrett, Plate 199, fig. 1b.

1842 Weel, E. Yorks., ix. 1874 †.
1839 Weel, E. Yorks., ix. 1874 †.
4966 " " x. 1881 †.
1371 " " ix. 1873 †.

Ab. pilicornis Haw. Greyish-ochreous, without the longitudinal dark shades, but with a transverse row of black dots. Cf. South, I. Pl. 145, fig. 2. In this specimen, and in 1841, the row of dots has developed into an indistinct sharply-angulated line.

1840 " " ix. 1874 †.
1843 " " ix. 1875 †.

**Glottula (Brithys) pancratii **Cyr.

5488 Central France, 1883 (Staudinger).
5486 " "
5487 " 

**Agrotis cuprea **Hüb.

3806 Switzerland, 1877 (Staudinger).
3807 " "
3808 " "
3809 " "

Ground colour more uniform than in the preceding.

**Hydroecia leucographa **Bork. = borellii Pier. = lunata Frey.

5094 South-East Hungary, 1882 (Staudinger).
5093 " "

**Hydroecia zanthenes **Germ.

5545 Sicily, 1883 (Staudinger).
5544 " [The abdomen in very bad condition].

**Goryyna ochracea **Hüb. = flavago Esp.

387 Newcastle-on-Tyne, ix. 1871 (Wassermann).
389 Sutton, E. Yorks., bred from pupa, ix. 1879 †.
Lewisham, 1876 (Kenward).
Hull, 'bred from larva', 1884 (Boult).
Rotterdam, 1875.
Var. flavago Esp. = flavo-auratum Tutt. Larger than the above; ground colour golden-yellow. 3400 and 2315 darker in tone. Cf. Barr., Pl. 193, fig. 2b.

Var. flavago [Wings at rest].
Hull, 1881 (Potts).

Hydroecia nictitans Bork. = chrysographa Hüb.
Forres, viii. 1871 †.
' Ab. rosea Tutt. Ground colour red; reniform stigma white.
Beverley, bred 1883 †.
' Ab. auricula Haw. Ground colour dark reddish-grey; reniform stigma yellow.

South England, bred 1889 (Weir).
Ground colour pale grey with no reddish tinge; reniform stigma white.

South England, bred 1889 (Weir).
Ground colour pale grey with no reddish tinge; reniform stigma yellow.

Chabarofka, Amurland, 1881-1886 (Graeser’s expedition).

Chabarofka, Amurland, 1881-1886 (Graeser’s expedition).

Central Germany, 1883 (Staudinger).
[Half grown].

Central Germany, 1883 (Staudinger).

Hydroecia petasitis Doubl.
Bury, viii. 1876 (Kay).
Wakefield, bred from pupa, viii.-ix. 1875 (Wilson).
Wakefield, bred from pupa, viii.-ix. 1875 (Wilson).

Amurland, 1885 (Staudinger).
Hydroecia micacea *Es.* = cypriaca Hüb.
2727 Weel, E. Yorks., ix. 1876 †.
2647 Beverley, ix. 1877 †.
2648 †.
3941 Brighton, 1883 (Salvage).
2728 " " "
3943 " " ix. 1878 †.
4651 Weel, E. Yorks., ix. 1880 †.
3942 " " ix. 1876 †.

There is some variation in the depth of the ground colour, in distinctness of the darker shades, and in size, which ranges from 33 mm. (4651) to 43 mm. (2728).

3938 Isle of Lewis, 1887 (Salvage).

Ab. lutea Tutt. Ground colour pale reddish.

[Wings at rest].

Axylia putris Linn.
3857 Beverley, bred 1879 †.
3858 †.
3855 London, bred 1878 (Riding).
3859 " " "
3864 " " "
3860 " " "
3861 " " "
3866 " " "
3863 "
*5933 Fly, viii. 1885 (Cross).
*5928 "
*5925 Carmarthen, viii. 1885 (Owen Wilson).
*5926 " " "
*5927 " " "

Xylophasia rurea Fab.
318 Droylesden, v. 1872 (White).
722 Hunsley, E. Yorks., vi. 1875 †.
571 Forres, vi. 1872 (Norman).
6468 Isle of Lewis, 1887 (Salvage).

The inner-marginal area more whitish than in the preceding. Cf. Barrett, Plate 179, fig. 1d.

570 Forres, vi. 1872 (Norman).
571a " " "
745 Germany, 1872 (Staudinger).
746 " " "

Ab. combusta Hüb. All except the costa filled up with deep reddish-brown; stigmata with pale outlines. 571a paler than the others; 570 redder. Cf. Barrett, Plate 180, figs. 1, 1a, and South, I. Pl. 135, fig. 2.

*5670 Leipzig, 1884 (Gerhardt).
*5602 Oldham, 1883 (Rodgers).
*5600 " Dorsal and sub-dorsal lines clear white.
*5601 Oldham, 1883 (Rodgers).
*5217 Carmarthen, x. 1882 (Owen Wilson).
Dorsal line yellow.

Xylophasia lateritia Hufn. = molochina Hüb.
3079 Germany, 1876 (Staudinger). ♀
3080 " " ♂
3081 " " ♂
Rhizogramma detersa *Esp.* = petrorhiza Treit. = comma Hüb.

3082 Germany, 1876 (Staudinger).
3083 " " "
3084 " " "

Xylophasia lithoxylea *Fab.*

564 Cliffe, E. Yorks., vii. 1872 ?
564a " " "
565 Forres, 1871 (Norman).  
566 " " "
567 " " "
1571 Beverley, 1874 †
1572 " " †
1573 " " †
*6008 Austria, 1885 (Staudinger).

*6007 Xylophasia sublustris *Esp.* = lithoxylea Hüb.

2874 1879 (Harwood).
2875 " "
2877 " "
3986 Bred 1878 (Harwood).
3984 " "
3985 " "

All agreeing with Barrett, Plate 176, fig. 3a, which form Tutt would apparently call ab. intermedia.

Scotochrosta pulla Hüb.

3500 Continent, 1876 (Staudinger). ♂
3501 " " "
3502 " " "

Xylophasia monoglypha *Hufn.* = polyodon Linn.

2533 Beverley, 1886 †.
6187 Sligo, 1886 (Russ).

Wings suffused with pale brownish-ochreous, but markings distinct.

2534 Spurn, E. Yorks., 1886 †.
425 Forres, viii. 1871 †.
6186 Sligo, 1886 (Russ).

Ab. obscura Tutt. Wings suffused with brown; markings indistinct. Cf. South, I. Pl. 136, fig. 4.

2533 Spurn, E. Yorks., 1886 †.

Ab. infuscafa White. Wings suffused with black. Cf. South, I. Pl. 136, fig. 5.

6478 Isle of Lewis, 1887 (Salvage).

Ab. aethiops Haw. Wings intense black; markings entirely obliterated.

*4253 Loughborough, 1879 (Wieldt).
*5419 Continent, 1883 (Watkins and Doncaster). [Half grown].

Xylophasia hepatica Hüb.

4544 Beverley, vii. 1880 †.
1035 Beverley, vii. 1873 †.
1034 " " "
4547 " vii. 1880 †.
4546 " " †.
4545 " " †.
2422 Molescroft, E. Yorks., vi. 1875 †.
2421 " " vii. 1875 †.
2506 Beverley, vii. 1877 †.
3647 Beverley, vii. 1877 †.

There is some variation in the amount of surface covered by the brown markings.
*5693  Saxony, 1883 (Staudinger).
*5694  "  Paler and greyer.

_Xylophasia scolopacina_ Esp.

2599  Barnsley, viii. 1875 (Jackson).
2600  "  "  "  "
2601  "  Masborough, Derby, 1879 (Bloor).
2602  "  "  "  "
5411  1883 (Salvage).
5412  "  "  "
5413  "  "  "
2598  Barnsley, viii. 1875 (Jackson).
3711  "  1877 "
3714  There is a slight variation in the extent of brown shading in the wings.

*6122  London, vi. 1886 (Pearce).
*6120  "  "  "
*6123  "  "  "
*6121  "  "  "

**DRAWER IX.**

_Dipterygia scabriuscula_ Linn. = _pinastri_ Linn.

1181  Bred 1887 †.
1182  "  "  "  †.
1183  "  "  "  †.
1184  "  "  "  †.
1176  1873 (Lulham).
1178  "  "  "
1175  "  "  "
1179  "
*5920  viii. 1885 (Harwood).
*5919  "  "  "
*5918  "  "  "
*5917  "  "  "
*5916  "  "  "

_Xylomyges conspicillaris_ Linn.

2869  Loughborough, 1875 (Wieldt).
2868  "  Ab. _intermedia_ Tutt. The inner margin and apex ochreous. Cf. Barrett, Plate 152, fig. 3a.

28  Germany, 1872 (Staudinger).
27  "  "  "  "
2977  "  1876 "
2978  "  "  "
2979  "  "  "
2980  "  "  "  "

Ab. _intermedia_ Tutt.

33  Germany, 1872 (Staudinger).
34  "  "  "  "
32  "  Ab. _melaleuca_ View. The whole costal region rich blackish-brown; only the inner margin ochreous. A fine form. Cf. Barrett, Plate 152, fig. 3b.

*4268  Germany, 1880 (Staudinger).
*3993  1878 "
Aporophyla australis *Boisd.*

3323 Bristol, 1876 (Spiller).
3320 Colchester, 1876 (Harwood).
3324 " " "
3319 " " "
3321 " Lewes, 1874 (Mond).
1914 Var. *pascuea* Curt. Smaller than the type (35 mm. as against 39 mm.); markings darker and most conspicuous: the common form found in Britain.

3433 Dalmatia, 1876 (Staudinger). ♀
3432 " " "
2981 " " "
2982 " An extreme form of the type. All the central portion of the wing taken up by the ashy-white ground colour.

*5661* Leipzic, 1884 (Gerhardt).
Rich reddish-brown; markings lighter; no trace of green.

*5662* Leipzic, 1884 (Gerhardt).

*5016* Continent, 1882 (Staudinger).

5086 " " "
6552 Asia Minor, 1887 " ♀

Ab. *ingenua* Frey. Semi-melanic: dark blackish-grey; markings obscured (42 mm., 38 mm.).

Caradrina exigua *Hüb.*

2983 Continent, 1876 (Staudinger).
4702 " 1880 "
4703 " " "
4705 " " "
4704 " " "
4442 " 1879 "
6051 Dalmatia, 1885 " "
6050 " The colouring lighter, giving a washed-out appearance.

Prodenia littoralis *Boisd.*

6536 Syria, 1887 (Staudinger). ♀
6536a " "

Ulochlaena hirta *Hüb.*

4825 Continent, 1880 (Staudinger). ♀
4826 " " "
4827 " " "
4828 " " "

Neuria reticulata *Vill. = saponariae* *Bork.*

3172 Molescroft, E. Yorks., vi. 1876 †.
3192 Hunsley, E. Yorks., 1876 †.

Referring to these two specimens, Mr. Dobrée wrote in a letter to Mr. Tutt, ' *N. reticulata* is so scarce in this part of the East Riding (Beverley) that I have never taken more than two; but these still retain a decided vinous tinge, though taken five years ago.' The vinous tinge has now disappeared.

6451 Brighton, 1887 (Salvage).
6452 " " "
4206 Ripon, 1879 (Meldrum).
4208 " The space between the elbowed and subterminal lines unicolorous dull brown.
Epineuronia (Neuronia) popularis Fab.

2698 Beverley, ix. 1875 ♀
3173 " " " ♂ ♀
2780 " " 1879 ♂ ♀
2779 " " ♂ ♀
5396 Brighton, bred 1883 (Salvage). ♂
6672 South Russia, 1888 (Staudinger). ♀
Var. hilaris Staud. Small (31 mm. as against 41 mm.); nervures clear white; thorax ashy; hind wings white, with dark marginal band.

Phoeobophilus amoenus Staud.

6790 Issyk-Kul, Turkistan, 1888 (Tancrè—taken by Graeser). ♂

Heliophobus hispidus Hüb.-Gey.

3333 Devon, bred from larva 1876.
1788 Portland, 1889 (Partridge).
1786 " " " (Brown).
6774 " " " (Brown).
6775 " " "
6776 " " "
6777 " " "
1787 Portland, 1889 (Partridge).
1785 " All the specimens are of the usual 'Portland' form, lacking the violet tinge apparently possessed by the Continental type form.

Episema glaucina Esp.=trimacula Frey.=tersa Hüb.

4819 Continent, 1880 (Staudinger). ♀ ♂
4820 " Ground colour reddish-ochreous; markings indistinct.
4821 Continent, 1880 (Staudinger). ♀ ♂
4822 " Ab. " tersina Staud. Soft whitish-ochreous, lightly shaded with darker; two dark reddish-brown spots, one (triangular) before the orbicular stigma, and one (square) between the stigmata.

6538 Austria, 1887 (Staudinger). ♂ ♂
6539 " " " ♂ ♂
6537 " " " ♂ ♂
4823 " 1880 " Var. dentimacula Hüb.=trimacula Hüb. Ground colour purplish-grey; three dark reddish-brown markings surrounding the very large stigmata, which would be otherwise indistinguishable from the ground colour. [6539 has the right fore wing badly sprung, and the left hind wing broken].

*6492 Austria, 1880 (Staudinger).

'Ep. dentimacula.'
Charaeas graminis Linn.

4045 Norbiton, Surrey, 1880 (Ficklin).
4046 " " "
4048 " " "
4049 " " "
4047 " " "
4050 " Ab. *rufa* Tutt = *tricuspis* Hüb. (33-38 mm.). Dark reddish-brown; stigmata yellow; median nervure white and two-branchè beneath the reniform. Cf. Barrett, Plate 151, fig. 2a.

38 Forres, viii. 1871 †. ♀

Ab. *hibernicus* Curt. Smaller (33 mm.); dull yellowish-brown; stigmata and median nervure yellow; the darker markings indistinct. Cf. Barrett, Plate 151, fig. 2c.

6049 South Germany, 1885 (Staudinger). ♀ ♂

6048 "Ab. *tricuspis* Esp. A very distinct form (30-32 mm.). Almost uniform pale reddish-brown; stigmata yellow, indistinct; median nervure white, expanding largely under the reniform stigma.

5489 Turcomania, 1883 (Staudinger). ♀

Var. *megala* Alph. (34 mm.). Resembles the last two, but the white markings are not so distinct.

*Lauder, Berwickshire, viii. 1882* (Turnbull).

*5149 " " "

*5147 " " "

*5148 " " "

---

**DRAWER X.**

Pachetera leucophaea View.

3073 Germany, 1876 (Staudinger).

3075 " " "

787 " 1872 "

786 " " "

6674 Asia Minor, 1888 " ♀ (52 mm.).

6673 " " ♂ (40 mm.).

3077 Germany, 1876 "

3076 " " "

784 " 1872 "

There is considerable variation in the depth of the markings, 3073 and 3075 approaching ab. *vestigialis* Esp., being speckled with ochreous.

*5096 Saxony, 1885 (Staudinger).

*6002 " " "

*4675 Germany, 1880 "

Celaena matura Hufn. = *cytherea* Fab.

430 Ipswich, 1872 (Long).

432 " Spurn, E. Yorks., viii. 1881 †.

Largely suffused with ochreous, and the general appearance more uniform.

4569 Spurn, E. Yorks., viii. 1880 †.

4567 " " "

4568 " " "

---
Germany, 1872 (Staudinger).
All the central area from costal to inner margin pale brownish-grey.

" Small (33 mm. as against 42 mm.) ; almost unicolorous dull brown.

France, 1885 (Staudinger).
France, 1883
Berlin, 1886 (Gleissner).

Dianthoecia luteago Hüb.
Continent, 1878 (Staudinger).
Var. " argillacea " Hüb. A very distinct form. Ground colour dull yellowish-white; the dark markings more distinct than in the type form.

Germany, 1880 (Staudinger).
Austria, 1883
Austria, 1883
Large for size of imago. [The colour gone].

Luperina testacea Hüb.
Weel, E. Yorks., viii. 1875
Brighton, 1883 (Salvage).
Ab. " unca " Haw. A longitudinal black mark between the transverse lines under the stigmata.
Weel, E. Yorks., viii. 1875
Intermediate between the above and the following.
Weel, E. Yorks. ix. 1873
viii. 1875
Pale greyish-ochreous; almost unicolorous.
Leven, E. Yorks., viii. 1874
Sligo, 1885 (Russ).
Ab. nigrescens Tutt. Dark brownish-grey; markings indistinct. *Cf. Barrett, Plate 173, fig. 1e.
Austria, 1883 (Staudinger).
[Half grown].

Luperina nickerlii Frey.
Bohemia, 1883 (Staudinger).
" 1887
" 1887
Bohemia, 1883 (Staudinger).

Luperina dumerilii Dup.
Continent, 1884 (Gerhardt).
1876 (Staudinger).
[The wings badly sprung].
Granada, 1885 (Ribbe).
Very small (27 mm. as against 34 mm.); ground colour white.

Luceria (Luperina) virens Linn.
Central Germany, 1883 (Staudinger).
Berlin, 1888 (Staudinger).
Epineuonia (Neuronia) cespitis Fab.
4241 Brighton, bred 1879 (Salvage).
4243 " " "
4240 " " "
4245 " " "
4246 " " "
4239 " "
*6622 Austria, 1888 (Staudinger).
*6623 " "

Mamestra leineri Frey.
6640 Austria, 1888 (Staudinger). O
6641 " " 1876 " O { O
3449 " "
3450 " Var. pomerana Schulz. Nerves strongly white.

Hadena exulis Lef.

Sunk as a variety of H. maillardi in Dr. Staudinger's 'Catalog,' 1901.

6504 Iceland, 1887 (Staudinger).
6504a " Ab. gelida Guen. Like ab. groenlandica, but smaller (33 mm.; 35 mm.).
4027 Iceland, bred from pupa, 1878 (Staudinger).
Greyish-brown, with a distinct transverse band between the stigmata (42 mm.).
4026 Iceland, bred from pupa, 1876 (Staudinger).
Ab. groenlandica Dup. Greyish-brown, powdered with white, but otherwise as the type (43 mm.).
6505 Iceland, 1887 (Staudinger).
Ab. poll Guen. Small (34 mm.); stigmata distinct; a series of white dots on the nerves before the sub-terminal line.
6506 Iceland, 1887 (Staudinger).
Small (33 mm.); dark brown; markings indistinct.
4028 Iceland, bred from pupa, 1878 (Staudinger).
Very rich dark reddish-brown; nerves whitish to beyond the reniform; stigmata distinct and outlined in whitish (38 mm.).
4029 Iceland, bred from pupa, 1878 (Staudinger).
As the preceding, but the nerves and stigmata only just distinguishable; reniform stigma filled in with reddish (39 mm.).
6507 Labrador, 1887 (Staudinger).
6508 " Type form: brownish-grey; an indistinct central dark band; stigmata fairly distinct; a row of dark brown wedge-shaped spots before the hind margin (40 mm.).
6591 Shetland, 1888 (Salvage).
5366 Unst, vii. 1883 (McArthur).
Large (48 mm.; 42 mm.), and strongly marked with transverse yellow lines and bands. Cf. 'Entomologist,' 1884, Plate 1, figs. 5, 6, 7, and South, I. Pl. 123,
6590 Shetland, 1888 (Salvage). [figs. 1, 4.
5485 Rannoch, 1883 (Clark).
5484 " Ab. assimilis Doubl. Rich dark brown, with lighter transverse lines, and stigmata outlined in pale brown.
(46 mm.; 44 mm.; 42 mm.). Cf. 'Entomologist,' 1884, Plate 1, fig. 4, and South, I. Pl. 123, fig. 3.
Hadena arctica Frey.

Pseudohadena (Luperina) immunda Ever.

Hadena maillardi Hüb.-Gey.

Pseudohadena (Luperina) chenopodiphaga Ramb.

Hadena zeta Treit.

Mamestra abjecta Hüb.

Mamestra sordida Bork. = anceps Hüb.
Mamestra albicolon Hüb.

4144 Spurn, E. Yorks., vii. 1879.
4142 " " " vii.
4145 " " " vii.
4587 " viii. 1880.
4588 " " " vi.
2450 " vi. 1875.
2449 " " ".
2452 " " ".
2453 " " ".
2454 " " ".
2455 " " ".

There is a slight variation in the depth of the ground-colour and markings of these specimens.

Mamestra brassicae Linn.

437a Beverley, bred 1877.
437 " " ".
438 " " ".
436 " " ".

" Ab. albicolon Steph. The common form in Britain: stigmata and subterminal line distinctly marked in yellowish-white.

6333 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).
6334 " Var. decolorata Staud. A very distinct variety. Ground colour pale brownish-ochreous; reniform stigma white, filled in with ochreous; all the stigmata outlined in black, the claviform stigma being thereby rendered very distinct; a grey shade beyond the subterminal line, which is only slightly lighter than the ground colour.

*5360 Beverley, viii. 1882.
*5361 " " ".
*4909 Beverley, ix. 1884.
*4630 " " ".
*5362 Beverley, viii. 1882.
*5943 Beverley, ix. 1885.
*5359 Beverley, viii. 1882.
*5633 Beverley, ix. 1884.

Mamestra furva Hüb.

3389 Ayton, Berwickshire, 1878 (Buglass).
3390 " " " " ".
3391 " " " " ".
3665 " " 1879 ".
3666 " " " " ".

The markings not so distinct as in the Continental type form below.

6550 Turcomania, 1887 (Staudinger).
6551 " Large (43 mm.); apparently Guéné's furva = var. ochracea Tutt. Ground colour pale brownish-ochreous; markings distinct.
Mamestra persicariae Linn.

Bred vi. 1874 (Harwood).

[Wings at rest]

Ab. unicolor Staud. A melanic form: reniform stigma entirely filled in with brown; wings suffused and markings indistinct. 'A common Continental variety.' (Dobrée).

Beverley, ix. 1882.
Rich reddish-brown.
Leipzig, 1884 (Gerhardt).
Pale reddish-brown.
Greenwich, 1881 (Tutt).
Green.

Apamea basilinea Fab.

Gateshead, 1876 (Hedworth).
Beverley, vi. 1877.
1883.
1880.
Gateshead, 1876 (Hedworth).
Hartlepool, bred 1889 (Gardner).
Small (35 mm.); darker, and with a faint purplish tinge. 'A very scarce local variety.'
Canada, 1875 (Norman).
Labelled 'Had. finitima, Canada, ? spec. Darw.' In his diary Mr. Dobrée remarks, 'Is this not our basilinea under climatic influences? What is the larva like?' The two specimens certainly have the appearance of being a finely-marked variety of basilinea, with ground colour purplish-grey, and darker central transverse band. [4768 has the left hind wing broken].

Helotropha leucostigma Hüb.

Brighton, bred 1883 (Salvage).
Ely, 1882 (Raynor).
Germany, 1873 (Staudinger).
Var. fibrosa Hüb. Deep reddish-brown; reniform stigma ochreous in 5397, 5132, and white in 1236, 3484, the nervures forming a white forked line at its lower extremity; a pale ochreous band parallel to the hind margin. Cf. Barrett, Plate 19, fig. 1b.
3591 Canada, 1875 (Norman). }  
3590 " Like the above, but ground colour dark brown, with no trace of red. In his diary Mr. Dobrée remarks of these: 'Helotropha reniformis—the American form of A. fibrosa.'  
5133 Ely, 1882 (Raynor).  
The type form: almost unicolorous dark reddish-brown; reniform stigma yellow.  
3633 Norwich, vi. 1887 (Wheeler).  
Ab. abipuncta Tutt. As the type, but reniform stigma white.  
5134 Ely, 1882 (Raynor).  
3482 Germany, 1876 (Staudinger). }  
The type form.  
3592 Canada, 1875 (Norman).  
As the type, but ground colour deep brown, with no trace of red, and not quite so unicolorous. In his diary Mr. Dobrée remarks: 'The American form of A. leucostigma.'  
6359 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).  
6360 The type form, but small (34 mm., 31 mm.), and slightly duller than 5133. 

Apamea gemina Hüb.

4134 Beverley, 1879 †. }  
4935 Spurn, E. Yorks., 1886 †. }  
Intermediate between ab. intermedia and ab. remissa.  
4934 1881 (Salvage).  
Ab. remissa Treit. The small basal patch, inner margin, and space between the reniform stigma and subterminal line pale ochreous; claviform stigma as in ab. intermedia. Cf. Barrett, Plate 182, fig. 1f.  
4590 Spurn, E. Yorks., viii. 1886 †. }  
4136 vii. 1886 †. }  
4933 Hull, 1881 (Boult).  
Ab. intermedia Tutt. Claviform stigma represented by a longitudinal black streak between the transverse lines. Cf. South, I. Pl. 131, fig. 8.  
2530 Spurn, E. Yorks., 1886 †.  
4135 Beverley, 1879 †.  
5901 vii. 1885 †. }  
[Wings at rest].  
1233 Germany, 1873 (Staudinger).  
As the type, but ground colour warm brownish-grey.  
*5179 1882 (Staudinger).  

DRAWER XII.

Apamea pabulatricula Brahm = connexa Bork.

2552 Masborough, Derby, 1875 (Bloor).  
2553  
2554  
2555 " 1879 "  
2556 "  
2557 "  

2552
Apamea unanimis Treit.

London, bred 1880 (Pratt).

Weel, E. Yorks., bred 1884. [The left hind wing broken].

Weel, E. Yorks., bred 1884.

bred 1883. *5648

Weel, E. Yorks., x. 1884.

bred 1881. *5647

Germany, 1880 (Staudinger).

Apamea ophiogramma Esp.

Germany, 1876 (Staudinger).

Intermediate between the above and 619.

Didyma Esp. Reddish-brown, banded; a longitudinal black streak below the stigmata. Cf. South, I. Pl. 132, fig. 7.

Oculea Guen. Greyish-ochreous; costa and hind margin dark. Cf. Barr., Pl. 183, fig. 1j, and South, I. Pl. 132, fig. 11.

Intermediate between ab. nicititans and oculea.

Beverley, vii. 1872. [132, fig. 7.

Didyma Esp. Ground colour slightly paler than in 619.
620 Beverley, vii. 1872 †.
Dark, blackish-brown, approaching ab. lugens Haw.

618 Beverley, vii. 1872 †.
Almost unicolorous dark reddish-brown, approaching ab. rufa Tutt.

[Wings at rest].

*5180 Germany, 1882 (Staudinger).

**Miana strigilis** Clerck.

456 Beverley, vii. 1872 †.
456a " " " †.
457 " " " †.
457a " " " †.

Suffused melanic forms. Cf. Barrett, Plate 186, fig. 1i.

458 Beverley, vii. 1872 †.
458a " " " †.

Ab. aethiops Haw. Unicolorous black, with slight greenish tinge. Cf. Barr., Pl. 186, fig. 1g, and South, I. Pl. [134, fig. 16.]

6172 Sligo, 1886 (Russ).

6171 Cliffe, E. Yorks., vii. 1872 †.

539 Small (23-25 mm.); suffused brownish forms.

469 Beverley, viii. 1876 †.
469a " " " †.
470 " " " †.
470a " " " †.
470b " " " †.

*6491 Bavaria, 1887 (Staudinger).

*6205 France, 1886 "

**Miana fasciuncula** Haw.

2471 Spurn, E. Yorks., vi. 1875 †.
2476 " " " †.
2475 " " " †.
2473 " " " †.
2474 " " " †.
2472 " " " †.
3175 " " vi. 1876 †.

Ab. pallida Tutt. Pale ochreous; the central fascia indistinct, and only slightly darker than the ground colour. Cf. Barrett, Plate 186, fig. 2b.

3176 Spurn, E. Yorks., vi. 1876 †.
2477 " " vi. 1875 †.
2478 " " " †.
2479 " " " †.
2480 " " " †.
2481 " " " †.
245 Droylesden, v. 1872 (White).

244 " " " 

**Miana bicoloria** Vill. = furuncula Treit.

4618 Spurn, E. Yorks., viii. 1880 †.
3255 Middlesex, 1876 (South).
4617 Spurn, E. Yorks., viii. 1880 †.
3258 " 1881 †.

Ab. furuncula Hüb. The basal half reddish-brown; outer half ashy-grey. Cf. Barrett, Plate 187, fig. 1.

4619 Spurn, E. Yorks., viii. 1880 †.

Ab. pulmonariae Duf. The basal half pale reddish; outer half as type.
3252 Hartlepool, 1876 (Robson).
A suffused form of the type. Cf. Barrett, Plate 187, fig 1b.
3254 Spurn, E. Yorks., 1881 †.
Suffused uniformly with greyish-ochreous. Cf. Barrett, Plate 187, fig. 11.
3256 Middlesex, 1876 (South).
Var. rufuncula Haw. Unicolorous reddish-brown.
3257 Middlesex, 1876 (South).
Labelled ab. vinetuncula Hüb., but not a good example of that form, the ‘fine, black, transverse line’
bounding the central fascia being inconspicuous.

4622 Spurn, E. Yorks., 1881 †.
3259 Holme, E. Yorkshire, viii. 1876 †. Small (19 mm.) ; very pretty mottled forms.
4621 Spurn, E. Yorks., viii. 1880 †. Slightly paler than 3254.
6199 New Holland, Linnc., 1886 (Boul). Slightly darker than 3254.
6277 Denmark, 1886 (Staudinger). Var. "insulicola" Staud. Very pretty mottled forms,
something like 4622 and 3259. Ground colour very pale ochreous, the markings of 6276 darker.

Miana onychina Herr-Sch.
Sunk as a variety of the following species in Dr.
Staudinger’s ‘Catalog,’ 1901.

5674 Continent, 1884 (Gerhardt).
5754 South Germany, 1885 (Staudinger).
5533 Heligoland, 1883 (Staudinger).

Miana literosa Haw. = erratricula Guen.
229 Forres, viii. 1871 †.
4555 Spurn, E. Yorks., viii. 1880 †.
4556 " " " " ++
4557 " " " " ++
4558 " " " " ++
4559 " " " " ++
4560 " " " " ++
4561 " " " " ++
4562 " " " " ++

[Wings at rest].

Petilampa (Hydrilla) arcuosa Haw.
1542 Beverley, vii. 1874 †.
1543 " 1879 †.
1544 " ++
1545 " ++
1548 " vii. 1877 †.
1012 " " ++.
1482 " ++
1549 " vii. 1874 †.
1550 " 1878 †.
1547 " vii. 1879 †.
1546 " vii. 1882 †.
1546a " " ++.
832 " ++.
5193 Beverley, vii. 1882 †.
Small (22 mm.), and with the dots of the first line joined together by curved lines.

**Miana (Photedes) captiuncula** Treit.

♀
The entire wing-surface suffused with pale brown; markings indistinct.

2901 Continent, 1876 (Staudinger). Φ
2902 " " " " Φ
2904 " " " " Φ
2903 " " " " Φ

The Continental type form, quite distinct from anything found in Britain. Bright yellowish with dark reddish-brown central band and hind margin. The basal area of 2904 and 2703 is suffused with reddish-brown.

1901 1874 (Gardner).
1903 " " " "
1905 " " " "
3204 Hartlepool, 1876 (Robson).
3205 " " " "
3206 " Var. expolita Stain. The almost unicolorous glossy-brown form found in Britain. Cf. Barrett, Plate 188, fig. 1.

**Mesotrosta signalis** Treit.

5734 Hungary, 1885 (Staudinger). Φ
5735 " " " " Φ
2905 " " " " Φ
2906 " " " " Φ

Paler brown than the others.

**Celaena haworthii** Curt.

4289 Bred 1879 (Harwood).
4290 " " " "
4292 " " " "
4291 " Of a very much paler reddish-brown than the Continental specimens below.

5520 Central Germany, 1883 (Staudinger).
5519 " " " "
2933 Germany, 1876 (Staudinger).
2932 " " " "
2934 " " " "
2935 " " " "
2931 " " " "
752 " 1872 " "
753 " " " "

**Grammesia trigrannica** Hufn. = *trilinea* Hüb.

1527 Kingston, Surrey, vii. 1874 (Lulham).
3174 Molescroft, E. Yorks., vi. 1876 †.
2428 " " 1875 †.
2427 " " " " †.
2426 " " " " †.
1528 Kingston, Surrey, viii. 1874 (Lulham).
478 Beverley, 1871 †.
Ab. *semifuscans* Haw. Basal half of wings pale grey; outer half, from the medium line, smoky-grey. Cf. Barrett, Pl. 222, fig. 1a, and South, I. Pl. 151, fig. 2.
4918  Brighton, (Salvage).
4919  "  "  "
4920  "  "  "
4921  "  "  "

Ab. bilinea Hüb. Entirely suffused with dark smoky-grey; the median transverse line obscured. Cf. Barrett, Plate 222, fig. 1b.

*6498  Austria, 1887 (Staudinger).

DRAWER XIII.

Segetia viscosa Frey.
3548  Continent, 1876 (Staudinger).
3549  "  "  "

Hydrilla palustris Hüb.
4047  Germany, 1878 (Staudinger).
4326  1879  "
6642  Alps, 1888  "
6643  "  "  "  (22 mm.—24 mm.).
4713  Germany, 1880 (Staudinger).
4325  1879  "
4048  1878  "
4714  1880  "  (30 mm.—33 mm.).

Hydrilla glutiosa Treit.
6052  Hungary, 1885 (Staudinger). ♀
6053  "  "  "  [The left fore wing chipped].

Caradrina lenta Treit.
4330  Continent, 1879 (Staudinger). ♀
4328  "  "  "  ♀
4329  "  "  "  ♂
4327  "  "  "  ♀

Acosmetia caliginosa Hüb.
969  Walthamstow, 1873 (Downing).
968  "  "  "
1638  Wimborne, 1874 (Spiller).
3704  Carmarthen, 1877 (Hearder).
3703  "  "  "
3687  New Forest, 1886 (Bright).
3688  "  "  "
3684  1877 (Ross).
3686  "  "  "
3685  "  "  "
3689  Leipzic, bred from pupa 1886 (Heyne).
*5006  Germany, 1882 (Staudinger).

[The colour gone].

Caradrina morpheus Hufn.
3205  Spurn, E. Yorks., vi. 1876 †.
4146  vii. 1879 †.
4147  Beverley, bred vii. 1883 †.
5323  "  "  †.
5322  "  Ab. obscura Tutt. Deep greyish-brown; markings indistinct.
5320 Beverley, bred vii. 1883  
5321 **  
4904 Lee, viii. 1881 (Bower).  
Intermediate between the type and 5322.  
4903 Lee, viii. 1881 (Bower).  
4902 **  
5226 Beverley, bred from ovum, ix. 1882  
5228 **  
5227 **  
5228a **  
Caradrina alsines Brah. 
3207 Holme, E. Yorks., vii. 1876  
3207a **  
3208 **  
3209 **  
6771 North Ireland, 1889 (Salvage's expedition).  
Almost uniform soft yellowish-brown.  
6770 North Ireland, 1889 (Salvage's expedition).  
Suffused with dark greyish-brown, exactly as 5322 of  
the last species. This is apparently Tutt's ab.  
suffusa.  
1315 Germany, 1873 (Staudinger).  
6258 Amurland, 1886 (Staudinger).   
6257 **  
1318 Germany, 1873  
The markings darker and most distinct. (?) var.  
* amurensis Staud.  
*6212 Central Germany, 1886 (Staudinger).  
Lighter in colour than the following.  
*4696 Germany, 1886 (Staudinger).  
*6211 Central Germany, 1886 (Staudinger).  
Caradrina taraxaci Hüb. = blanda Treit.  
3210 Beverley, viii. 1876  
3210a **  
625 viii. 1872  
624 **  
4915 Brighton, 1881 (Salvage).  
4914 **  
4913 **  
4917 **  
4913a **  
4916 **  
4912 **  
*6206 Hungary, 1886 (Staudinger).  
Caradrina ambigua Fab. = plantaginis Hüb.  
4331 Continent, 1879 (Staudinger).  
4334 **  
4332 **  
4333 **  
6253 Bohemia, 1886  
6254 **  
6256 **  
6255 **  
*5005 Continent, 1882  
Caradrina respersa Hüb.  
4496 Germany, 1879 (Staudinger).  
4497 **  
4498 **  
4499 **
Garadrina superstes Treil. = blandum Hüb.
6554 Switzerland, 1887 (Staudinger).
6553
[Garadrina multifera Walk.]
6203 Orillia, Canada West, 1876 (Norman).
6202
Caradrina selini Boisd.
5778 Livonia, 1885 (Staudinger).
5777
3546 Continent, 1876 (Staudinger).
3547
Caradrina kadenii Frey.
5715 Turcomania, 1883 (Staudinger).
5714
5716
Caradrina quadripunctata Fab. = cubicularis Bork.
479 Forres, viii. 1871.
480
5324 vii. 1883.
1037 viii. 1874.
1034 vii. 1875.
1035 viii. 1875.
1036
Suffused with greyish-brown; the markings less distinct.
2463 Spurn, E. Yorks., vi. 1875.
2463a
472 North Ireland, 1889 (Salvage’s expedition).
Ab. superstes Steph. Larger (35 mm. as against 29 mm.-32 mm.) and darker.

*Rusina umbratica Göze = tenebrosa Hüb.
3197 Rannoch, 1879 (Salvage).
2466
3200 vii. 1876.
3201 vii. 1876.
3199 viii. 1876.
3198
Ab. obscura Tutt. Unicolorous blackish-brown, but the costal spots persist in all except 3199. Cf. Barr.,
3202 Hunsley, E. Yorks., vi. 1876.
3201 vii. 1876.
3203 vii. 1876.
2465 Aberdeen, vi. 1875 (Carpenter).
2589 vii. 1875.
*6487 Hartlepool, xi. 1887 (Gardner).
*6486
*6009 Germany, 1885 (Staudinger).

**DRAWER XIV.**

Agrotis obesa Boisd.
4037 Continent, 1878 (Staudinger).
4036
4038 Asia Minor, 1878
Var. _seytha_ Alph. Ground colour whitish, and the markings consequently more distinct; hind wings entirely white. (Marked 'var. _albidior_' in Mr. Dobrée’s diary).

**Agrotis fatidica** _Hüb._

6066 Central Alps, 1885 (Staudinger).  
6065  
4815 Continent, 1880 (Staudinger).

**Agrotis vestigialis** _Rott._ = _valligera_ _Hüb._

2458 Spurn, E. Yorks., vi. 1875 †.  
4603 „ viii. 1886 †.  
4604 „  
4503 Germany, 1879 (Staudinger).  
4502 „  
4600 Spurn, E. Yorks., viii. 1886 †.  
1649 „ vii. 1874 †.  
126 „ 1883 †.  
Suffused with brown; the markings obscured; approaching ab. _nigra_ Tutt.

6434 Sligo, 1885 (Russ).  
5339 Spurn, E. Yorks., 1883 †.  
5340 „  
[Wings at rest].

1650 Spurn, E. Yorks., vii. 1874 †.  
Ground colour soft fawn; the wedge-shaped spots very distinct.  

*4985 Berlin, 1881 (Kricheldorff).  
[The colour gone].

**Agrotis graslinii** _Ramb._

4039 Continent, 1878 (Staudinger).  
4040  

**Agrotis trifurca** _Ever._

6695 Amurland, 1888 (Tancré—taken by Graeser).  
6694 „  
All the wings much darker than in the preceding.

**Agrotis issykula** _Staud._

Sunk as a variety of _A. multicuspis_ in Dr. Staudinger’s ‘Catalog,’ 1901.

6696 Issyk-Kul, Turkistan, 1888 (Tancré—taken by Graeser).  
6697  

**Agrotis spinifera** _Hüb._

6073 Granada, 1885 (Ribbe).  

**Agrotis puta** _Hüb._

1722 Guernsey, ix. 1874 †.  
1721 „ „  
1720 „ „  
1719 „ „  
1725 „ „  
Lighter grey than the other six ♀ ♂.  
1728 Brighton, 1883 (Salvage).  
1729 „ „  
1726 „ „  
1727 „ „  
1723 Guernsey, ix. 1874 †.  
1718 „ „  
1724 „ „  

Agrotis ypsilon *Rott.* = *suffusa* Hüb.  
3352 Weel, E. Yorks., ix. 1876 †.  
3351 ″ ″ ″ †.  
3351a ″ ″ ″ †.  
3352a ″ ″ ″ †.  
6766 North Ireland, 1889 (Salvage’s expedition).  
6765 Sligo, 1889 (Salvage’s expedition).  
3291 Canada, 1875 (Norman).  
6391 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).

— [Wings at rest].

Agrotis saucia Hüb.  
2729 Guernsey, 1875 (Luff).  
2665 1875 (Harwood).  
2666 ″ ″ ″.  
2667 ″ ″ ″.  
2668 2730 Bathampton, Somerset, 1875 (Ross).  
3289 Canada, 1875 (Norman).  

3290 Canada, 1875 (Norman).  
*5420 Britain, 1883 (Watkins and Doncaster).

Agrotis segetum Schiff.  
2430 Spurn, E. Yorks., vi. 1875 †.  
Dark blackish-brown; the markings indistinct.

4943 Shetland, 1881 (Salvage). ♀ Ab. *subatatus Haw.* Black, with hind-marginal row of pale spots.

4944 Shetland, 1881 (Salvage). ♀ Ab. *nigricornis Vill.* = *nigricornutus Haw.* Unicolorous black. [The abdomen badly greased].

3289 Canada, 1875 (Norman).  
4128 Spurn, E. Yorks., vii. 1879 †.  
1804 Guernsey, ix. 1874 †.

6402 Turkistan, 1881-1886 (Graeser’s expedition). ♀ Var. *pallida Staud.* A very distinct form. Uniform pale whitish-brown; stigmata of the same colour but outlined in pale brown; (34 mm.). [The left hind wing damaged].

6403 Turkistan, 1881-1886 (Graeser’s expedition). ♀ Var. *pallida.* Not quite so uniform; reniform stigma filled in with dark grey; (39 mm.).

6223 Turkistan, 1886 (Staudinger). ♀ Var. *pallida.* Like 6402, but with some faint indications of the transverse markings; (39 mm.).

*5316 Beverley, bred from ovum, viii. 1883 †.  
*5315 ″ ″ ″ †.  
*5316a ″ ″ ″ †.  
*4984 Germany, 1881 (Kricheldorff). ″

Agrotis exclamationis Linn.  
4129 Spurn, E. Yorks., vii. 1879 †.  
♀ Suffused with blackish-brown; orbicular stigma indistinct.
Ab. *rufescens* *Tutt.* Ground colour reddish-brown, darker than ♂ ♂.

4132 Spurn, E. Yorks., vii. 1879 ♂. ♂
Ground colour reddish-brown; all the stigmata run together to form one large dark-brown blotch. Cf. Barrett, Plate 127, fig. 1f.

4857 Scotland, 1880 (Salvage). ♀
Ab. *plaga* *Steph.* Reniform and orbicular stigmata joined to form one blotchy streak.

4133 Beverley, 1874 (Bishoprick). ♀
As 4132, but ground colour and blotch duller.

4132a Spurn, E. Yorks., vii. 1879 ♂. ♀
As 4857; claviform stigma intensely dark.

— All the stigmata separate and very distinct.

— Orbicular stigmata obsolete.

4130 Spurn, E. Yorks., vii. 1879 ♂. ♀
— Ab. *rufescens* *Tutt.* Ground colour pale reddish-brown; claviform stigma intensely dark.

*4986 Germany, 1881 (Kricheldorff.)*

**Agrotis fennica** *Tausch.*

Of this species one specimen was *said* to have been taken in England about 1850, and none has ever been taken here since. The two females in this collection were probably *the first ever brought to England,* and until Herr Louis Graeser bred these from larvae found in Eastern Siberia, the difference between the male and the female seems to have been unknown to scientists. (See Mr. Dobrée's article in the 'Entomologist,' December 1887, where, however, the habitat is wrongly given as 'Western Siberia.' This mistake is repeated on p. 376 of Barrett's 'Brit. Lep.' Vol. III., and on p. 84 of Tutt's 'Brit. Noct.,' Vol. II.).

6322 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition) ♀.
6321 " " " " " " " " ♀
6324 " " " " " " " " ♀
6323 " [The abdomen badly greased] " " " " ♀

**Agrotis conspicua** *Hüb.*

6384 Turkistan, 1881-1886 (Graeser's expedition). ♀
6383 " " " " " " ♀
3837 Western Siberia, 1877 (Staudinger). ♀
3838 " " " " " " ♀
3840 " " " " " " ♀
3839 " " " " " " ♀
Agrotis trux Hüb.

6225 Sicily, 1886 (Staudinger).
5121 Continent, 1882 (Staudinger).
5122 Sicily, 1886 (Staudinger).

Ab. terranea Frey. A very distinct form. Ground colour yellowish-brown or reddish-brown; markings indistinct; claviform stigma absent; hind wings of ♀ whiter than in the ♀ form.

5125 Continent, 1882 (Staudinger).

5045 Switzerland, 1882 (Kricheldorff). ♀
Claviform stigma large and very conspicuous.

2216 Continent, 1874 (Staudinger). ♀
1880 ♀

5046 Switzerland, 1882 (Kricheldorff). ♀
Suffused with brown; the markings indistinct.

2217 Continent, 1874 (Staudinger). ♀
2215 ♀

Orbicular stigma pale greenish-white, claviform stigma dark reddish brown; both very conspicuous.

Agrotis simplonia Hüb.-Gey.

4487 Continent, 1879 (Staudinger). ♀
4488 " " " ♀
4490 " " " ♀
4489 " " " ♀

Agrotis lunigera Steph.

Sink as a variety of Agrotis trux in Dr. Staudinger’s ‘Catalog,’ 1901.

6605 Isle of Wight, 1888 (Hodges). ♀
4157 " 1879 (Riding). ♀
4159 " " " ♀
4158 " " " ♀

Intermediate between the type and ab. suffusa.

6606 Isle of Wight, 1888 (Hodges). ♀
Ab. suffusa Tutt. Ground colour blackish-grey.

5538 Switzerland, 1883 (Staudinger). ♀
Rich brown; orbicular stigma large, irregular in shape, and very conspicuous.

Agrotis corticea Hüb.

2581 Canterbury, 1875 (Parry).
2583 " " "
2582 " " "
5969 Brighton, 1885 (Salvage).

Suffused with blackish-brown from the base to second line; beyond this paler.

5971 Brighton, 1885 (Salvage).
Ab. brunnea-virgata Tutt. Suffused with dark brown from base to subterminal line; beyond this pale yellowish-brown. Cf. Barrett, Plate 126, fig. 1c. (But the contrast is greater here than in the figure).

2585 Canterbury, 1875 (Parry).
Ground colour pale whitish-brown, and markings much lighter than in the type. Cf. Barrett, Plate 126, fig. 1d.

2584 Canterbury, 1875 (Parry).
Larger than all the others (41 mm.). As the type, but the thorax much crested with ashy-white.
5970 Brighton, 1885 (Salvage).
Ground colour blackish-grey; basal area and the nerves whitish-brown; approaching ab. *venosa* Tutt.

1052 Forres, bred 1873 (Norman).
Ground colour pale whitish-brown; stigmata very distinct; costal region dark brown.

6348 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition). ♀
Costal region suffused with dark blackish-brown; orbicular and reniform stigmata indistinct. (?) var. *obscura* Frey.

*6488 Austria, 1887 (Staudinger).

**Agrotis cinerea** Hüb.

3376 Brighton, 1876 (Salvage).
Ab. *pallida* Tutt. Ashy-grey; the transverse median shade obsolete. Cf. Barrett, Plate 126, fig. 2b.

3377 Brighton, 1876 (Salvage).
3378  "  "  "  "
3383  "  "  "  }
4936  "  1881  "  }
The dark median shade extended along inner margin towards the base.

3692 Brighton, bred 1877 (Salvage).
3691  "  "  "  }
3693  "  "  "  }
The dark median shade takes up almost the whole space between the first and second lines.

*6443 Bred from ovum, viii. 1887 (Salvage).
*6444  "  "  "  "
*6445  "  "  "  "

**Agrotis cursoria** Hüfn.

3248 Ipswich, 1877 (Wheeler).
4573 Spurn, E. Yorks., viii. 1880 †.
  Intermediate between the type and 5365.
4572 Spurn, E. Yorks., viii. 1880 †.
4579  "  "  Brown, darker than the type.
4578 Spurn, E. Yorks., viii. 1880 †.
  Ab. *mixta* Fab. Very pale whitish-grey; markings fairly distinct.
4574 Spurn, E. Yorks., viii. 1880 †.
4575  "  "  Ab. *ochrea* Tutt. Yellowish-brown; the orbicular and reniform stigmata, median nervure, and costal streak paler. Cf. Barrett, Plate 129, figs. 1b, 1d.

6179 Sligo, 1886 (Russ).
6178  "  "  Brown forms, darker than the type.

5365 Unst, vii. 1883 (McArthur).
A very pretty form, strongly resembling the Forres forms of *A. trifaci* (555, 556). Ground colour reddish-brown, but the two upper stigmata, costal streak, median nervure, and clouds along the hind margin and inner margin pale ashy-grey. Cf. ‘Entomologist,’ 1884, Plate 1, fig. 3.

5341 Spurn, E. Yorks., 1883 †.
  Ab. *ochrea*. [Wings at rest].
5342 Spurn, E. Yorks., 1883 †.
  Type form. [Wings at rest].
*5370 x. 1883 (McArthur).
  [Colour gone].
Agrotis nigricans Linn. = fumosa Hüb.

1685 Leven, E. Yorks., viii. 1874.
1684 " " " " 1874.
1682 " " " " 1874.
4580 Spurn, E. Yorks., viii. 1880.
5403 Brighton, 1883 (Salvage).

Ab. striata Tutt. Ground colour pale yellowish-brown; transverse lines and stigmata ochreous; beyond the second line the nervures ochreous.

4889 Shetland, bred from pupa, 1886 (Salvage).
2771 Canterbury, 1875 (Parry).

Ab. rufa Tutt. Ground colour pale reddish-brown; reniform stigma ochreous.

2272 Canterbury, 1875 (Parry).
2270 " " " " 1875.
5402 Brighton, 1883 (Salvage).

Parallel forms to ab. striata Tutt, but ground colour fairly dark greyish-brown.

*6005 Austria, 1885 (Staudinger).

Agrotis tritici Linn.

5390 Spurn, viii. 1883.
5389 " " " " 1883.
4583 " viii. 1880.
6180 Deal, 1886 (Tutt).
6181 " " " " 1886.

Ground colour slaty-grey, tinged with brown; costal streak undeveloped. ‘Taken in the proportion of about 5 per cent.’

6180a Deal, 1886 (Tutt.).
555 Forres, viii. 1871.
550 1888 (Salvage).

Ab. vitia Hüb. Ground colour purplish-brown, with costal streak, margins of stigmata, median nervure, and space between the second and the subterminal line whitish. Cf. Barrett, Plate 131, fig. 1b.

4581 Spurn, E. Yorks., viii. 1880.

As the preceding, but all the markings have a decided brown tinge, and the costal streak is rich creamy-white.

2775 Canterbury, 1875 (Parry).
2770 " " " " 1875.
2774 " " " " 1875.
2773 " " " " 1875.

Labelled ‘var. aquilina Hüb.’ The first three of these have the ground colour yellowish-brown, 2776 being almost unicolorous; 2773 resembles the type form, but is slightly suffused.

Agrotis ripae Hüb.

1654 Spurn, E. Yorks., vii. 1874.
2442 " viii. 1879.
1653 " " " " 1879.
1655 " " " " 1879.
7441 " vi. 1875.
2446 " " vii. 1875.

[Named by Mr. Henry Doubleday]. Ground colour yellowish-brown, with the transverse markings well developed; the submarginal row of wedge-shaped spots strongly developed in 1654. These are apparently ab. brunnea Tutt.
Spurn, E. Yorks., vi. 1875

Sarepta, South Russia, 1887 (Staudinger). Var. desertorum Boisd. Pale greyish-white with slight ochreous shading; reniform stigma darker; in the transverse markings practically obsolete; hind wings pure white.

* Ely, ix. 1884 (Cross).

Germany, 1876 (Staudinger). Var. weissenbornii Frey. A most distinct form. Ground colour pure white; stigmata outlined in dark reddish-brown; a sub-marginal row of dashes of same colour. In these markings are only just discernible.

South Germany, 1887 (Staudinger).

Agrotis recussa Hüb.

Continent, 1880 (Staudinger). 

Agrotis obelisca Hüb.

Ayton, Berwickshire, 1876 (Buglass).

Isle of Wight, 1888 (Hodges).

Ground colour rich purplish-brown, with paler costal streak. (?) var. hastifera Donz.

Isle of Wight, 1888 (Hodges).

Ab. grisea Tutt. As the preceding, but with a greyish tinge. Cf. Barrett, Plate 133, fig. 1c.

Germany, 1873 (Staudinger).

The Continental type form: ground colour reddish-brown, with ochreous costal streak.

Austria, 1885 (Staudinger).

Exactly similar to the British forms preceding.

Austria, 1885 (Staudinger).

Var. hastifera Donz. Ground colour deep vinous black, with slightly paler costal streak.

Germany, 1876 (Staudinger).

Austria, 1885 (Staudinger).

Var. villiersii Guen. Larger than type (40 mm.) and paler, with a greyish tinge.

Austria, 1885 (Staudinger).

Continent, 1873 (Staudinger).

Ab. ruris Hüb. Reddish-grey as the preceding form, but the pale costal streak obsolete.
Agrotis renigera *Hüb.*

6072 Swiss Alps, 1885 (Staudinger). ♀
[Does not agree with Kirby's description of the species].

Agrotis signifera *Fab.*

4477 Continent, 1879 (Staudinger). ♀
4478 " " " ♀♂
4476 " " " ♀♂

Agrotis forcipula *Hüb.*

4507 Continent, 1879 (Staudinger). ♀
4508 " " " ♀♂

Agrotis agathina *Dup.*

3650 Forres, bred 1877 (Norman).
3654 " " " ♀♂
3653 " " " ♀♂
6471 Isle of Lewis, 1887 (Salvage).
6470 *6424 Perth, vi. 1887 (Anderson). *
6425 " " " ♀♂
6426 " " " ♀♂
5832 Scotter Common, Lincoln., v. 1885.

Very beautiful examples of the art of preserving larvae, the green colour and white markings remaining perfect.

Agrotis erythrina *Ramb.*

6548 Central France, 1887 (Staudinger). ♀
6549 " " " ♀♂

Agrotis senna *Hüb.-Gey.*

5492 Switzerland, 1883 (Staudinger).

Agrotis strigula *Thun.* = *porphyrea* *Hüb.*

490 Forres, 1871 (Norman).
3300 1876 (Harwood).
3301 1883 (Salvage).
3302 " " " " ♀♂
6603 Shetland, 1888 (Salvage). *
6602 " " Var. "suffusa" *Tutt.* Semi-melanic: suffused with black, causing the disappearance of the red in the type form.

*5645 Rannoch, ix. 1884 (Salvage). *
*5646 " " " " Pale reddish-brown. 'Salvage writes in 1885 that he bred some of these, and they proved to be *A. cor-
digera.* I don’t think these are.' (MS. note in Mr. Dobrée's diary).

*5644 Rannoch, ix. 1884 (Salvage).
Rich dark reddish-brown.

*5424 Britain, 1883 (Watkins and Doncaster).
Duller than the preceding specimen.

Agrotis molothina *Esp.*

6654 South France, 1888 (Staudinger). ♀♂
6653 " " " ♀♂

Agrotis praecox *Linn.*

3302 Colchester, 1876 (Harwood).
3304 " " " ♀♂
3305 " " " ♀♂
Wallasey, Cheshire, bred from larva, 1877 (Billington).

*5852 vi. 1885 (Hughes).

*5850

*5829

*5831

Agrotis candelisequa *Hüb.* = *sagittifera* *Hüb.*

Austria, 1888 (Staudinger). ♀

Continent, 1879 (Graeser). ♀

Agrotis helvetina *Boisd.*

Switzerland, 1883 (Staudinger). ♀

Germany, 1879 ♀

Agrotis sollers *Staud.*

Turcomania, 1883 (Staudinger). ♀

Agrotis lucipeta *Fab.*

Germany, 1876 (Staudinger). ♀

Agrotis obscura *Brahm = ravida* *Hüb.*

Spurn, E. Yorks. viii. 1886 ♂

Beverley, vii. 1875 ♂

Germany, 1873 (Staudinger). Intermediate between the type and the following.

Germany, 1873 (Staudinger).

Ab. *obducta* Esp. The reddish costal streak obsolete.

Agrotis simulans *Hufn.*

Germany, 1873 (Staudinger). ♀

Agrotis fugax *Treit.*

Guernsey, viii. 1872 (Luff). ♀

Austria, 1887 (Staudinger). ♀

[The right fore wing much broken].

Agrotis grisescens *Treit.*

Alps, 1887 (Staudinger). ♀

A dark central band across the wing.

Alps, 1887 (Staudinger). ♀

Agrotis decora *Hüb.*

Austria, 1885 (Staudinger). ♀

Agrotis lucernea *Linn.*

Ayton, Berwickshire, 1877 (Buglass).
North Ireland, 1889 (Salvage's expedition). 
Var. *reniger* *Steph*. Melanic: uniform dark brown; 6768 the more extreme form. Cf. Barr., Pl. 136, fig. 3b.
North Wales, 1889 (Salvage's expedition). Ground colour greyish-brown, paler than the type.

Dalmatia, 1888 (Staudinger). 
Var. *dalmata* *Staud.* Very fine varieties. Ground colour glossy whitish-brown; 6671 slightly the paler. In his 'Catalog,' 1901, Dr. Staudinger suggests the possibility of this form being a distinct species.

Continent, 1882 (Staudinger). 
Dark reddish-brown with yellowish markings.

**Agrotis nictymera** *Boisd.*
Castile, 1886 (Staudinger). Labelled 'Sp. Darw.' and differing from the specimens of *A. lucernea* above only in the ground colour, which is of a soft yellowish-brown.

**Agrotis alpestris** *Boisd.*
Zürich, 1889 (Rühl). 
Switzerland, 1886 (Staudinger). 

**Agrotis latens** *Hüb.*
Saxony, 1886 (Staudinger). 
Central Germany, 1885 (Staudinger). 

**Agrotis elegans** *Ever.*
Central France, 1886 (Staudinger).

**Agrotis ocellina** *Hüb.*
Switzerland, 1886 (Staudinger). 

**Agrotis fimbriola** *Esp.*
Hungary, 1886 (Staudinger). 

**Agrotis multangula** *Hüb.*
Hungary, 1886 (Staudinger). 

**DRAWER XVII.**
Agrotis rectangula *Fab.*

4799 Continent, 1880 (Staudinger). 
4800 Var. *ändereggi* *Boisd.* Ground colour dark purplish-brown: a melanochroic form of the type.

Agrotis polygona *Fab.*

6246 Austria, 1886 (Staudinger). 
6245 Ground colour and markings of a warmer brown tint than in the following.

3759 Germany, 1877 (Staudinger).

5758

Agrotis anachoreta *Herr.-Sch.*

5278 Caucasus, 1883 (Staudinger). ♀

5277

Triphaena chardinyi *Boisd.*

3756 South Russia, 1877 (Staudinger). ♂

3757 ♀

Triphaena linogrisca *Schiff.*

3455 Germany, 1876 (Staudinger). ♀

3456 " " " ♂

3457 " " " ♀

Triphaena orbona *Hufn.* — subsequa *Hüb.*

6595 Forres, 1888 (Salvage).

6596 " " " ♂

3752 Germany, 1877 (Staudinger).

3754 " Ab. " subsequa " Hüb. Ground colour reddish-brown; darker than any of the following. Cf. Barrett, Plate 138, fig. 3a.

3753 Germany 1877 (Staudinger).

3755 " " " ♂

798 Germany, 1872 " ♂

2220 " 1874 " ❗

2221 " " " ♀

[The abdomina greased].

2222 Germany, 1874 (Staudinger).

Triphaena janthina *Esp.*

634 Beverley, vii. 1872 †.

2633 " viii. 1875 †.

2564 " " " ♂

3988 Bred 1878 (Harwood).

5082 Asia Minor, 1882 (Staudinger). ♂

5083 " " " ♂

"Ground" colour paler and thickly dusted with Bluish-grey atoms along the costal region to beyond the reniform; this most pronounced in 5082.

6687 Zürich, 1888 (Rühl).

Small (33 mm.): the hind-marginal area beyond the reniform stigma strongly suffused with Bluish grey.

*5826 v. 1885 (Salvage).

*5825 " " ♂

*5824 " " ♀
**Triphaena fimbria** *Linn.*

2492 Bred from pupa, vii. 1875 (Harwood).

2493 The yellowish-brown type form.

2495 Bred from pupa, vii. 1875 (Harwood).

2496 Ground colour olive-green in different shades.

*5827* v. 1885 (Salvage).

*3953* Sheffield, 1878 (Doncaster).

2492 Bred from pupa, vii. 1875 (Harwood).

2493 The yellowish-brown type form.

2495 Bred from pupa, vii. 1875 (Harwood).

2496 Ground colour olive-green in different shades.

*5684* Leipzic, 1884 (Gerhardt). [Young].

*5802* Kent, v. 1885 (Williams).

*5804* Perth v. 1885 (Lawson).

*5805* v. 1885 (Harwood).

**Triphaena interjecta** *Hüb.*

2503 Stanstead, 1875 (Spiller).

1744 Bred 1883 (Salvage).

1745  

1746  

2505 Bred 1883 †.

Less reddish and duller than any other of the series.

1743 Bred 1883 (Salvage).

1747  

*5807* v. 1885 (Harwood).

*5802*  

*5806*  

*5809*  

*5806a*  

**Triphaena comes** *Hüb.—orbona* *Fab.*

3349 Beverley, bred from larva, 1876 †.

Almost unicolorous soft yellowish-drab, with a slight reddish tinge.

4137 Bristol, 1879 (Mann).

Pale reddish-brown with the stigmata and transverse lines dark: apparently the type form.

515 Beverley, 1871 †.

3348 Beverley, 1871 †.

bred from larva, 1876 †.

Ab. *grisea* *Tutt.* Dark grey, almost unicolorous.

3571 Beverley, 1876 (Cherry).

Varied with dark and light grey; stigmata darker.

3350 Beverley, 1875 (Bishoprick).

Pale grey with stigmata darker; the first and second lines very distinctly marked, and consisting of a series of wave-forms, each rounded towards the middle of the wing.

6566 Isle of Lewis, bred from larva, 1887 (McArthur).

As 3349 in ground colour, but with a more decided reddish tinge, and with most conspicuous stigmata, dark reddish-brown edged with pale. 'One of a series of eighteen which were mostly like this, and with dark stigmata; one was like 3571.' (MS. note in Mr. Dobrée's diary).

3496 Germany, 1876 (Staudinger).

Large (46 mm.); a very soft fawn-colour, unicolorous.
Britain, 1883 (Watkins and Doncaster).

*5431*  
*5437*  
*5438*  
[The skin badly eaten by mites; as a result the brown wool stuffing exposed.

3630 Forres, vii. 1877 (Norman).
Ab. *rufescens* Tutt. Reddish-brown; reniform stigma slightly darker. Cf. ‘Entomologist,’ 1889, Plate vi., fig. B1, and Barrett, Plate 139, fig. 1a.

3628 Forres, vii. 1877 (Norman).
As 3571, but general tone darker.

6593 Forres, 1888 (Salvage).
A melanic form of the preceding: a slight reddish tinge along the costa; hind wings completely filled in with smoky-black, leaving only the fringe yellow.

1072 Forres, bred 1877 (Norman).

1070  
6592  
Var. *curtisi* Newm. A very distinct form. Deep blackish-brown with broad red shade along the costal region. Cf. ‘Entomologist,’ 1889, Plate vi., figs. C1, C2, and Barrett, Plate 139, fig. 1d. The hind wings largely suffused with black scales, especially in 6592.

3629 Forres, vii. 1877 (Norman).
Ab. *nigrescens* Tutt. Black; transverse lines and edges to the stigmata pale. Cf. ‘Entomologist,’ 1889, Plate vi., fig. D1, and South, I. Pl. 115, fig. 8. The hind wings strongly suffused with black scales.

6594 Forres, 1888 (Salvage).

3631  

1071 Forres, bred 1877 (Norman).

1073  
As 3629, but smaller (36 mm.; 34 mm.), and with costal region tinged with pale reddish-brown. The hind wings of 1071 slightly suffused with black.

Note.—In the Collection the label ‘V. *curtisi* Newm.’ is made to apply to all the specimens from 3630 to 1073 inclusive. Only the three noted above are, however, the true var. *curtisi*.

**Triphaena pronuba** Linn.

A sub-ab. of *innuba*, with ochreous costal streak.


A sub-ab. of *innuba*, with darker spaces before and after the orbicular stigma.


Fore wings largely suffused from the base outwards with pale purplish-grey.
Agrotis candelarum Staud. = candelisequa Hüb.

2211 Germany, 1874 (Staudinger).
Almost unicolorous, with the large stigmata showing slightly paler than the ground colour, and with three dark costal spots. [The left hind wing slightly broken].

2214 Germany, 1874 (Staudinger).
2212 ” ”
2213 ” ”

*5449 South Germany, 1883 (Staudinger).
Dull brown, with sub-dorsal rows of dark purplish wedge-shaped spots.

Agrotis ashworthii Doubl.
Whether this insect is entitled to specific rank is doubtful. Mr. Dobrée says:—'It is generally admitted to be merely an illustration of the melanism, so commonly occurring in Britain, of common Continental species, and by no means entitled to rank as a separate species' (Letter to Mr. Tutt). This makes it an insular variety of the preceding species, and certainly, notwithstanding the remarks of Barrett (Vol. III., page 384), the resemblance between the two forms is striking. But the larvae as here represented are distinct.

6755 North Wales, 1889 (Salvage’s expedition).
4542 Bred 1880 (Meek).
4543
3715 1876 (Jackson—came from Gregson).
*5566 1884 (McArthur).
*5505 ” ”
*4541 1880 (Meek).
Colour and markings as the preceding, but the dark spots much squarer in shape.

Agrotis chaldaica Boisd.
6656 Siberia, 1888 (Staudinger). ♀
6655 ” ” ♂

Agrotis depuncta Linn.
724 Forres, viii. 1871 ♂.
727 ” ” ♂.
726 ” ” ♂.
6763 Sligo, 1880 (Salvage’s expedition).
Ground colour paler, and without the red tinge of the other specimens.
5490 Central France, 1883 (Staudinger).

5491 “Ground colour paler” than the Forres form above, but with the same reddish-brown tinge.
6669 Asia Minor, 1888 (Staudinger).
   Var. p. pontica Staud. Darker than any of the preceding; ground colour greyish-brown, with a purple tinge.

*5001 Germany, 1882 (Staudinger).

**Noctua augur** *Fab.*
251 Droylesden, 1872 (White).

3058 Beverley, 1877 †.
6762 North Wales, 1889 (Salvage’s expedition).
6761 Sligo, 1889 (Salvage’s expedition).
   Much darker than the preceding, and the fore wings of a different shape—the costa straighter and the hind margin much rounded.

5338 Beverley, 1883 †.
[Wings at rest].
*6128 Beverley, v. 1886 †.
*6129 †.
*5457 Germany, 1883 (Staudinger).

[**Noctua haruspica** *Grote*.]
Labelled ‘North American ? sp. darwinii?’ Mr. Butler says of this species: ‘*G. haruspica*, though very closely allied to *G. augur*, differs in being constantly much darker and larger.’ These specimens are larger than those of *N. augur* (47 mm. as against 39-42 mm.), but not so dark as 6761 above, and, allowing for the difference in size, the two species seem identical. In Dr. Staudinger’s *Catalog*, 1901, the form appears under Agrotis augur as var. haruspica *Grote*.

5967 St. Catherine’s, Canada West, 1875 (Norman).
5966

**Noctua signum** *Fab.* = *sigma* *Hüb.*
4831 Germany, 1886 (Staudinger).

4832 " " " "
4830 " " " "
4829 " " " "
*4077 " " " "

**Noctua leucogaster** *Frey.*
5762 Dalmatia, 1885 (Staudinger).

5763 " " " "

**Noctua plecta** *Linn.*
4100 Lancashire, bred from pupa, vi. 1879.
4103 " " " 
4101 " " " 
4104 " " " 
3164 Spurn, E. Yorks., vi. 1876 †.
   [Wings at rest].

6401 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).
6400 " " " "
6249 Amurland, 1886 (Staudinger).
   Var. glaucimacula *Graes.* Ground colour dark purplish-brown, without the reddish tint of the preceding specimens. Cf. Barrett, Plate 141, fig. 2d.

*5921 Carmarthen, vii. 1885 (Wilson).
*5922 " " " "
*5923 " " " "
*5924 " " " "
*5261 Saxony, 1883 (Staudinger).
Noctua flammatra *Fab.*
  5562 Gloucester, 1884 (Marsden).
  5561                         
  1230 Germany, 1873 (Staudinger).
   Almost unicolorous, except for the dark basal streak,
   and another before the orbicular stigma.
  1231 Germany, 1873 (Staudinger).
  3046 Germany, 1876 (Staudinger).
  3045                         
  5084 Russian Turkistan, 1882 (Staudinger).
   Ground colour paler than that of any of the preceding,
   but otherwise much resembling 1230.

Noctua collina *Boisd.*
  5770 Silesia, 1885 (Staudinger).
  5769                         

Noctua c-nigrum *Linn.*
  646 Forres, vii. 1872 (Norman).
  645                         
  601 Molescroft, E. Yorks., 1873 †.
  2723 Weel, E. Yorks., ix. 1875 †.
  1664 Spurn, E. Yorks, vii. 1874 †.
  1662                         
  6366 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
  6368                         
  6367                         
  6365                         
   *Ab. suffusa* Tutt.  Ground colour deep purplish-black; extreme in 6367; the hind wings of 6168 and 6365 also darker than in the type. [The left fore wings of 6365 sprung].

*6003 Central Germany, 1885 (Staudinger).
*5158 Germany, 1882 (Staudinger).

Noctua ditrapezium *Bork.*
  4236 Brighton, bred 1879 (Salvage).
  4237                         
   Much resembles 3506, but the costal streak is distinctly reddish.
  4235 Brighton, bred 1879 (Salvage).
  4226 Colchester, bred 1879 (Harwood).
  4227                         
  1229 Germany, 1873 (Staudinger).
  3509                         
  3508                         
  3506                         
  6390 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
   Fore wings suffused with purplish-black; parallel forms to 6367 of the preceding species; the markings of 6390 brighter than those of 3506.

*5263 Saxony, 1883 (Staudinger).
*6001 Central Germany, 1885 (Staudinger).

Noctua triangulum *Hufn.*
  4655 London, bred 1880 (Williams).
  4653                         
  4656                         
  4657                         
  648 Beverley, bred 1880 †.
  2805                         
  3214 Holme, E. Yorks., vii. 1876 †.
   All the specimens in this series are ab. *sigma* Haw. =
   *intermedia* Tutt.  Ground colour reddish: the common British form.
Zürich, 1888 (Rühl.).
Larger (42 mm. as against 37-39 mm.).

*4634 Beverley, ix. 1884 †.
[Half grown].

*5155 Germany, 1882 (Staudinger).

*5379 Brighton, bred 1883 (Salvage).

**Noctua fuscostigma** Brem.

6387 Wladiwostock, 1881-1886 (Graeser’s expedition). ♀

Strongly resembling the preceding species, and apparently a form of it with a strong vinous tinge over the whole area of the wings, and with the markings indistinct. Larger than the British specimens (42 mm.).

**Noctua margaritacea** Vill.

5599 Central France, 1883 (Staudinger). ♀

5507 " " " " ♀

5508 " " " " ♀

**Noctua glareosa** Esp. = **hebraica** Hüb.

3497 Clevedon, 1887 (Mason).

4182 Innerhadden, Kinloch, 1879 (Salvage).

4181 " " " " "

3411 " " " " "

4185 North Ireland, 1889 (Salvage’s expedition).

6764 " Ab. rosea Tutt. " Ground colour with a reddish tinge.

6604 Shetland, 1888 (Salvage).

6152 " 1886 (Salvage’s expedition). "

Var. edda Staud. = **suffusa** Tutt. An intensely melanic form: wings suffused with deep brownish-black. Cf. Barrett, Plate 141, fig. 1b (where the transverse pale lines are, however, too distinct), and ‘Entomologist,’ 1884, Plate I., fig. 1 (where the hind wings are too white).

**DRAWER XIX.**

**Noctua castanea** Esp.

4205 Innerhadden, Kinloch, 1879 (Salvage).

4201 " " " " "

4204 " " " " "

4202 " " " " "

4203 " The type form: dark red. Cf. Barrett, Plate 148, fig. 2a, and South, I. Pl. 110, fig. 3.

1326 Germany, 1873 (Staudinger).

510 Forres, viii. 1871 †.

Ab. laevis Haw. An intermediate form: grey, thickly dusted with red atoms.

3284 Bathampton, Somerset, 1876 (Ross).

3283 " Var. neglecta Hüb." The more usual pale greyish form.

509 Forres, viii. 1871 †.

As the preceding, but ground colour a darker grey.

*6422 Perth, vi. 1887 (Anderson).

*6420 " " " [Three-fourths grown].

*6421 Perth, vi. 1887 (Anderson).

*6423 " " "
Noctua brunnea *Fab.*

4548 Beverley, bred 1880 †.
4549 ″ ″ †.
4550 ″ ″ †.
4551 ″ ″ †.
4552 ″ ″ †.
4553 ″ ″ †.
4554 ″ ″ †.

All the above specimens are ab. lucifera *Esp.* Ground colour purplish-brown.

2361 Hunsley, E. Yorks., vi. 1875 †.
Ground colour delicate purplish-grey, and the markings very distinct.

3681 Beverley, bred 1882 †.
*6415 London, v. 1887 (Williams).
[Half grown].
*5262 Germany, 1883 (Staudinger).
*6004 Central Germany, 1885 (Staudinger).
*6417 London, v. 1887 (Williams).
*4955 ″ ″ ″

Noctua primulae *Esp.* = festiva *Hüb.*

562 Cliffe, E. Yorks., vii. 1872 †.
1735 Grantham, 1874 (Walpole). †

Prinumae *Esp.* Yellow-ochreous; the quadrate dark spots well developed.

2778 Dunecht, Aberdeen, 1875 (Carpenter).
4874 Scotland, 1880 (Salvage).

Intermediate between the preceding form and the following.

720 Forres, ix. 1872 (Norman).
Ab. ignicola *Herr.-Sch.* Pale yellow-ochreous; the markings indistinct.

4873 Scotland, 1880 (Salvage).
Approaching the following form, but more unicolorous.

6064 Carniola, 1885 (Staudinger).

6063 ″ Labelled ‘Var. transiens,’ and so recorded in Mr. Dobrée’s diary. Finely marked forms: deep reddish-ochreous, with basal and hind-marginal areas pale rosy-grey. 6063 has the quadrate dark spots, 6064 not.

6159 Shetland, 1886 (Salvage’s expedition).
Semi-melanic; suffused with blackish-brown, and shaded with grey.

5207 Labrador, 1879 (Couper).
Very much like 6064, but without the ochreous tinge in the central area.

*4956 London, 1881 (Williams).
[Half grown].
*6418 London, v. 1887 (Williams).
*5237 Oldham, 1882 (Rodgers).
*6419 London, v. 1887 (Williams).

Noctua confinua *Treit.*

Sunk as a variety of the preceding species in Dr. Staudinger’s ‘Catalog,’ 1901.

6166 Shetland, 1886 (Salvage’s expedition).
Blackish-grey, with lighter shades; the quadrate spots marked.
Noctua dahlii Hüb.

728 Newcastle, Staffs., vii. 1872 (Earl).
Deep yellow-ochreous, with purplish-brown markings.

4174 Innerhadden, Kinloch, 1879 (Salvage).
Dull purplish-brown; the markings indistinct.

715 Forres, 1872 (Norman).

4172 Innerhadden, Kinloch, 1879 (Salvage).
Dark purplish-brown; reniform stigma fairly distinct;
the other markings indistinct. Cf. Barr., Pl. 144, fig. 1b.

4175 Innerhadden, Kinloch, 1879 (Salvage).

4177 " Ochreous-brown; markings indistinct.

4176 Innerhadden, Kinloch, 1879 (Salvage).
Purplish-brown, mottled.

6320 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).

6319 " A fine, large, distinct form (40 mm.). Deep yellow
ochreous, with purplish-transverse markings; the
hind-marginal area purplish-brown.

6317 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).
Another large form (44 mm.). The markings not so
bright as in the preceding.

6318 Nicolajefsk, Amurland, 1881-1886 (Graeser's expedition).
A third large and magnificent form (44 mm.). Suffused
with dark purplish-brown, markings indistinct;
much resembling 715 and 4172, but more unicolorous.

Noctua subrosea Steph.

4531 England, 1879 (Staudinger). ♀

5292 Hungary, 1883 "♂

5288 " " " ♂

5291 " " " ♂

5287 " " " ♂

5290 " " " ♂

1324 Continent, 1873 "♀

Var. subcaerulea Staud. Very distinct from the
reddish-brown type; ground colour ashy-grey,
slightly tinged with brownish-red.
Noctua florida Schmidt.
6034 Saxony, 1885 (Staudinger). ♀
5033

Noctua punicea Hüb.
4843 Germany, 1880 (Staudinger).
4041 " 1878 "
4042 " 1883 "
*5464 Pale reddish-brown. [Half grown].
*5462 Germany, 1880 (Staudinger).
Dark purplish-brown. Recorded as 'var. obscura.'
[Neither of these agrees with Kirby's description of the larva].

Noctua rubi View. = bella Bork.
4164 Isle of Wight, 1879 (Riding).
658 Bred 1885 (Harwood).
660 " "
661 " "
659 " "
Dark olive-green.
*6099 " Pale olive-green.

Noctua sobrina Guen.
4107 Innerhadden, Kinloch, 1879 (Salvage).
4166 Rannoch, 1876 (Robertson).
3231 Approaching var. gruneri as showing the same ashy-grey dusting, but in a less marked degree.
5534 Central France, 1883 (Staudinger).
5779 Livonia, 1885 (Staudinger).
Var. gruneri Guen. Ground colour thickly dusted with ashy-grey atoms, especially in the basal half of the wings.

Noctua umbrosa Hüb.
1084 Beverley, viii. 1881 †.
3722 " "
3724 " 1882 †.
1582 " 1884 †.
3346 Weel, E. Yorks., 1882 †.

Noctua baja Fab.
2625 Stanstead, 1875 (Spiller).
2631 Kingston-on-Thames, 1879 (Windybank).
2630 " Ab. grisea Tutt. Without the ferruginous tinge of the type form. Cf. South, I. Pl. 114, fig. 8.
2628 North Ireland, 1889 (Salvage's expedition).
Fine large (43 mm.) type form, but the fore wings slightly darker than in the others.
2628a North Ireland, 1889 (Salvage's expedition).
503 Forres, viii. 1871 †.
506 " "
5795 North America, 1885 (Staudinger).
5796 Indistinguishable from 506 above (58 mm.).
*5461 Germany, 1883 (Staudinger).
*6438 London, vi. 1886 (Pearce).
*6489 Saxony, 1887 (Staudinger).
Noctua stigmatica Hüb. = rhomboidea Treit.
1832 Stanstead, 1874 (Spiller).
1834 Bathampton, Somerset, 1876 (Ross).

Apparently ab. tristigma Steph. Matches in colour the dark purplish-brown of N. brunnea ab. lucifera.
Cf. Barrett, Plate 143, fig. 2a.

4847 Germany, 1880 (Staudinger).

4848 " Very much like the preceding, but with a slightly redder tinge.

*6210 Central Germany, 1886 (Staudinger).

Noctua xanthographa Fab.
512 Forres, viii. 1871 †.

Blackish-brown; reniform stigma fairly distinct.
4170 Beverley, 1882 †
Uniform light red; reniform stigma pale yellow.
Cf. Barrett, Plate 148, fig. 1c.

3355 Beverley, 1876 †.
3356 Beverley, 1876 †.
3357 , 1878 †.
3358 , †.

Grey type forms.
4171 Beverley, 1879 †.

— Unst.


*5823 v. 1885 (Harwood).
*4958 London, xi. 1881 (Williams).
*4628 London, x. 1880 (Russell).
*5821 v. 1885 (Harwood).

6079 Asia Minor, 1888 (Staudinger).

Var. elutior (Alph.). Large (38 mm.); reddish-grey, almost unicolorous. Apparently also Tutt's ab. rufescens.

5560 Hungary, 1883 (Staudinger).
5570 Sicily, 1883

Var. cohaesa” Herr.-Sch. Large (39 mm.); almost unicolorous dark grey; in 5570 the ground colour minutely dusted with ochreous.

*5447 Hungary, 1883 (Staudinger).

" Agr. cohaesa."

Pachnobia leucographa Hüb.

4088 Bathampton, Somerset, bred 1879 (Ross).
3603 " " bred 1877 
3602 " " " " " Ground colour a brighter red than that of the others in the series.
4716 Bathampton, Somerset, bred 1880 (Ross).
4715 " " " " "

DRAWER XX.
Germany, 1876 (Staudinger).

*5680 Leipzic, 1884 (Gerhardt).
Pale purplish-red. [Three-fourths grown].

*5679 Leipzic, 1884 (Gerhardt).
Green.

_Taeniocampa munda_ Esp.

2283 Houghton, E. Yorks., 1877 †.

2281 Ground colour strongly ochreous.

2282 Houghton, E. Yorks., 1877 †.


2284 Central Germany, 1886 (Staudinger).

2284 Saxony, 1885 (Staudinger).

Lee, 1887 (Bower).

_Taeniocampa gothica_ Linn.

961 Sligo, 1885 (Russ).


1428 Houghton, E. Yorks., iv. 1874 †.

Ab. _rufescens_ Tutt. Ground colour lighter than in the preceding.

1429 Houghton, E. Yorks., iv. 1874 †.

7 Beverley, iii. 1872 †.

4086 Rannoch, 1879 (Salvage).

4867 1880

4863 " " " "

4865 " " " "

4866 " " " "

5794 1885

Var. _gothica_ Herr.-Sch. Ground colour ferruginous red, with the 'gothica' mark red, and indistinct in all except 4865 and 4866. Cf. Barrett, Pl. 208, figs. 1, 1b, and South, I. Pl. 155, figs. 9, 10.

*5578 Beverley, bred v. 1884 †.

*5442 Derby, 1883 (Hutchinson).

*5577 Beverley, bred v. 1884 †.

_Pachnobia rubricosa_ Fab.

2276 London, bred 1878 (Etheridge).

280 Forres, v. 1872 (Norman).

Ab. _mucfa_ Esp. Purplish-brown, thickly dusted with slaty-grey, especially along the costa.

1422 Houghton, E. Yorks., iv. 1874 †.

2278 London, bred 1878 (Etheridge).

Ground colour red, almost unicircus.
Taeniocampa incerta Hufl. = instabilis Esp.

1425 Houghton, E. Yorks., iv. 1874 †.

Instabilis Hüb. Dark reddish-brown, with a darker central band.

11 Beverley, bred from pupa, iii. 1872 †.
Ab. angusta Haw. Dark blackish-grey; stigmata plainly outlined, subterminal line bordered inwardly with reddish-brown.

15 Beverley, bred from pupa, iii. 1872 †.
72 " iv. 1872 †.

Paler than the preceding specimen, and with an indistinct central band.

274 Forres, v. 1872 (Norman).
1424 Houghton, E. Yorks., iv. 1874 †.
Var. contacta Esp. Dull reddish-brown; stigmata plainly outlined.

4899 Scotland, 1881 (Salvage).
4900 " Instabilis Fab. Whitish-grey forms. Cf. Barrett, Plate 211, fig. 1g.

6588 Forres, 1888 (Salvage).
Ground colour pale brown, with a very conspicuous dark central band. Cf. Barrett, Plate 211, fig. 1h.

6589 Forres, 1888 (Salvage).
Pale ochreous-brown; almost unicolorous.

6030 Rannoch, 1885 (Salvage).
Ab. fusca tua Haw. Small (33 mm.); dull brownish-black; subterminal line and edges to the stigmata pale. 'Salvage says it is the only one he has ever taken. He has submitted it to Dr. Staudinger, who says it is true "fusca"' (MS. note in Mr. Dobrée's diary). Cf. South, I. Pl. 157, fig. 6.

*4256 Loughborough, 1879 (Wieldt).

Taeniocampa opima Hüb.

1456 Bred iii. 1874 (Harwood).
1455 " "
1458 " "
1453 " "
1452 " "
144 Bred 1871 (Harwood).

Ab. brunnea Tutt. Deep brown; subterminal line and outlines of stigmata pale. Cf. Barrett, Plate 210, fig. 2c, and South, I. Pl. 157, fig. 10.

145 Bred 1871 (Harwood).
147 "
1454 Bred iii. 1874 (Harwood).
1457 "
*5605 vi. 1884.
*5604 "
*5603 "
*5606 "

E
Taeniocampa populeti *Treit.*

141 Bred 1872 (Harwood).
1459 Bred iii. 1874 (Harwood).
1460 Bred iv. 1874 (Harwood).
3088 " 1876 "
3089 "  "
3090 "  "
4939 Rannoch, 1881 (Salvage).
4937 "  "
4938 "  " Ab. *ocularis* Frey. A subterminal row of 6, 7, or 8 black spots. Cf. Barrett, Plate 210, fig. 1b.

*5593 Tenbury, vi. 1884 (Decie).
*5594 "  "
*5595 "  "
*5596 "  " [The colour not well-preserved].

Taeniocampa stabilis *View.*

1433 Houghton, E. Yorks., iv. 1874 †.
16 Beverley, iii. 1872 †.
1438 Houghton, E. Yorks., iv. 1874 †.
19 "  " Intermediate between the preceding and following forms.
21 Beverley, iii. 1872 †.
1439 Houghton, E. Yorks., iv. 1874 †.

Stabilis Hub.=Var. suffusa Tutt. Ground colour dark grey, powdered with brown scales. Cf. Barrett, Plate 209, fig. 2c.

20 Beverley, iii. 1872 †.

More variegated, and the space behind the subterminal line pale yellowish-white.

--- Sligo.

Ground colour rich brown, thickly dusted with darker scales.

---

[Wings at rest].

*5874 vii. 1885 (Salvage).
*5875 "  "
*5875a "  "

Note.—1438 and the Sligo specimen have the orbicular and reniform stigmata joined, and are thus Haworth’s ab. *juneta.*

Taeniocampa gracilis *Fab.*

2263 Bred 1875 (Harwood).
2262 "  "
149 Bred 1871 "
1479 London, 1874 (South).
1480 "  "
3183 Houghton, E. Yorks., 1876 †.
5985 Kuldja, Russian Turkistan, 1885 (Ribbe).
6333 Turkistan, 1881-1886 (Graeser’s expedition).

Var. *pallidior* Stand. Ground colour paler and clearer, and sparsely covered with minute black atoms; markings indistinct.
Turkistan, 1881-1886 (Graeser's expedition).
Kuldja, Russian Turkistan, 1885 (Ribbe).
Ground colour as type, but thickly covered with minute black atoms. [Abdomen of 5984 greased].

New Forest, 1886, bred from larva 'found feeding on' *Myrica gale* (Harwood).

*Ab. rufescens* Cock. A fine series of a most distinct form. Ground colour red, ranging from an intermediate tone in the first two of the series through clear light red in 6314 to dark purplish-red in the last three of the series. In 6310 and 6313 the claviform stigma is distinct, and in 6312 the orbicular stigma is reduced to a small dot. 'These specimens were shown at the Entomological Society, January, 1887. They seemed to be known, but none present could give any direct information. Warren, however, had never met with them. To Porritt they were quite unknown.' (MS. note in Mr. Dobrée's diary).
Cf. Barrett, Plate 213, fig. 1g, and South, I. Pl. 158, figs. 6, 7.

*Taeniocampa pulverulenta* Esp. = *cruda* Treit.

1442 Houghton, E. Yorks., iv. 1874 †.
1446 ′ ′ ′ ′ †.
1440 ′ ′ ′ ′ †.
1445 ′ ′ ′ ′ †.
1450 ′ ′ ′ ′ †.

*Note.—* The larvae of *T. gracilis* and *T. pulverulenta* will be found in the last column of Drawer XXII.

*Taeniocampa miniosa* Fab.

2256 Plymouth, bred from ovum, iv. 1875.
2260 ′ ′ ′ ′ †.
136 Bred 1877.
2859 Devon, 1875. (Harwood).
*5139 Bred v. 1886 †.
*5459 Germany, 1883 (Staudinger).
*5306 Bred 1883 †.
*6130 Bred v. 1886 †.
*6131 ′ ′ ′ †.
*6132 ′ ′ ′ †.

*DRAWER XXI.*

*Perigrapba cincta* Fab. = *I-cinctum* Hüb.

4772 Continent, 1880 (Staudinger). ♀
4769 ′ ′ ′ ′ ♂
4771 ′ ′ ′ ′ ♂
4770 ′ ′ ′ ′ ♂
Panolis griseovariegata Goëze = piniperda Panz.
278 Forses, v. 1872 (Norman).
3098 Wolsingham, bred from larva, iv. 1875 †.
1414 Houghton, E. Yorks., iv. 1874 †.
959 iv. 1873 †.
957 Ab. grisea Tutt. Ground colour grey, tinged with green. Cf. Barrett, Plate 206, fig. 2c.
3095 Wolsingham, bred from larva, iv. 1875 †.
5876 Ely, vii. 1885 (Cross).
5877 " " "
5878 " " "
5879 " " "

Agrotis hyperborea Zett. = alpina West.
4883 Shetland, bred from pupa, vi. 1886 (Salvage).
4887 " " "
6193 " " " " "
6194 " " " " "
6195 " " " " "
4885 " " " " "
6198 " " " " "
6197 " " A magnificent series of forms, of which 6198 is ab. glacialis Herr.-Sch. = caeruleaens Tutt. Ground colour ashy-grey, clouded with rich reddish-brown; a quadrate black spot between the stigmata, a longitudinal black streak across the wing under them, and two short black streaks outwards from the reniform stigma. Cf. Barrett, Plate 215, fig. 1e. The others are extreme forms of variation starting from this and developing longitudinal black streaks between the nervures. 4885 has these developed most fully. Cf. ‘Entomologist,’ 1880, Pl. 4, fig. 15.
4884 Shetland, bred from pupa, vi. 1886 (Salvage).
The largest of the series (40 mm.); the reddish-brown area largely extended at the expense of the black striations.
3458 Finmark, 1876 (Staudinger).
The type form: ground colour ashy-grey with brown markings, lacking the warm reddish tinge of the Shetland specimens preceding.
5567 v. 1884 (McArthur).
5568 " " "
4942 Shetland, 1881 (Salvage).
6196 Shetland, bred from pupa, vi. 1886 (Salvage).
4885 " " " " "
6192 " " " " "
4888 " " A continuation of the Shetland series preceding.
In 6196 the black striations form a large central patch completely hiding the reniform stigma.
3366 Rannoch, 1876 (Clark).
3364 Rannoch, 1876 (Clark).
3363 Schiehallion, Perth, 1876 (Meek).
3270 Schiehallion, Perh, 1876 (Meek).
Var. carnica Hering. Ground colour pale reddish-brown, with slight purplish tinge.
I. ivonia, 1886 (Staudinger).

Large ashy-grey forms (40 mm.), resembling the Finmark type, but tending to a more unicolorous appearance. 6298 has a distinct vinous tinge, most marked along the costa.

Dyschorista suspecta Hüb.

3719 1876 (Jackson).
Approaching the succeeding form.

2540 Rannoch, ix. 1884 (Salvage).

2539 4879 Scotland, 1880 (Salvage).

Ab. variegata Tutt. Reddish-brown, with pale ochreous hind margin. Cf. Barrett, Plate 222, fig. 2b.

4881 Scotland, 1881 (Salvage).

Ab. nigrescens Tutt. Almost uniform smoky-red. Cf. Barrett, Plate 222, fig. 2.

4882 Scotland, 1880 (Salvage).

2541 Rannoch, ix. 1884 (Salvage).

Approaching the preceding form.

5773 Austria, 1885 (Staudinger).

6067 6068 Ab. iners Treit. A very distinct form. Pale grey; markings indistinct.

Kuldja, Russian Turkistan, 1888 (Tancre—taken by Graeser).

As the preceding, but ground colour darker.

Orthosia lota Clerck.

282 Beverley, 1871 †.

The margin of the hind wings pale and unicolorous with the fringe, producing the effect of a wide pale grey border. There is a tendency in the same direction in 687, 688, and 4665. Cf. Barr., Pl. 229, fig. 1.
Beverley, bred 1880 †.

North Ireland, 1889 (Salvage’s expedition).

Wings suffused with reddish-brown, and the dark spot of the reniform stigma obsolete.

*5842 vi. 1885 (Harwood).

Orthosia macilenta Hüb.

3403 Clevedon, 1887 (Mason).
3404  
1879  
1878  
3405  
1882 Ayton, Berwickshire, 1881 (Buglass).

Ab. straminea Tutt. Ground colour pale yellow.

1876 Clevedon, 1887 (Mason).
1877  
1879a  
1880  
1878a  

Ab. obsoleta Tutt. Ground colour as the type, but the dark spot of the reniform stigma obsolete. Cf. South, II. Pl. 7, fig. 8.

1876a Clevedon, 1887 (Mason).

Ab. straminea-obsoleta Tutt. Ground colour pale yellow and the dark spot of the reniform stigma obsolete.

Orthosia laevis Hüb.

4336 Germany, 1879 (Staudinger).
4338  
4337  
4335  

Orthosia ruticilla Esp.

4516 Germany, 1879 (Staudinger).
4515  

Orthosia nitida Fab.

2989 Germany, 1876 (Staudinger).
2990  
2991  
2992  

Orthosia helvolia Linn. = rufina Linn.

4639 Beverley, bred ix. 1880 †.
4644  
4638  
4635  
4643  
4637  

Ab. ochrea Tutt. Ground colour ochreous.

4876 Scotland, 1880 (Salvage).
4877  
4878  
4050 Siberia, 1878 (Staudinger).

4049 Var. sibirica Staud. A large (40 mm., 37 mm.) and strikingly pale form; ground colour paler than in ab. ochrea, and the transverse bands little darker than the ground colour. Cf. Barr., Pl. 226, fig. 2b.
Orthosia pistacina *Fab.*

174 Beverley, 1871 †. 

175 †. 

Ab. *venosa* *Haw.* Reddish-brown, with distinct markings and pale nervures.

171 Beverley, 1871 †. 

Redder and more unicolorous than the preceding.

172 Beverley, viii. 1878 †. 

A form of ab. *venosa* developing basal and submarginal transverse blackish bands, cut across by pale nervures. Cf. Barrett, Plate 227, fig. 1b.

176 Beverley, 1871 †. 

Ab. *serina* *Esp.* Ground colour pale grey; markings distinct. Cf. Barrett, Plate 227, fig. 1e.

Ancho celis lunosa *Haw.*

132 Forres, 1871 (Norman).

2733 Weel, E. Yorks., ix. 1875 †.

2847 Guernsey, 1875 (Luff).

2848 —

2732 Weel, "E. Yorks., ix.," 1875 †. 

The hind wings suffused with blackish.

1791 Weel, E. Yorks., ix. 1874 †. 

A parallel form to 172 of the preceding species, developing basal and submarginal transverse blackish bands, cut by the pale nervures.

5782 Central Spain, 1885 (Staudinger). ♀

5781 —

Smaller than the above (32 mm., 30 mm.), and paler.

5783 Central Spain, 1885 (Staudinger). ♀

5784 —

"Recorded" as 'ab. *pallida* ' in Mr. Do brée's diary. 

Small (31 mm., 28 mm.); ground colour pale fawn; the markings nearly obsolete.

5786 Central Spain, 1885 (Staudinger). ♀

5785 —

"Recorded" as 'ab. *rubicunda* ' in Mr. Do brée's diary. 

A very distinct form. Small (30 mm.); ground colour reddish-ochreous, nervures invisible, and markings almost obsolete. The stigmata distinct in 5785.
Orthosia litura *Linn.*

683 Beverley, ix. 1872 †.
682 ′ ′ †.
684 ′ ′ †.
685 ′ bred 1882 †.

Ground colour uniform reddish-brown.

Ab. borealis *Spa.-Schn.* Basal area greyish-ochreous. Cf. South, II. Pl. 9, fig. 8.

3944 Weel, E. Yorks., ix. 1878 †.
As the preceding, but the outer portion of the fore wings darker.

[Wings at rest—one of each of the two forms above].

5771 Mauretania, 1885 (Staudinger). ♀
Var. meridionalis *Staud.* Ground colour uniform purplish-grey, with sharply-defined reddish-brown central band, shading off towards the hind margin.

*5308 Colchester, bred from ovum, 1883 (Grapes).*
*5302 Beverley, bred 1883 †.
*5303 ′ ′ †.
*5304 ′ ′ †.

Orthosia humilis *Fab.*

5101 Germany, 1882 (Staudinger). ♀
5102 ′ ′ ♀

Orrhodia veronicae *Hüb.= dolosa* *Hüb.*

3810 Hungary, 1877 (Staudinger).
3811 ′ ′ ′
3812 ′ ′ ′
3813 ′ ′ ′

Orrhodia vaccinii *Linn.*

104 Beverley, 1871 †.
105 ′ ′ †.
106 ′ ′ †.

Ground colour dark yellow-ochreous, with the transverse markings distinct. Cf. Barrett, Pl. 234, fig. 1.

4972 South of England, x. 1881.
4971 ′ ′ ′

Ground colour purplish-grey, with the nervures pale, and a subterminal pale band. Cf. South, II. Pl. 11, fig. 5.

4968 South of England, x. 1881.
109 Beverley, 1871 †.

The type form: bright reddish-brown, almost unicolorous.

110 Beverley, 1871 †.
Intermediate between the type and the following.

4970 South of England, x. 1881.
The whole area from the base to second line suffused with dark purplish-grey.

4969 South of England, x. 1881.
As 6305, 6304, 6303 in the next column.

6684 Forres, 1888 (Salvage).

6685 ′ ′ Ground colour uniform dark purplish-brown, with nervures and outlines of the stigmata grey.
Orrhodia erythrocephala Fab.

898 Zeitz, bred from larva, 1888 (Obenauf).
897
895 Germany, 1872 (Staudinger).
   Ab. glabra. As 2236, 2237.

*6569 Zeitz. vii. 1888 (Obenauf).
*6570
859 Germany, 1872 (Staudinger).
860 " Ab. glabra Hüb. Ground colour dark brown, with
costal streak and subterminal band pale ochreous;
stigmata pale yellow. Cf. Barrett, Plate 233, fig. 3a.

2236 Continent, 1875 (Hålssen).
2237 " Ab. glabra Hüb. As the preceding, but ground colour
duller, stigma ochreous, and the whole appearance
less conspicuous.

Orrhodia vau-punctatum Esp. = silene Hüb.

2985 Germany, 1876 (Staudinger).
2986 " " "
2987 " " "
2988 " " "
   A warmer brown than the preceding.

Orrhodia fragariae Esp. = serotina Ochs.

4758 Germany, 1880 (Staudinger).
4759 " " "
4760 " Hind wings almost entirely suffused with black.

*6579 Berlin, 1888 (Gleissner).
   Ground colour pale greenish-yellow.
*6578 Berlin, 1888 (Gleissner).
   Ground colour rich purplish-brown.

Orrhodia ligula Esp.

3819 Switzerland, 1877 (Staudinger).
3818 " Small (27 mm.), and almost unicolorous. [The right
hind wing of 3819 chipped].
Scopelosoma satellitia *Linn.*

3370 Beverley, 1871 †.  
83  
3371  
85  
3372 Beverley, 1871 †.  
87  
3373 Beverley, 1871 †.  
88  
3374 Beverley, 1871 †.  
89  
3375 Beverley, 1871 †.  
87  
3376 Beverley, 1871 †.  
88  

*6024 Germany, 1885 (Staudinger).  
*5476 1883  
*5476 1882  

*6024 Germany, 1885 (Staudinger).  
*5476 1883  
*5476 1882  

[The colour partly gone].

Orrhodia rubiginea *Fab.*

1319 Germany, 1873 (Staudinger).  
1321  
2997 1876  
2995  
2998  
832 1872  

Ab. *tigerina* *Esp.* Ground colour redder than in the type.

5103 Central Germany, 1882 (Staudinger).  
5541 1883  
5540 1882  
5104 1882  

Ab. *unicolor* *Tutt.* Almost unicolorous orange-red, especially so in 5540 and 5104. The latter has the nervures on the extreme hind margin marked in white.

*4264 Germany, 1880 (Staudinger).  
*5453 South Germany, 1883 (Staudinger).  
*5710  
*5669 Leipzic, 1884 (Gerhardt).  

Hoporina croceago *Fab.*

189 Canterbury, 1871 (Parry).  
2749 Crawley, Sussex, 1875 (Peters).  
865 Germany, 1872 (Staudinger).
Cirrhoedia xerampelina Hüb.

2680 Colchester, bred 1875 (Harwood).
4186 " bred 1879 "
1069 Bristol, 1873 (Greene).
1068 "
3669 Hunsley, E. Yorks., 1877 †.
3670 Hunsley, E. Yorks., 1877 †.
2681 Stanstead, bred 1875 (Spiller).

The dark central band extends to the costa.

1222 Continent, 1873 (Staudinger).
1223 "
5099 " Ab. unicolor Staud. A very distinct form. Ground colour pale reddish-brown, uniform from costa to inner margin; central band slightly darker than the ground colour, and bounded by yellow lines.

*6681 Isle of Man, 1888 (Mosley—taken by Porritt).
*5553 Leipzic, 1884 (Heyne).

Cirrhoedia ambusta Fab.

3823 Hungary, 1877 (Staudinger).
3822 "
3825 "
3824 "

Taeniocampa gracilis Fab.

*6463 New Forest, 1887 (Harwood).
*6404 " Green; markings distinct. [Half grown].
*6459 New Forest, 1887 (Harwood).
*6460 "
*6462 " Green; markings obscure.
*6461 New Forest, 1887 (Harwood).
Dull purplish-brown; markings obscure.
*6458 New Forest, 1887 (Harwood).
Green; markings distinct.
*5250 Bavaria, 1883 (Staudinger).
Bright reddish-brown; markings distinct.

Taeniocampa pulverulenta Esp. = cruda Treit.

*5590 Dartford, vi. 1884 (Davis).
*5591 "
*5592 "
DRAWER XXIII.

Xanthia citrago Linn.
1716 Barnsley, viii. 1874 (Harrison).
1713 " " " "
1710 " " " "
1711 " " " "
1712 " Var. aurantiago Tutt. Ground colour orange-red:
the common British form. Cf. Barr., Pl. 230, fig. 1b.

5791 Denmark, 1884 (Staudinger).
Ground colour paler orange than in the type; the
central transverse line conspicuously dark.

4736 Continent, 1880 (Staudinger).

5542 Island of Fladø, 1883 (Staudinger).

1713 1710 1711 1712

5543 " Ab. subflava Ever. Ground colour orange, crossed by
a basal and a hind-marginal dark reddish band;
stigmata filled in with the same colour. A very
distinct form.

*5668 Leipzic, 1884 (Gerhardt).
*5835 vi. 1885 (Harwood).
*5834 " " "
*5833

Xanthia fulvago Linn. = cerago Fab.
91 Forres, viii. 1871 †.
2743 Crawley, Sussex, 1875 (Peters).
2745 " " " "
3963 Derby, bred from larva, ix. 1887 (Sheldon).
3964 " " " "
3965 " Ab. suffusa Tutt. The central markings extended and
dark purplish-brown in colour. Cf. Barrett, Plate
230, fig. 2a. The specimens range in size from 28
mm. (3964) to 35 mm. (2743). 'Larvae taken at
Little Eaton, three miles N.E. of Derby, and
noticeable that many of the lepidoptera occurring in
that valley incline to melanism' (MS. note in Mr.
Dobrée's diary).

3966 Gateshead, bred 1878 (Hedworth).
3967 " " " "
92 Forres, viii. 1871 †.
2744 Crawley, Sussex, 1875 (Peters).
93 Forres, viii. 1871 †.

Ab. aurantia Tutt. Ground colour orange.

6339 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
The central markings confined to the costa, where the
most conspicuous mark is a dark triangular blotch
near the apex. Cf. Barrett, Plate 230, fig. 2.

95 Forres, vii. 1871, 'equally abundant with the type†.'
97 " " " " " " " "
96 " " " " " " " "
3962 Gateshead, bred 1878 (Hedworth).
3956 " " " "
3960 " " " "
3958 " " " "
3959 " " " "
6717 Amurland, 1888 (Tancré—taken by Graeser).
6716 " Ab. flavescens Esp. The markings reduced to a dark
spot in the lower half of the reniform stigma, and
a submarginal row of dots, the latter obsolete in 96, 3962 and 6717; fringes orange-red except in 6717, which has fringes unicolorous with the surface of the wings. This specimen has also the dot in the lower half of the reniform stigma nearly obsolete.

*5846 vi. 1885 (Harwood).
*5845 " " "
*5844 " " "
*5843 " " "

Xanthia lutea Ström = flavago Fab. = silago Hüb.
180 Canterbury, 1871 (Parry).
179 " " "
177 Forres, viii. 1871 †.
1792 Weel, E. Yorks., ix. 1874 †.
2719 " " ix. 1875 †.
2742 Crawley, Sussex, 1875 (Peters).
2740 " " " "
2739 " " " "
2741 6380 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
Small (26 mm.); inner edge of the dark transverse band more regular than in the British specimens.

*6106 vi. 1886, bred from ovum laid by captured female (Harwood).
*6105 " " " "
*6104 " " " "
*5380 Brighton, bred from ovum, 1883 (Salvage).

Xanthia aurago Fab.
3969 Watford, 1878 (Slocombe).
3971 Watford, 1878 (Slocombe).
3292 Colchester, 1876 (Harwood).
3293 " " "
3294 " " "
3295 " " "
3972 Watford, 1878 (Slocombe).
Ab. rutilago Fab. The central band deep orange-red.
2793 Barnsley, 1875 (Jackson)
Approaching ab. unicolor Tutt. Cf. South, II. Pl. 10, fig. 3.
4509 Germany, 1879 (Staudinger).
Recorded as "var. fucata," but, rather, a good example of ab. unicolor Tutt. Almost unicolorous orange.
5105 Germany, 1882 (Staudinger).
5106 " Ab. " fucata Esp." The central band very dark and the division between it and the outer purplish band correspondingly indistinct.

Xanthia gilvago Esp.
181 Croxton, 1872 (Cole).
990 Derby, bred 1872 (Baker).
2696 " bred 1875 "
2694 " " "
2693 " " "
2695 " Var. " suffusa " Tutt. The wings suffused with smoky-black, and the transverse markings extended to form a band: the common British form. Cf. Barr., Pl. 231, figs. 2, 2a., and Scuth, II. Pl. 10, fig.10.
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<td>6340</td>
<td>Chabarofskia, Amurland, 1881-1886 (Graeser’s expedition)</td>
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<td>5720</td>
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The true ab. *palleago* Hüb. A form exactly corresponding to the ab. *flavescens* form of *X. fulvago*. Ground colour pale yellow, transverse markings only distinct on the costa; lower half of the reniform stigma white, outlined with dark reddish-brown; considerably larger than all others of the series (39 mm.). In Mr. Dobrée’s diary 5720 is recorded as ‘var. *pyrrhago* Staud.’

*5160* | Germany, 1882 (Staudinger) |  |  |
*6023* | Austria, 1885 |  |  |

**Orthosia circcellaris** Hujn. — *ferruginea* Esp.

4001 | Beverley, 1880 (Bishoprick) |  |  |

Ab. *macilentia* Hüb. A suffused form corresponding to var. *suffusa* of the preceding species; the dark markings enlarged to form transverse smoky bands, and the nervures very distinct. Cf. Barrett, Plate 226, fig. 3b. The last of the four is much larger than any other in the series (41 mm.).

76 | Beverley, 1871 |  |  |
77 | '' |  |  |
75 | '' |  |  |

**Ferruginea** Esp. Ground colour reddish-brown. Cf. Barrett, Pl. 226, fig. 3a, and South, II. Pl. 7, fig. 10.

6189 | Orillia, Canada West, ix. 1875 (Norman) |  |  |
6190 | '' |  |  |

Labelled ‘**Orth. *ferrugineoides* Grote**: ? sp. Darw.?’ Small (31 mm.), but otherwise indistinguishable from the type specimens above.

*5260* | Saxony, 1883 (Staudinger) |  |  |
*5666* | Leipzic, 1884 (Gerhardt) |  |  |
*5665* |  |  |  |
*5463* | Germany, 1883 (Staudinger) |  |  |

**Xanthia ocellaris** Bork.

54 | Germany, 1872 (Staudinger) |  |  |
56 | '' | '' |  |
53 | '' | '' |  |
55 | '' | '' |  |

**Xanthia sulphurago** Fab.

885 | Germany, 1872 (Staudinger) |  |  |
886 | '' | '' |  |
2131 | 1874 |  |  |
2132 |  |  |  |

**Caradrina pulmonaris** Esp.

2133 | Germany, 1874 (Staudinger) |  |  |
2134 | '' | '' |  |
2135 | '' | '' |  |
2136 | '' | '' |  |
Leucania evidens Hüb.
3446 Continent, 1876 (Staudinger). ♀
3445 ♀
3196 Leipzig, bred from pupa, 1876 (Heyne). ♂
*5004 Continent, 1882 (Staudinger).

Mesogona acetosellae Fab.
803 Germany, 1872 (Staudinger). ♂
4319 " 1879 " ♀
4320 " " " ♀

Mesogona oxalina Hüb.
4521 Sicily, 1879 (Gerhardt). ♀
4522 " " " ♀
4523 " " " ♀

Plastenis subtusa Fab.
2664 Bred 1875 (Harwood).
2663 " " "
3973 Derby, bred 1878 (Baker).
3974 " " "
3975 " bred 1879 (Sheldon).
4219 " " "
4216 " " "
4217 " " "
4218 " " "
1225 Germany, 1873 (Staudinger).
1226 " " "
*6118 Lee, vi. 1886 (Bower).
*6119 " " "

Plastenis retusa Linn.
4191 Lee, bred 1879 (Bower).
4192 " " "
4193 " " "
4194 " " "
4195 " " "
4196 " " "
4210 " " "
4211 " " "
4212 " " "
4213 " " "
4215 " " "
*6124 Lee, vi. 1886 (Bower).
*5161 Germany, 1882 (Staudinger).

**DRAWER XXIV.**

Cosmia contusa Frey.
4783 Germany, 1880 (Staudinger). ♂.
4784 " " " ♀.

Cosmia abluta Hüb.
911 Continent, 1872 (Staudinger). ♀
4785 " 1880 " ♀
**Cosmia paleacea** Esp. = *fulvago* Hüb.

4220 York, 1879 (Prest).
4221 
4222 Slightly suffused with dark grey.
4223 Rotherham, 1888 (Young).
4224 
743 Barnsley, 1873 (Jackson).

Almost unicolorous, the dot in the lower half of the reniform stigma being the only mark plainly visible.

4225 York, 1879 (Prest).

As the preceding, but the ground colour very pale.

'This pale var. he [Prest] considers very rare'.

(MS. note in Mr. Dobrée's diary).

670 ix. 1872 (Norman).

Unicolorous; all the markings obsolete except for a faint indication of the dot in the reniform stigma.

6702 Amurland, 1888 (Tancrè—taken by Graeser).
3514 Continent, 1876 (Staudinger).

Slightly larger (42 mm.); but otherwise indistinguishable from the first three of the York specimens.

*5159 Continent, 1882 (Staudinger).

Pale brown, and not resembling Buckler's figure. [Half grown].

**Dicycia** oo Linn.

202 Newcastle, Staffs., 1871 (Earl).
293 
1971 1875 'Harwood'.
1970 
1969 
1968 

Ab. *ferruginago* Hüb. Intermediate between the type and ab. *renago*; a narrow dark band developed between the second and the subterminal line.

6450 Brentwood, bred from ovum, 1887 (Raynor).
4046 Germany, 1878 (Staudinger).
4045 
4310 1879 

Ab. *renago* Haw. A handsome form with broad dark reddish bands, one in the basal area and one stretching from the reniform stigma to the subterminal line. Cf. Barr., Pl. 223, fig. 3b, and South, II. Pl. 2, fig. 2. In 4310 these bands are blackish and are joined across the central area below the stigmata.

*468.4 Germany, 1880 (Staudinger).

**Calymnia trapezina** Linn.

2646 Holme, E. Yorks., vii. 1876 †.
3273 Hunsley, E. Yorks., viii. 1876 †.
234 Wolsingham, 1872 (Pickard).


1038 Barton, Lines.; bred from larva, 1873 †.
3271 Holme, E. Yorks., vii. 1876 †.

Slightly darker than the first two of the series.

3272 Holme, E. Yorks., vii. 1876 †.

A pretty form. Ground colour whitish-grey, with dark central shade, transverse lines, and hind margin. The transverse lines nearly meet on inner margin.

905 Germany, 1872 (Staudinger).

Ground colour browner, and with the transverse lines indistinct.
Germany, 1872 (Staudinger).

Middle between the type and ab. ochrea.

Var. _saturata_ Staud. Small (29 mm., 31 mm.) ; a melanochroic form: ground colour reddish-brown; darker than any of the preceding.

Beverley, vi. 1885 †.

Continent, 1883 (Watkins and Doncaster).

* _Calymnia pyralina_ View.

Continent, 1879 (Staudinger).

Var. _corusca_ Esp. Ground colour redder and apical markings whiter than in the type: the more common form.

Saxony, 1877 (Staudinger).

The markings of the above vary considerably in depth and shade. No two of the four specimens are exactly alike.

* _Calymnia affinis_ Linn.

Beverley, 1877 †.

Loughborough, 1875 (Wieldt).

Intermediate between the type and ab. _suffusa_.

Loughborough, 1875 (Wieldt).

"Ab. _suffusa_ Tutt." Semi-melanic: ground colour smoky-brown; the white apical markings obsolete in 2591.
Dianthoecia carpophaga Bork. — *perplexa* Hüb.

4285 Colchester, bred 1879 (Harwood).
4284 1884
5897 Brighton, 1885 (Salvage).

Ab. *lepida* Esp. 4284 shows a tendency to the development of a dark central band, which becomes distinct in 5897.

2762 Crawley, Sussex, bred 1875 (Peters).
1004 vi. 1873 (Lees).
1846 Hartlepool, 1874 (Gardner).
4282 Colchester, bred 1879 (Harwood).
4283

Ab. *lepida* Esp. Ground colour pale yellow-ochreous; markings darker.

5898 Brighton, bred 1885 (Salvage).

A most distinct form: var. *pallida* Tutt. Ground colour white; faint traces of the first and second transverse lines; stigmata outlined in brown; a pale brown shade before the apex and faint indications of the subterminal arrow-heads; fringes normal.

4859 Brighton, bred 1880 (Salvage).

Var. *ochracea* Haw. Ground colour pale yellow-ochreous; markings as in the preceding, but without the apical shade; fringes unicolorous with the ground colour of the wings. Cf. Barr., Pl. 162, fig. 1b.

*5891 Guernsey, vii. 1885 †.
*3945 Sheffield, 1878 (Doncaster).
*5880 Guernsey, vii. 1885 †.

Dianthoecia capsophila Dup.

Sunk as a variety of the preceding species in Dr. Staudeinger's 'Catalog,' 1901.

2403 Isle of Man, bred from larva, vi. 1875 (Harwood).
2398
2400
6191 Sligo, 1886 (Russ).
5907 Lough Swilly, bred from larva, 1885 (Campbell).
5908 Sligo, 1885 (Russ).

Hind margin strongly marked with white.

2406 Guernsey, bred from larva, 1885 †.
5913 Small (29 mm.); ground colour and markings pale olive-green in 2406, brown in 5913.

2784 Isle of Man, bred from larva, and emerged x. 1875 (Harwood).

Small (30 mm.); suffused with greyish-green; markings indistinct.

5909 Lough Swilly, bred from larva, 1885 (Campbell).

[Wings at rest].

*5904 Lough Swilly, 1884 (Campbell).
*5903 Paler than the following. [The colour probably gone].
*5902 Lough Swilly, 1884 (Campbell).
*5905

Dianthoecia capsincola Hüb.

2353 Beverley, bred from larva, v. 1875 †.
2354
2355
Guernsey, bred from larva, 1885 1.

Andalusia, 1885 (Staudinger). 1.

1883

Meaux, E. Yorks., 1883 1.

Guernsey, vii. 1885 1.

Sheffield, 1878 (Doncaster).

Dianthoecia cucubali Fuess.

Germany, 1872 (Staudinger).

The purple tint very strong in this specimen.

Germany, 1872 (Staudinger).

1874

1874

1874

1876

1878

1878

1878

1878

Continent, 1883 (Watkins and Doncaster).

Greenwich, 1882 (Tutt).

Sheffield, 1878 (Doncaster).

Dianthoecia albimacula Bork.

Brighton, 1885 (Salvage).

Germany, 1872 (Staudinger).

1874

1873

1876

1876

1876

Central Germany, 1886 (Staudinger).

Dianthoecia nana Rott. = conspersa Esp.

Torquay, bred from larva, 1881 (Salvage).

Shetland, 1881 (Salvage).

1886 (Salvage’s expedition).

Var. obliterae Robs. = hethlandica Staud. A melanic form: entirely suffused with greenish-black; no white markings. Cf. Barrett, Plate 164, fig. 11, and South, I. Pl. 123, fig. 8.

Unst, 1883 (McArthur).

Ab. ochrea Greg. Suffused with pale olive-green, but not so fully as in the preceding; orbicular stigma white, the other markings showing paler than the ground colour. Cf. ‘Entomologist,’ 1880, Plate 4, fig. 12, and Barrett, Plate 164, fig. 15.

Pokrofka, Amurland, 1881-1886 (Graeser’s expedition). ♂

Small (30 mm. as against 35 mm.), but otherwise similar to the type form above.
There is in the above series much variation in the tone of the ground colour, and in distinctness of the markings. 782 and 3552 tend most towards a unicolorous bluish-grey; 783 and 2092 are the most variegated forms; 3555 has the most fully developed dark transverse band in the basal area.

Dianthoecia compta Fab.

3441 Continent, 1876 (Staudinger). ♀

Var. xanthocyanea Hüb. The ♀ darker than the ♂, and the orange basal spot very conspicuous.

Dianthoecia magnolii Bois.

3441 Continent, 1876 (Staudinger). ♀

Dianthoecia filigrana Esp.

2078 Continent, 1874 (Staudinger). ♂

DRAWER XXVI.

Metopoceras felicina Donz.

4754 Continent, 1880 (Staudinger).

4755 Polia suda Hüb.-Gey.

5497 Switzerland, 1883 (Staudinger). ♀.

5498 Polia chi Linn.

1039 Manchester, bred from larva, 1873.
Forres, viii. 1871 ♌.

1042b North Ireland, 1889 (Salvage’s expedition).

Var. olivacea Steph. Ground colour greenish-grey, very clear in 6110, and darkest in 2545. Cf. Barrett, Pl. 170, figs. 1c, 1h, and South, I. Pl. 138, figs. 4, 5.

6361 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).

Var. subcaerulea Graes. Ground colour bluish-grey, with a slight purple tinge.

*6436 Leeds, bred from ovum, vi. 1887 (Pickles).

6435 Poiia canescens Dup.

5496 Hungary, 1883 (Staudinger). ♀
5495 ♀ Ground colour a more uniform olive-brown than in the others.

5493 Hungary, 1883 (Staudinger). ♀

5494 Poiia polymita Linn.

5496 Hungary, 1883 (Staudinger). ♀

5495 Ground colour a more uniform olive-brown than in the others.

6266 Central France, 1886 (Staudinger). ♀

6265 Fine examples of the type form, with yellow markings very conspicuous.

6266 Central France, 1886 (Staudinger). ♀

6265 Fine examples of the type form, with yellow markings very conspicuous.

6266 Central France, 1886 (Staudinger). ♀

2917 Germany, 1876 (Staudinger). ♀

2917 Germany, 1876 (Staudinger). ♀

3331 Germany, 1876 ♀.

3331 Germany, 1876 ♀.

Var. nigrocinetra Treit. Semi-melanic: suffused with dark grey, darker in the English specimens than in the Continental ones. In all the yellow markings are reduced to a minimum.

*6680 Isle of Man, 1888 (Mosley—taken by Porritt).

Poiia flavicincta Fab.

1165 Beverley, 1876 ♌.

214 Beverley, 1876 ♌.
Sligo, 1889 (Salvage’s expedition). ♀  ♂
6757
6759
6753
6751
6748 North Ireland, 1889 (Salvage’s expedition)
4747
6749
6746
6754 Sligo, 1889 (Salvage’s expedition) ♀
6758

Ab. luneburgensis Frey. Dark blackish-brown, with central band still darker. Cf. Barrett, Plate 166, fig. 1c (but without the pale second line of this figure); and South, I. Pl. 137, figs. 9, 10.

Sicily, 1879 (Gerhardt). ♀
4519
4518 Received from the Continent as var. luneburgensis, but really being var. sedi. (See ‘Entomologist,’ 1884, page 107).

[The right hind wing of 4519 badly broken].

Epunda lichenea Hüb.
3695 Guernsey, bred from larva, x. 1877 (Luff).
3694
3935 Plymouth, 1886 (Lascelles).
2845 Basal and costal areas and the stigmata whitish.
3697 Plymouth, 1886 (Lascelles).
3696 Guernsey, bred from larva, x. 1877 (Luff).
2846 x. 1875 (Luff).
2844 bred from larva, x. 1878 (Luff).

*5798 v. 1885 (Harwood).
*5797
*5799
*5800

Polia serpentina Treit.
3154 Continent, bred 1876 (Staudinger). ♀
3154a ♀
3155 ♂
3155a ♀

Valeria oleagina Fab.
69 Germany, 1872 (Staudinger).
5503 Hungary, 1883
5502
3770 1877
3771 1877
3772 1878

*3990 Germany, 1878

Valeria jaspidea Vill.
3769 Saxony, 1877 (Staudinger). ♀
3536 Germany, 1876
3537
5499 1883
5500
5501

*5443
Oxytrypia orbiculosa *Esp.*
3434 Continent, 1876 (Staudinger). ♀
3435 " " ♂

Miselia oxyacanthae *Linn.*
209 Beverley, 1882 †.
208 " " ♀
4228 Londonderry, bred 1879 (Campbell).
4230 Beverley, 1882 "

The central area, except along the inner margin, little darker than the hind margin, and the reniform stigma almost invisible, being concolorous with the ground colour; the first and second lines distinct.

6561 Syria, 1887 (Staudinger). ♂
6560 " Var. *benedictina* Staud. An intermediate form between the type and ab. *capucina*, being of the ground colour of the type, but without the green shade along the inner margin; reniform stigma very conspicuous, and in shape a long ellipse, with axis parallel to the costa.

2777 Beverley, x. 1875 †.
1868 " x. 1874 †.
690 " ix. 1872 †.

Ab. *capucina* *Mill.* A melanochroic form: suffused with dark reddish-brown, the typical green of the inner margin obliterated, but the white anal crescent conspicuous. Cf. Barrett, Pl. 172, fig. 2b, and South, I. Pl. 141, fig. 3.

*5299 Meaux, E. Yorks., 1883 †.
*5300 " " ♀ " " ♀

Miselia bimaculosa *Linn.*
190 Germany, 1872 (Staudinger). ♀
4776 " 1880 " ♂
4775 " " ♂

Chariptera viridana *Walch—culta* *Hüb.*
1281 Germany, 1873 (Staudinger). ♀
3534 " 1876 " ♂
3535 " " ♂
1280 " 1873 ♀

Hadena gemmea *Treil.*
4030 Saxony, 1878 (Staudinger). ♀
4931 " [Both right wings broken, and the right hind wing deformed].

*5539 Saxony, 1883 (Staudinger). ♀
*6745 Hilbersdorf, bai Chemnitz (Werner).

Unknown hitherto, and discovered by him this year. See " Entom. Societats," No. 14, 15 October 1880. (MS. note in Mr. Dobrée's diary).

Trigonophora jodea *Guen.*
3491 Continent, 1876 (Staudinger). ♂
3492 " " ♀

Dichonia aprilina *Linn.*
201 Beverley, 1871 †.
203 " " ♀
200 " " ♂
1758 " bred from pupa, 1874 †.
1757 " " ♀
1760  Beverley, bred from pupa, 1874  
   Ground colour a whiter green than in the preceding, and the black markings reduced to a minimum.
3562  Beverley, 1876 (Bishoprick).
   Ab. *virgata* Tutt. A fine form. The black markings of the central area extended so as to form a distinct black band, crossed by the pale nervures, between the first and second transverse lines. In this specimen the ground colour is strongly ochreous.

*5157  Germany, 1882 (Staudinger).
*5854  Beverley vi. 1885  
*5137  vi. 1882  
*5136  

**Jaspidea celsia** Linn.

4277  Germany, 1880 (Staudinger).
4278  "  "  "
4707  "  "  "
4706  "  "  "
*6626  Berlin, 1888 "(Staudinger).
*6576  1888 (Gleissner).

**Phlogophora (Habryntis) scita** Hüb.

6634  Zittau, bred 1888 (Ralle).  
6631  "  "  "
6632  "  "  "
6633  "  "  "
*6571  vi. 1888  
*6571a  "  "  "
*6571b  "  "  "

**Brotolomia meticulous** Linn.

198  Beverley, vii. 1873  
199  "  "  "  
197  "  "  "  

[Wings at rest].

6331  Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
6294  Amurland, 1886 (Staudinger).

Var. *pallens* Ober. A distinct form. The markings blurred by the pale reddish shade (rather greyish than red in 6331) extending from the base outwards as far as the reniform stigma, thus obliterating the upper portion of the first line. The second line has a different direction from that in the type, being rounded outwardly at its middle instead of being parallel to the hind margin.

*5057  Christchurch, x. 1884 (Druitt).  
*5056  "  "  "
*5055  "  "  "  [Green].

*5058  Christchurch, x. 1884 (Druitt).  
*5054  "  "  "
*5052  "  "  "
*5053  "  "  Bright reddish-brown.
**Trigonophora flammea** Esp. = *empyrea* Hül

194  Brighton, 1872 (The O'Reilly).
192  
3392  "  1876 (Salvage).
3394  "  "  
3393  "  "  "  
3395  "  "  "
2146  Continent, 1874 (Staudinger).
3854  "  1876  "  
3853  "  "  "  

**Euplexia lucipara** Linn.

5192  Beverley, bred 1882 †.
548  "  "  bred 1878 (Bishoprick).
549  "  "  "  "  
3177  "  "  "  "
2424  "  "  "  "  
2425  "  "  "  "

[Wings at rest],

*5194  Beverley, viii. 1882 †.  ]
*5194a  "  "  "  "  "  "  "  "  "  
*5195  "  "  "  "  "  "  "

Green.

*5196  Beverley, viii. 1882 †.  ]
*5196a  "  "  "  "  "  "

Purplish-red.

**Polyphaenis sericata** Esp. = *prospicua* Hüb.

755  Germany, 1872 (Staudinger).
1216  "  1873  "  
1217  "  "  "  "  
1221  "  "  "  "  
1219  "  "  "  "  "  The central area between the first and second lines unicolorous; stigmata obliterated.
1220  Germany, 1873 (Staudinger).
1214  "  1882  
5090  "  1882  "  "  
5089  "  "  "  "

Recorded as ‘var. viridisema’ in Mr. Dobrée’s diary. Ground colour pale yellowish-green instead of greyish-brown, as in the preceding. A very pretty form.

*5010  Germany, 1873 (Staudinger).

**Aplecta prasina** Fab. = *herbida* Hüb.

3158  Hunsley, E. Yorks., vi. 1876 †.
3159  "  "  "  "  "  "  "  "  "  «
4892  Hull, bred from larva, 1880 †.  
4891  "  "  "  "  "  "

Ground colour a paler and brighter yellowish-green than in the preceding, and the white blotch beyond the reniform stigma obliterated by it.

6683  Switzerland, 1888 (Rühl).

The whole central area between the first and second lines developed into a dark brown band, except for the white blotch beyond the reniform stigma, which is thereby rendered the more conspicuous.

6778  Switzerland, 1889 (Rühl).
801  Germany, 1872 (Staudinger).
     The general appearance paler than in the others of the
     series, and the blotch beyond the reniform stigma
     conspicuously white.
800  Germany, 1872 (Staudinger).
*6568 Beverley, i. 1888 (Staudinger).
*5368 London, x. 1883 (Williams).
*5367

**Aplecta occulta** Linn.
1389 Rannoch, 1873 (Meek).
     Intermediate between the type and var. implicata.
3223 Beverley, viii. 1885.
1391       
3221 Rannoch, 1876 (Robertson).  ♂
813       
     Var. implicata Lef. A melanic form: ground colour
     dark blackish-brown; the orbicular stigma and
     transverse lines pale ashy-grey; reniform stigma
     indistinctly outlined. Cf. Barrett, Plate 150, fig. 1a,
     and South, I. Pl. 117, fig. 4.
814 Rannoch, bred 1881 (Salvage). ♀
     A magnificent form, with ground colour as in the pre-
     ceding, but the transverse lines broadly grey, and
     the hind margin touched with dark grey.
6385 Chabarofka, Amurland, 1881-1886 (Graeser’s expedition).  ♂
     (50 mm.).
6386       
     (60 mm.).
     Fore wings much more pointed than those of the pre-
     ceding specimens.
*5458 Germany, 1883 (Staudinger).
*4607 Continent, 1880

**Aplecta nebulosa** Hufn.
541 Cliffe, E. Yorks., vii. 1872.
1591 York, 1881 (Prest).
1592       
6173 Barnsley, "1886 (Salvage). ♂
     Var. bimaculosa Esp. The ‘Yorkshire form’; semi-
     melanic: ground colour suffused with dark greyish-
     brown. Cf. Barrett, Plate 155, fig. 1d, and South,
     I. Pl. 119, fig. 1. 6173 is the darker.
6381 Chabarofka, Amurlund, 1881-1886 (Graeser’s expedition).  ♂
     ♀
6382       
     Ground colour a delicate purplish-grey, and the mark-
     ings not so conspicuous as in the type.
*4666 Germany, 1880 (Staudinger).
*6102 London, v. 1886 (Pearce).
*6103       
*5434 Continent, ”1883 (Watkins and Doncaster).
     [Half grown].
*4625 London, 1880 (Williams).
     [Three-fourths grown].

**Aplecta tincta** Brahm = hepatica Hüb.
3224 Rannoch, 1876 (Robertson).
3225       
3226       
2118       
2117 Germany, 1874 (Staudinger).
2116       

1234 Germany, 1873 (Staudinger).  
Fore wings suffused with brown.
1235 Germany, 1873 (Staudinger).
*5221 Isle of Arran, 1882 (McArthur).
*5220

**Aplecta advena** Fab.
6448 Ely, bred from ovum, 1887 (Raynor).
6449 " " Almost uniform pale reddish-grey; markings very faint.
3463 Germany, 1876 (Staudinger).
Ab. *unicolor* Tutt. Almost unicolorous dark reddish-grey; the reniform stigma faintly marked.
3801 Central France, 1877 (Staudinger).
3803
6379 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀ ♂
6378 " " Suffused with reddish-brown; the inner marginal area and that before the subterminal line slightly paler; stigmata faintly marked.
*6476 Brentwood, bred from ovum, 1887 (Raynor).
*6618 Silesia, 1888 (Staudinger).
[Half grown].
*5256 Bavaria, 1883 (Staudinger).
*6619 Silesia, 1888 (Staudinger).
Marked ‘mature’ in Mr. Dobrée’s diary. Enormous (length 64 mm., thickness in middle, 9 mm).

**DRAWER XXIX.**

**Agrotis speciosa** Hüb.
6645 Alps, 1888 (Staudinger). ♂
6646 ♀
6648 Lapland, 1888 (Staudinger). ♂ ♀
6647 " " Var. *arctica* Zett. Semi-melanic: ground colour suffused with dark brownish-grey; the stigmata and other markings almost obliterated.

**Hadena jankowskii** Ober.
6325 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♂
6326 ♀

**Hadena amica** Treit.
3490 Continent, 1876 (Staudinger). ♀
3489 ♀

**Hadena leuconota** Herr.-Sch.
6295 Asia Minor, 1886 (Staudinger). ♀
[The abdomen badly greased].

**Hadena porphyrea** Esp. = *satura* Hüb.
3070 Germany, 1876 (Staudinger).
5265 Saxony, 1883
5269 " " " "
5268 " " " "
5266 " " " "
5267 " " " "
*5455 Hungary, 1883
*5455a " " " 
Thecophora fovea Treit.

The oval cup-like fold in the middle of the hind wings, peculiar to the males of this species, is most noticeable.

Hadena solieri Boisd.

Darker than the preceding.

Paler than any of the others.

Hadena adusta Esp.

The wedge-shaped spots before the subterminal line increased in size and number, so as to give the outer area of the wing a striated appearance. In 6176 all three transverse lines are conspicuous.

Dryobota furva Esp. = occlusa Hüb.

The reniform stigma conspicuously white.

The reniform stigma white, but filled in with brown.

Dryobota roboris Boisd.

Hungary, 1882 (Kricheldorff).
Dryobota saportae *Dup.*

5109 Continent, 1882 (Staudinger) ♂
5111 " " " " ♂
5110 " " " " ♂
5112 " [The right fore wing rubbed].

Dryobota monochroma *Esp. = distans* Hüb.

5087 Continent, 1882 (Staudinger) ♂
5088 " " " " ♂
5743 Galicia, 1885 "Staudinger". ♀ ♂
5744 " Var. suberis Boisd. Ground colour more whitish than that of the type male above, and in 5744 the markings less distinct.

Dichonia aeruginea *Hüb.*

5736 Hungary, 1885 (Staudinger) ♀
4484 Germany, 1879 " ♂
4485 " " " ♂
5737 Hungary, 1885 " ♂
5738 " " " ♂
6070 " Var. " miroleuca" *Hüb.-Gey.* A very distinct form. Ground colour purplish-grey; stigmata inconcolorous with this, and the other markings inconspicuous.

*6496 South Austria, 1887 (Staudinger).

Dryobota protea *Bork.*

237 Forres, viii. 1871 †.
238 " " A pretty form. Ground colour pale reddish-brown, with the white markings very distinct.

2702 Beverley, ix. 1875 †.
Semi melanic: ground colour suffused with dark blackish-brown; the orbicular stigma, a pale blotch below it, and the inner margin pale.

2703 Beverley, ix. 1875 †.
2710 " " " ♂
2708 " Ab. variegata *Tutt.* Ground colour as in the type, but the white markings well developed.

2706 Beverley, ix. 1875 †.
2705 " " " ♂
2707 " " " ♂
2704 " ix. 1876 ♂
695 " " ♂
Pale olive-green with a reddish tinge, much mottled with black.

Dianthoezia proxima *Hüb.*

1206 Continent, 1873 (Staudinger) ♂
1207 " " ♂
6529 Switzerland, 1887 " ♂
6530 " Strongly marked.
5756 Livonia, 1883 (Staudinger) ♂
5757 " Var. " cana *Ever.* The markings paler and the general appearance therefore more uniform.
Dichonia convergens *Fab.*

6534 Saxony, 1887 (Staudinger). ♀
6532 " " Darker than the preceding.
6531 Saxony, 1887 (Staudinger). ♂
6535 " " " ♂
6533 " Paler than the two preceding specimens.

*6495 Saxony, 1887 (Staudinger).

Hadena glauca *Hüb.*

3127 Rannoch, 1876 (Robertson).
3125 " " " "
3124 " " " "
3126 " " " "
3150 Lancashire, bred from pupa, 1882.
3151 " " " "
3152 " Hind-marginal area whitish, in which the black wedge-shaped spots of the subterminal line stand out conspicuously. Cf. Barrett, Plate 158, fig. 3a.
3056 Germany, 1876 (Staudinger).

Ground colour suffused with purplish-grey; the orbicular and claviform stigmata indistinct.

*6084 Thüringen, 1885 (Heyne).

Hadena leucodon *Ever.*

4447 South Russia, 1879 (Staudinger).

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**DRAWER XXX.**

Hadena dentina *Esp.*

446 Hunsley, E. Yorks., 1877 †.
2362 " " vi. 1875 †.
2364 " " " " †.
2366 " " " " †.
3572 Beverley, 1876 (Cherry).
4856 Scotland, 1880 (Salvage).

The pale nervures distinctly marked in the outer margin of the wing.
6168 Sligo, 1886 (Russ).

Approaching the preceding form.
1588 Beverley, vi. 1874 †.
2307 Spurn, E. Yorks., 1886 †.

Suffused brown forms; markings indistinct. Apparently ab. *latenai* Pier.
6153 Shetland, 1886 (Salvage’s expedition).

A small (30 mm.) dark form; very dark brown central band, and hind margin crossed by paler nervures.
6262 Alps, 1886 (Staudinger).

Ab. *latenai* Pier. A suffused brown form with dark central band and pale transverse lines.
6636 Zürich, 1888 (Rühl).

A very distinct form. Ground colour purplish-grey; markings very distinct.

*5931 Hartlepool, 1885 (Robson).
*5932 " " " "
*5930 " " " "
**Hadena marmorosa** Bork. = nana Guen.

3880 Leipzig, bred from pupa, 1878 (Heyne).

3881 Saxony, 1888 (Staudinger).

* Large for size of imago.

*6011 Alps, 1888 (Staudinger).

*6649 Saxony, 1888 (Staudinger).

**Hadena peregrina** Treit.

4517 Sicily, 1879 (Gerhardt).

6134 Greenwich, 1886 (Heyne).

6133 Greenwich, 1886 (Heyne).

**Hadena trifolii** Rott. = chenopodi Fab.

2414 Bred vi. 1875 (Harwood).

1567 Greenwich, 1881 (Tutt).

2411 Greenwich, vii. 1885 (Luff).

6739 Alps, 1888 (Staudinger).

6733 Kaschgar, Turkistan, 1888 (Tancré—taken by Graeser).

6734 These two specimens agree exactly with the description (Barrett, vol. iv., page 201), and the figure (Plate 159, fig. 2c) of var. albifusa Grote: orbicular stigma large and conspicuously whitish; lower half of reniform stigma dark grey; claviform stigma broad and also dark grey; a pale oblique band from the orbicular stigma joining a second from the apex at the anal angle. Barrett’s statement that, with the exception of a single specimen taken at Portland in 1888, ‘this peculiar variety does not seem to have been observed in the eastern hemisphere,’ is apparently incorrect.

4948 Greenwich, 1881 (Tutt).

Dull yellowish-green.

4949 Greenwich, 1881 (Tutt).

Purplish-red.

4950 Greenwich, 1881 (Tutt).

5614 London, ix. 1884 (Buckell).

Pale reddish-brown.

5612 London, ix. 1884 (Buckell).

Dull yellowish-green.

5615 London, ix. 1884 (Buckell).

Bright biulsh-green; the subdorsal black markings very distinct.

5611 London, ix. 1884 (Buckell).

Pale green.

[Mamestra albifrons Grote].

4833 Orillia, Canada West, 1875 (Norman).

4834 Rhode Island, 1876 (Norman).

4833 is exactly similar to the Altai specimens of the preceding species, but 4834 has the ground colour paler. Labelled ‘? spec. Darwini?’
Hadena sodae *Ramb.*

4794 Continent, 1880 (Staudinger). ♀
4795 ” ” ” ♀
4796 ” ” The reniform stigma very conspicuous.
4797 Continent, 1880 (Staudinger). ♀

The markings less distinct and the general appearance hence more unicolorous. [The left fore wing badly sprung].

Hadena atriplicis *Linn.*

4092 Leipzig, bred from pupa, vi. 1879 (Heyne).
4093 ” ” ” ” ”
4094 ” ” ” ” ”
4095 ” ” ” ” ”
4096 ” ” ” ” ”
4097 ” ” ” ” ”

Hadena dissimilis *Knoch—suasa* *Bork.*

3729 London, 1877 (King).
3727 Droylesden, 1873 (White).
6316 Hartlepool, 1884 (Harwood).

Suasa *Bork.* The variegated form.

6315 Hartlepool, 1884 (Harwood).

Dark, almost unicolorous, except for the subterminal line. ? ab. confluens *Ever.*

3796 Central Germany, 1877 (Staudinger). 
3794 ” ” ” ” ”
3795 ” ” ” ” ”

Dissimilis *Knoch.* The more unicolorous form.

3797 Central Germany, 1877 (Staudinger).

As the preceding, but markings still more obsolete.

5078 Germany, 1882 (Staudinger). 
5079 ” ” ” ” ”

Recorded as ‘var. varians’ in Mr. Dobrée’s diary. Ground colour reddish-brown; costal area pale grey; subterminal line very conspicuous. Cf. Barrett, Plate 157, fig. 1b.

6698 Kuldja, Russian Turkistan, 1888 (Tancré—taken by Graeser). 
6699 ” ” Ground colour dark reddish-brown, almost unicolorous, except for the subterminal line, which is conspicuous, as in the preceding.

*6621 Austria, 1888 (Staudinger).

Hadena oleracea *Linn.*

— Spurn, E. Yorks †.
— ” ” ” ” †.
*3635* Beverley, bred vi. 1877 †.
*3631* Weel, E. Yorks., ix. 1873 †.
  Pale whitish-green.
*3630* Weel, E. Yorks., ix. 1873 †.
  Bright green.
*3632* Weel, E. Yorks., ix. 1873 †.
  Greyish-green.
*3633* Weel, E. Yorks., ix. 1873 †.
  Dark red; barred with green between each segment.
*3634* Weel, E. Yorks., ix. 1873 †.
  Reddish-brown.
*3635* Weel, E. Yorks., ix. 1873 †.
  Brown.
*3635* Beverley, ix. 1884 †.
*3637" " †. J
  Pale salmon colour.
*3683* Beverley, taken off clematis with the two previous specimens. ix. 1884 †.
  Greyish-black. [Half grown.]

**Hadena pisi** *Linn.*

3870 Wakefield, bred from larva, 1878.
  Intermediate between the type and the following.
2565 London, bred 1875 (Wittick).
  Ab. *splendens* *Steph.* Ground colour uniform reddish-brown.
2369 London, bred 1875 (Wittick).
  Paler than the preceding specimen, and the subterminal line not so conspicuous.
2370 London, bred 1875 (Wittick).
2373 Shetland, 1887 (Salvage).
  Var. *seotica* *Tutt.* Ground colour purplish-brown; markings conspicuously dark. Cf. Barrett, Plate 157, fig. 2b.
2374 Shetland, 1887 (Salvage).
6371 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).♂
  Suffused with a strong purplish tinge.
6372 Nicolajefsk, Amurland, 1881-1886 (Graeser’s expedition).♀ Var. *palliens* *Staud.* Ground colour pale brown, almost unicolorous; the subterminal line almost obsolete.
4035 1878 (Staudinger).}
4034 "" Var. *sibirica* in Mr. Dobrée’s diary. Pale reddish-brown; markings indistinct; the yellowish-white anal mark large and blurred. But Staudinger’s description of the preceding form would probably also apply to these specimens—‘fore wings pale (yellowish) brown, less marked.’
*5209* Carmarthen, x. 1882 (Owen Wilson).}
*4631* Weel, E. Yorks., ix. 1883 †.
  Ground colour purple. [5209 three-fourths grown].
*4631a* Weel, E. Yorks., ix. 1883 †.
  Ground colour greyish-green,
**Hadena genistae** Bork.

102

792 Germany, 1872 (Staudinger).
790 " " " "
791 " " " "
789 " " " "
3052 " 1876
3790 Central Germany, 1877 (Staudinger).
3791 " " " "
3789 " " " "
3792 " " " "

In the above series there is a slight variation in the distinctness of the dark markings in the central area.

*5999 Saxony, 1885 (Staudinger).
*6000 " [Three-fourths grown].
*5691 Central Germany, 1883 (Staudinger).
*5695 " [Half-grown].

**DRAWER XXXI.**

**Hadena thalassina** Rott.

248 Droyesden, 1872 (White).
246 " " " "
249 " " " "
2322 " bred 1875" (White).
2316 " " " "
2317 " " " "
2318 " " " "
2319 " " " "
2321 " " " "
2320 " " " "
2419 Molescroft, E. Yorks., vi. 1875 †.
*6083 Saxony, 1886 (Heyne).

**Hadena contigua** Vill.

3123 Rannoch, vii. 1876 (Robertson).
3117 " " " "
4896 1881" (Salvage). " "
4894 " " " "
4898 Scotland, 1881 (Salvage).

With the exception of the pale blotch at base of fore wings, the whole area up to the second line very dark, and the orbicular stigma and anal blotch therefore very conspicuous by contrast.

6737 Amurland, 1888 (Tancre—taken by Graeser). ♀
6736 " " " "

The ground colour duller and paler and the markings blurred, the brightness of the preceding specimens being entirely wanting.

793 Germany, 1872 (Staudinger).
*5956 ix. 1885 (Harwood).
*5957 " " " "
*5958 " Bright green, the sub-dorsal markings distinct.
*5959 ix. 1885 (Harwood).

Bright green, the sub-dorsal markings obsolete.
Pale reddish-brown. [Half-grown].
Brown, with traces of green markings. [Half grown].
Pale reddish-brown, with traces of green markings.

**Hyppa rectilinea** Esp.

- 3104 Rannoch, vi. 1876 (Clark).
- 3105 " 1877 "
- 3106 " " "
- 3109 " " "
- 3108 " " "
- 3107 " Var. virgata Tutt. The common Scotch form: a dark reddish-brown central band between the first and second lines, the band most uniformly dark in 3107. Cf. Barrett, Plate 189, fig. 1, and South, I. Pl. 126, fig. 7. In 3105 it is invaded by the grey costal patch.

- 3112 Rannoch, vi. 1876 (Clark).

**Ab. semi-virgata** Tutt. The upper half of this band replaced by the slaty-grey ground colour.

- *5621 Rannoch, ix. 1884 (Salvage).
- *5620 " " "
- *5622 " " "
- *5625 " " "

**[Hyppa xylinoides** Guen.].

In Dr. Staudinger's 'Catalog,' 1901, this form appears as a variety of the preceding species.

- 5623 Orillia, Canada West, vi. 1876 (Norman). ♀
- 5624 " Almost exactly like 3112 above, but not so bright, and the stigmata more indistinct. Labelled '? spec. Darw. ?'

**Mamestra splendens** Hüb.

- 5571 Germany, 1883 (Staudinger). ♀
- 5572 " " ♀
- 5028 Environ de Berlin, 1882 (Kricheldorff). ♀
- 5029 " Slightly larger and browner than the preceding.

**Mamestra aliena** Hüb.

- 3873 Leipzic, bred from pupa, 1878 (Heyne). ♂
- 5026 Saxony, 1882 (Kricheldorff). ♀
- 5025 " " ♂
- 5027 " " ♀

**Lithocampa ramosa** Esp.

- 2999 Germany, 1876 (Staudinger). ♀
- 5031 Thuringia, 1882 (Kricheldorff). ♀
- 5032 " " ♂
- 5030 " " ♀

**Chloantha radios a** Esp.

- 2070 Germany, 1874 (Staudinger). ♂

Hind wings almost entirely blackish-brown, and little of the ground colour showing.

- 2071 Germany, 1874 (Staudinger). ♀
- 5033 Hungary, 1882 (Kricheldorff). ♀
- 5034 " " ♀
- *5013 Germany, 1882 (Staudinger).
Chloantha hyperici *Fab.*

1072 Germany, 1874 (Staudinger).
1073 
1074 
1075 

Chloantha polyodon *Clerck = perspicillaris Linn.*

5037 Environs de Berlin, 1882 (Kricheldorff).
5038 
5039 
5036 

2071 Germany, 1876 (Staudinger).
2072 
2073 

The brown costal streak and shading around the reniform stigma very dark.

2074 Germany, 1876 (Staudinger).

3440 
3439 

3251 1871 (Norman).
1620 Wimborne, 1874 (Spiller).
1619 
1623 Droylesden, 1872 (White).
707 
708 

In the above specimens there is some variation in the darkness of the brown central band, which is palest in 1623, and darkest in 1619.

5747 South Germany, 1885 (Staudinger). ♀
5748 ♀

Ab. *clinerascens Staud.* The central band obsolete, and the general appearance therefore more uniformly grey; the reniform distinct. Cf. Barrett, Plate 236, fig. 3c. 5747 is the paler of the two.

[Calocampa germana *Grote.*]

5751 Canada, 1875 (Norman).

5750 

The central darker area not so obsolete as in the last-mentioned form, and the reniform stigma less distinct; the fore wings narrower and their apex more pointed. Labelled *? spec. Darw. ?*

Brachionycha (*Asteroscopos*) sphinx *Hufl. = cassinea Hüb.*

4524 Sicily, 1879 (Gerhardt). ♀
4524 ♀

5040 Environ de Berlin, 1882 (Kricheldorff). ♀
*4987 1881 ♀

[The colour partly gone].

Xylocampa areola *Esp. = lithorhiza Treit.*

1065 Bristol, 1873 (Greene).
1064 
1404 Houghton, E. Yorks., iv. 1874 †.
1405 
1402 
1408 †.
*6025  France, 1885 (Staudinger).
       Pale yellowish-green.
*6025a France, 1885 (Staudinger).
       Pale yellowish-brown.
*5551  Leipzic, 1884 (Heyne).
*6025b France, 1885 (Staudinger).
       Reddish-brown, with traces of green markings.

Brachionycha (Asteroscopus) nubeculosa  Es\'p.

4295  Germany, 1879 (Staudinger).
4296  
4297  
4298  A wide and suffused black band along the inner margin
       and beyond the reniform stigma.
5097  North Russia, 1882 (Staudinger). \( \varrho \) \}
5098  Ground colour paler and clearer ashy-grey, and the
       markings less conspicuous. A very distinct form.
5095  Germany, 1882 (Staudinger). \( \varphi \) \}
5096  A striking melanic form: ground colour suffused with
       rich blackish-brown; the nervures in the central
       area strongly black; the subterminal line conspic-
       uously pale. Cf. South, I. Plate 140, fig. 4.

DRAWER XXXII.

Calocampa exoleta  Linn.

2820  Beverley, x. 1875 \( \dagger \).
2821  
2822  
2823  
2826  All the wing-area except the costal region strongly
       tinged with ashy-grey.
5117  Russian Turkistan, 1882 (Staudinger). \}
5118  Var. impudica  Staud. A further development of the
       preceding form, the costal area also being invaded
       by the ashy-grey tinge, thus producing a somewhat
       unicolorous effect.

*6627  South Germany, 1888 (Staudinger).
*6627a  [The colour partly gone].

Calocampa vetusta  H\( \dddot{u} \)b.

364  Forres, 1871 (Norman).
365  
1771  Dunecht, Aberdeen, 1874 (Carpenter).
1768  
1770  
1773  
366  Sligo, 1885 (Russ).
       All of the 'Irish form,' var. brunnea  Tutt. Without
       the broad greyish shade below the reniform stigma
       that is noticeable in the type form. The Sligo
       specimen (366) shows the absence of this greyish
       shade most markedly, there being in the Scotch
specimens the faintest indication of it by a weakening in the tone of the dark reddish-brown shade. Cf. Barr., Pl. 237, fig. 2a, and South, II. Pl. 14, figs. 1, 2.

*5377 Brighton, bred from ovum, 1883 (Salvage).
Olive-green; the dorsal area slightly darker; lines and spots distinct.

*5376 Brighton, bred from ovum, 1883 (Salvage).
The dorsal area of the same tone as the sides of the preceding specimen, and the sides much lighter; spots larger and more conspicuous.

*6439 Brentwood, vii. 1887 (Raynor).
Darker than 5377, and the dorsal area black.

*6440 Brentwood, vii. 1887 (Raynor).
Dark reddish-brown, with the dorsal area purplish-red; the lines and spots not so distinct as in the others.

Xylina furcifera Hufn. = conformis Hüb.

3520 Germany, 1876 (Staudinger).

3521 " " " "
3067 " " " "
1210 " 1873 "
2104 " 1874 "

5749 Llantrissant, 1885 (Salvage—bred by Evan John).

3245 Ireland, 1887 (Salvage).
Var. sulfusa Tutt. A melanic form, much darker than the Continental type specimens above. Cf. Barrett, Plate 235, fig. 3—not, however, a good figure of the form, the ground colour not being dark enough, while the reniform stigma is too conspicuous—and South, II. Plate 13, fig. 2.

*6572 Berlin, 1888 (Gleissner).
Pale purplish-red.

*5975 Chemnitz, 1885 (Ribbe).
Yellowish-brown.

*6497 Central Germany, 1887 (Staudinger).
Brown.

Xylina lambda Fab.

2225 Germany, 1874 (Staudinger).

2226 " " " "
2227 " " " "
2202 " " " "
2203 " " " "
3805 South Germany, 1877 (Staudinger.)

Var. somniculosa Her. More unicolorous, the stigmata obliterated, and the only distinct markings being the transverse central shade, the basal streak, and the longitudinal mark below the stigmata—all these being brown.

*6584 Berlin, 1888 (Gleissner).
'Xyl. somniculosa.'

6590 Saxony, bred from larva, 1888 (Teicher).

6600 " " " "
3493 Germany, 1876 (Staudinger).

3494 " " " "
Var. zinckenii Treit. A magnificent form, exactly opposite in character to the preceding. Both stigmata conspicuous and the dark markings of the type form largely developed and partly edged with white. Cf. Barrett, Plate 235, fig. 4, which, under the name of X. lambda, is a representative of this variety.
Xylina ornithopus Rott. = rhizolitha Treit.
357 Canterbury, 1871 (Parry).
1268 Germany, 1873 (Staudinger).
1266 " " "
1265 " " "
360 Bred 1887 (Salvage).
359 1872 London, 1874 (Etheridge).
1869 " " "
1870 " " "
1871 " " "
1873 " " "
*5015 Germany, 1882 (Staudinger).

Xylina semibrunnea Haw.
2758 Whittlesford, Cambs., 1875 (Thurnall). ♀ Neither this nor the two Continental females below have the costal area as shown in Barrett, Plate 235, fig. 1a.
2760 Whittlesford, Cambs., 1875 (Thurnall). ♂
2757 " " " " " " ♂
2759 " " " " " " ♂
2761 Canterbury, 1874 (Parry). ♂
1766 " " ♀
4260 Leigh, Somerset, 1879 (Mann). ♀
1359 Germany, 1873 (Staudinger). ♀
4766 " 1880 " " ♀
4765 " " The costal area slightly darker than in the others of the series, thus producing a more unicolorous appearance.
1358 Germany, 1873 (Staudinger). ♂

Xylina soci a Rott. = petrifl cata Fab.
1907 New Forest, 1874 (Spiller).
1908 " " "
4261 Leigh, "Somerset", 1879 (Mann).
6732 Crowcombe, Somerset, 1884 (St. John).
    Ab. umbrosa Esp. Ground colour pale yellowish-brown, with a dark shade below the reniform stigma.
6731 Crowcombe, Somerset, 1884 (St. John).
    Ab. rufescens Tutt. As the above, but with all the wing-area except the costal streak tinged with reddish-brown.
1909 Killarney, 1874 (Spiller).
    Ab. pallida Tutt. Ground colour pale yellowish-brown, with the brown markings almost entirely obsolete.
877 Germany, 1872 (Staudinger).
2111 " 1874 ♂
    Petrifl cata Fab. Ground colour pale brown, with a reddish tinge; all the inner-marginal area dark brown. Cf. Barrett, Plate 235, fig. 2a.
2112 Germany, 1874 (Staudinger).
878 " 1872 ♂
    Soci a Rott. Ground colour pale brown, and the inner-marginal area only slightly darker than the upper portion of the wings. Cf. South, II. Pl. 12, fig. 5.
*6442 Bavaria, bred from ovum, vii. 1887. ♂
*6441 " " [Three-fourths grown].
*6089 Saxony, 1886 (Heyne).
Xylina lapidea *Hübl.*

4703 Continent, 1880 (Staudinger). ♀
4704 " " 1874 " ♂
2114 " " 1874 " ♀
2113 " " 1874 " ♂

Var. *sabinae* *Hüb.-Gey.* Ground colour slightly more bluish in tone, and without the brown shade of the preceding type form.

Xylina ingrica *Herr.-Sch.*

3030 Continent, 1876 (Staudinger).
A fine semi-melanic form, strikingly similar to the type form of *X. furcifera*, but the stigmata plainly outlined. (?) var. *pexata* *Grote.*

3032 Continent, 1876 (Staudinger).

3031 " " "

**DRAWER XXIII.**

*Cucullia verbasi* *Linn.*

3615 Beverley, bred from larva, v. 1877 ♂
3616 " " " ♂
3623 " " " ♂
3617 " " " ♂
3618 " " " ♂
3619 " " " ♂
3622 " " " ♂
6522 Castile, 1887 (Staudinger).
6523 " " "

[Wings at rest].

*3954 Bought in Paris, 1878 (Wailly).
[Three-fourths grown].

*5296 Meaux, E. Yorks., vii. 1883 ♂

*5297 " " "

*Cucullia scrophulariae* *Capt.*

381 Canterbury, bred from pupa, v. 1872 (Parry).
Is this, rather, a diminutive specimen of *C. verbasi*?
In an article entitled ‘*Cucullia scrophulariae* probably specifically identical with *C. lychnitis*’ (‘Entomologist,’ June 1891), Mr. Dobrée says that in his opinion, ‘*C. scrophulariae* is probably not found in Great Britain at all.’

871 Germany, 1872 (Staudinger).
874 " " The costal streak very dark.
4138 Hamburg, 1879 (Graeser). ♂
4139 " " Of a more whitish appearance than the others in the series, and the costal streak whitish-grey, instead of brown. ‘These may be considered typical of *seraphulariae*.’ (MS. note by Mr. Dobrée.)
3898 Toulouse, 1878 (Wailly). ‘Bred from pupa obtained from Toulouse from a correspondent who, he says, knows the insect.’
3899 Toulouse, 1878 (Wailly).
3896 " " " " " " "
3897 " " " " The costal streak very pale.
Cucullia lychnitis Ramb.

In the article previously referred to, Mr. Dobrée says, 'The identity of C. scrophulariae with C. lychnitis is likely to be proved when any specialist has the opportunities for close and extended comparison.'

*Cucullia lychnitis*

1960 Bred 1875 (Harwood).
1959  
4190  
4188  
4189  
3932 Brighton, bred 1878 (Salvage).
3933  
5392 bred 1883  
5391  
*6088 Bohemia, 1886 (Heyne).*
*5700 South France, 1883 (Staudinger).*
*5204 Brighton, viii. 1885 (Salvage).*
*5215  

The larva of C. lychnitis is 'absolutely indistinguishable' from that of C. scrophulariae. (Ibid.)

Cucullia prenanthis Boisd.
5675 Leipzig, 1884 (Gerhardt).
5676  

Cucullia thapsiphaga Treit.
4313 Germany, 1879 (Staudinger).
4314  
4316  
*5008 1882  

[The colour gone].

Cucullia blattariae Esp.
4735 Continent, 1880 (Staudinger).
6657 Dalmatia, 1888 (Staudinger).
6658  
*5248 1883  

Cucullia scrophulariiphaga Ramb.
6525 Corsica, 1887 (Staudinger).
6526  

Cucullia gnaphalii Hüb.
6096 'Tilgate Forest, Tester, 1872' (Salvage).
6524 Livonia, 1887 (Staudinger).

Ground colour entirely suffused with dark violet-grey.

Cucullia asteris Schiff.
2380 Crawley, Sussex, bred from pupa, 1875 (Peters).
2379  
2376  
2381  
2375  
855 South Germany, 1872 (Staudinger).
*5947 viii. 1885 (Salvage).*
*5946  
*5944  

Bright green; the pale yellow lines tinged with green, as if the green colour had 'run.'
Brighton, 1882 (Salvage).

Continent, 1883 (Watkins and Doncaster).

Duller green than the preceding, and the pale yellow lines clear.

viii. 1885 (Salvage).

Pale red; the pale yellow dorsal line very distinct.

Continent, 1883 (Watkins and Doncaster).

Sides pale red; dorsal area black, in which the pale yellow dorsal line is very conspicuous.

Cucullia xeranthemi Boisd.

Guernsey, 1872 (Luff).

Ground colour suffused with dark grey.

Hungary, 1888 (Staudinger).

Dull green; dorsal stripe purple.

Hungary, 1888 (Staudinger).

Dull green; no dorsal stripe.

Cucullia artemisiae Hufn. = abrotani Hüb.

Germany, 1873 (Staudinger).

Hungary, 1888 (Staudinger).

Austria, 1888 [Half grown].

Cucullia scopariae Dorf.

Continent, 1879 (Staudinger).

Cucullia absinthii Linn.

Bathampton, Somerset, 1876 (Ross).

Germany, 1873 (Staudinger).

Germany, 1873 (Staudinger).

Germany, 1873 (Staudinger).

Germany, 1873 (Staudinger).

Germany, 1873 (Staudinger).

Germany, 1888 (Staudinger).

Germany, 1888 (Staudinger).

Germany, 1888 (Staudinger).

Austria, 1888 [Half grown].

Cucullia formosa Rogen.

Continent, 1876 (Staudinger).

Cucullia fraudatrix Ever.

Germany, 1876 (Staudinger).

Germany, 1876 (Staudinger).

[The right hind wing broken].

Cucullia santonici Hüb.

Continental, 1879 (Staudinger).

Cucullia tanaceti Schiff.

Germany, 1876 (Staudinger)

Germany, 1876 (Staudinger)

Berlin, 1888 (Gleissner).
Cucullia santolinae Ramb.
6652 South France, 1888 (Staudinger).
6651

Cucullia chamomillae Schiff.
2293 Crawley, Sussex, bred from pupa, 1875 (Peters).
2292 " " " "  
2294 " Darker than the Continental type form, and approaching the following variety.
3601 Beverley, v. 1877 †.
3600 Bred from pupa, v. 1877 (Harwood).
3599 " " "  
4301 Continent, 1879 (Staudinger).
4302 " Ab. chrysanthemi Hüb. A semi-melanic form, much streaked with dark. Cf. Barrett, Plate 240, fig. 1a, and South, II. Pl. 16, fig. 2. All but 4302 show a distinct pale spot below the centre of the fore wings. The Continental specimens are larger (50 mm. and 48 mm., as against 42 mm., 45 mm., 46 mm.).
*4271 Germany, 1880 (Staudinger).
*5451 South Germany, 1883 (Staudinger).

Cucullia lucifuga Hüb.
3747 Bavaria, 1877 (Staudinger).
3748 " " " "  
3749 " " "  

Cucullia lactucae Esp.
4051 Germany, 1878 (Staudinger).
4052 " " " "  
4053 *6580 Berlin, 1888 (Gleissner).

Cucullia umbratica Linn.
545 Cliffe, E. Yorks., vii. 1872 †.
1647 Beverley, vii. 1877 †.
347 " " "  
1642 Houghton, E. Yorks., vi. 1874 †.
1643 " " " " †.
1644 " " " " †.
1645 Spurn, E. Yorks., vii. 1874 †.
1646 " " " " †.
*4071 Germany, 1880 (Staudinger).
*5450 South Germany, 1883 (Staudinger).

Cucullia praecana Ever.
3420 Germany, 1876 (Staudinger).
3421 " " " "  

Cucullia lactea Fab.
3750 South Russia, 1877 (Staudinger)
3751 " "  
4732 Continent, 1880 " "  

Cucullia balsamitae Boisd.
4733 Continent, 1880 (Staudinger).
4734 " " " "  
*4670 " " " "  

Darker than the Continental type form, and approaching the following variety.
**Cucullia argentina** *Fab.*
3424 Continent, 1876 (Staudinger).
3426 " " " "
3425 " " " "
3427 " " " "

**Cucullia splendida** *Cram.*
5713 South Russia, 1882 (Staudinger).
5712 " " " "
4056 Continent, 1878 (Staudinger).
4057 " " " "

**Cucullia magnifica** *Frey.*
4055 Continent, 1878 (Staudinger).
4056 " " " "

**Cucullia argentea** *Hufn. = artemisiae* *Schiff.*
1346 Germany, bred from pupa, 1878 (Heyne).
1347 " 1872 (Staudinger).
811 The ground colour darker green than in any of the others in the series, and the longitudinal dark markings across the silvery spots that replace the upper stigmata so dark as to appear black.
812 " " " "
854 " " " "
1345 " 1873 " "
1349 Germany, 1879 (Staudinger).
853 " " " "
4486 " Ground colour very bright green, and the longitudinal dark markings nearly obsolete.
*5671 Leipsic, 1884 (Gerhardt).
The purplish markings of the two following specimens are here replaced by dull yellow, probably as the result of bad preservation.
*5163 Germany, 1882 (Staudinger).
*5007 " " " "

**DRAWER XXXV.**

**Epimecia ustula** *Frey. = ustulata* *Hüb.-Gey.*
6056 Dalmatia, 1885 (Staudinger).
6057 " " " "

**Stemmaphora (Omia) viola** *Staud.*
5124 Russian Turkistan, 1882 (Staudinger).

**Heliodes rupicola** *Hüb.*
1394 Hungary, 1873 (Luff).
1393 " " " "

**Omia cymbalariae** *Hüb.*
5271 Switzerland, 1883 (Staudinger).
5272 " " " "

**Cleophana yvania** *Dup.*
4762 Continent, 1880 (Staudinger).
4761 " Var. "diluens" *Staud.* Grey, with darker central band; the first and second transverse lines not united at about their middle; the stigmata with black centres in 4761, and almost obliterated in 4762. In Dr.
Staudinger's 'Catolog,' 1901, this form is raised to specific rank, though he appends the remark, 'Yvanii forma Darw. ?'

**Cleophana antirrhini** *Hüb.*
1307 Continent, 1873 (Staudinger).
2098 , 1874 ,
2099
1308 Continent, 1873 (Staudinger).
[The wings badly sprung].

*6628 Hungary, 1888

**Cleophana olivina** *Herr.-Sch.*
4753 Continent, 1880 (Staudinger).
[The right hind wing sprung].

**Cleophana dejeanii** *Dup.*
6278 Castile, 1886 (Staudinger).
6279

**Cleophana baetica** *Ramb.*
6075 Castile, 1885 (Staudinger).
6076

**Calophasia lunula** *Hufn. = linariae* *Esp.*
2138 Germany, 1874 (Staudinger).
2140 , ,
2143 , ,
2137 , ,

A narrow transverse black band strongly developed between the first and second lines in the lower half of the fore wings.

**Calophasia platyptera** *Esp.*
2959 Continent, 1876 (Staudinger).
2960 , ,
2961 , ,
2962 , ,

Both fore wings and hind wings much darker.

**Calophasia casta** *Bork. = opalina* *Esp.*
2141 Germany, 1874 (Staudinger).
2142 , ,
2143 , ,
2144 , ,

The abdomina with a reddish tinge.

*6612 Hungary, 1888 (Staudinger).

**Chariclea delphinii** *Linn.*
763 1871 (Cooke).
764
851 Continent, 1872 (Staudinger).
852 , ,
2059 , 1874 ,
2064 , ,
2060 , ,
2061 , ,
2062 , ,
2063 , ,
2065 , ,

There is in the above series some variation in the darkness of the transverse markings, which are perhaps most distinct in 2060. The hind margin and fringe of 764 are clear pale yellow, without the rosy tinge noticeable in the others of the series. In 2062 this pink tinge is very faint.
Continent, 1880 (Staudinger).

**Euterpia laudeti** Boisd.
3438 Continent, 1876 (Staudinger).
4079 Continent, 1878

The whole of the abdomen strongly red.

**Mycteroplus puniceago** Boisd.
3103 Continent, 1876 (Staudinger).
3102

The abdomen strongly red.

**Pyrrhia (Chariclea) purpurites** Treit.
999 v. 1873 (Marsden).
1000

The hind-marginal purplish band dark and very distinct.

984 v. 1873 (Marsden).
983

Markings suffused; the hind-marginal band little darker than the remainder of the wing; abdomina strongly tipped with red; 983 paler in ground colour and markings than 984.

**Pyrrhia (Chariclea) umbra** Hufn. = **marginata** Fab.
1857 Hartlepool, 1874 (Gardner).
2460 Spurn, E. Yorks., vi. 1875 †.
2461
2462
3182 Hartlepool, bred from pupa, vi. 1876 (Gardner).
6711 Amurland, 1888 (Tancre—taken by Graeser).

*5711 Brunswick, 1883 (Staudinger).
Dark violet-grey.
*6453 Burniston, N. Yorks., viii. 1887 †.
Pale reddish-brown.
*6454 Burniston, N. Yorks., viii. 1887 †.
Green. The dorsal line in each of these three specimens is darker than the ground colour.

*5214 Brighton, 1882 (McArthur).
Larger than the preceding; the colour dark green and the dorsal line paler.

**Chariclea treitschkei** Friv. = **taurica** Herr.-Sch.
2955 Continent, 1876 (Staudinger).
2956

3595

*4979

**Heliothis peltigera** Schiff.
1066 Bristol, 1873 (Greene).
3287 Bathampton, Somerset, 1876 (Ross).
3414

"Darker in ground colour" than the Continental specimens, and without the pale mark in the dark marginal band of the hind wings that is conspicuous in 3739, 3740, and 1305. 1066 and 3287 are also smaller than the Continental type specimens (30 mm. as against 38 mm.).

3741 Dalmatia, 1877 (Staudinger)
3739

3740

1305 Germany, 1873
Chariclea victorina Sodof.

3597 Continent, 1877 (Staudinger).

Ground colour pale sulphur-yellow, and the purple stripes nearly obsolete; costal margin of the hind wings white.

2957 Continent, 1876 (Staudinger).

Ground colour suffused with brown as far as the second line, and the purple stripes obliterated: a semi-melanic form.

3596 Continent, 1877 (Staudinger).

2958 " 1876 ",

Heliothis armigera Hüb.

1300 Germany, 1873 (Staudinger).

2964 " 1876 ",

2963 " " 1872 

862 " " 1872 

3743 South Russia, 1877 (Staudinger).

3744 " " 1873 

Ground colour yellowish-brown.

3745 South Russia, 1877 (Staudinger).

2965 Germany, 1876 (Staudinger).

2966 " " 1872 

861 " " 1872 

1299 " " 1873 

Ground colour paler, yellowish-grey.

6710 Kuldja, Russian Turkistan, 1888 (Tancré—taken by Graeser).

Ground colour pale yellowish-grey as in the preceding, but more unicolorous, the only dark marking being the lower half of the reniform stigma, and the fringe being concolorous with the ground colour.

5739 North America, 1885 (Staudinger).

Ground colour as the first six in the series, but the transverse band beyond the reniform stigma darker and more conspicuous. [Apex of right fore wing chipped].

Heliothis dipsacea Linn.

1966 1875 (Harwood).

6306 New Forest, 1885 (Harwood).

6307 1872 

6309 Essex " Coast, 1886 "

6308 " " Approaching var. maritima, but not so smooth-looking, and with (a) several dark dots distributed over the wing-surface, and a marginal row of dots before the fringe; (b) the inner edge of the central transverse band more irregular, and at the same time less sloping towards the base.

2968 Germany, 1876 (Staudinger).

2969 " " Slightly larger than the British specimens (32 mm. as against 28-30 mm.).

367 Dresden, 1872 (Staudinger).

Ground colour of a more distinct greenish hue than in any of the others in the series.

6709 Kuldja, Russian Turkistan, 1888 (Tancré—taken by Graeser)

Larger (33 mm.), and the ground colour paler than in any of the others.
**Heliothis scutosa** Schiff.

374 Dresden, 1872 (Staudinger).

373 " " " "

372 " " " "

371 " " " "

3437 Germany, 1876 " "

3737 " 1877 "

3733 " " " "

3734 " " " "

3735 " " " "

3738 " " " "

6708 Kuldja, Russian Turkistan, 1888 (Tancré—taken by Graeser).

Larger than the Continental specimens in the series (36 mm. as against 31-34 mm.). The reniform stigma smaller, and a correspondingly larger white area in the wing; the nervures not so distinct.

**Heliothis incarnata** Frey.

5533 Sarepta, South Russia, 1883 (Staudinger).

Ground colour paler and the general appearance more unicolorous than in the following, owing to the obsolete character of the markings.

5531 Sarepta, South Russia, 1883 (Staudinger).

5532 " " " "

5539 " " " "

**Heliothis ononis** Fab. = ononis Guen.

2055 Germany, 1874 (Staudinger).

2056 " " " "

2057 " " " "

**Heliothis purpurascens** Tausch.

3539 Continent, 1876 (Staudinger).

3538 " " " "

**Heliothis cardui** Hüb.

537 Germany, bred from pupa, 1872 (Staudinger).

538 " Marked 'or cognatus' in Mr. Dobrée's diary.

4993 Hungary, 1881 (Krichelдорф).

4992 " " " "

4991 " " " "

*5169 Germany, 1882 (Staudinger).

**Heliothis cognata** Frey.

4988 Berlin, 1881 (Krichelдорф).

4989 " " " "

**DRAWER XXXVI.**
630 Continent, bred from pupa, 1872 (Staudinger).

631 Marked "H. cardui" aut cognatus" in Mr. Dobrée's diary.

*5168 Continent, 1882 (Staudinger).

Janthinea frivaldszkyi Dup.

4065 Continent, 1878 (Staudinger).

4066 Anarta melaleuca Thun.

6271 Lapland, 1886 (Staudinger).

6272 Ground colour of the fore wings brown instead of grey, and the marginal band of the hind wings dark brown; base of the hind wings strongly suffused with the same colour.

6273 Lapland, 1886 (Staudinger).

6274 Ground colour a paler iron-grey than in the preceding.

6275 Ground colour much darker, and the appearance more unicorlous.

Anarta zetterstedtii Staud.

5524 Lapland, 1883 (Staudinger).

5523 Heliothis imperialis Staud.

5546 Caucasus, 1883 (Staudinger).

Anarta funebris Hüb.

5282 Switzerland, 1883 (Staudinger).

5283 The 'white spot' in the middle of the hind wings (Kirby) lacking.

Anarta richardsoni Curt. = algida Lef.

6270 Labrador, 1886 (Staudinger).

6269 The central area invaded by the pale grey ground colour, and the stigmata less conspicuous than in the preceding.

Anarta melanopa Thun.

3877 Rannoch, 1878 (Clark).

3612 Pitlochrie, vii. 1877 (Clark).

3613 A distinct pale grey central transverse band, bounded on its outer margin by dark brown bands.

3614 Pitlochrie, vii. 1877 (Clark).

3878 Rannoch, 1878 (Clark).

3879 The wing-surface more uniform than in the preceding.

6156 Shetland, 1886 (Salvage's expedition).

6155 Suffused with rich dark brown; the nervures showing in pale grey.

6158 Shetland, 1886 (Salvage's expedition).

Fore wings suffused with blackish-brown, but lighter around the stigmata. Cf. Barrett, Plate 250, fig. 2a.

6157 Shetland, 1886 (Salvage's expedition).

A very pretty form. A pale grey central transverse band extending beyond the reniform stigma, which is therefore conspicuously dark.
Anarta cordigera Thun.

864 Continent, 1872 (Staudinger).
863 " " 1873 "
1362 " " 1873 "
1363 " Var. "rupestralis" Hüb. Strongly melanic. 864, 863, have the fore wings and hind wings entirely suffused with blackish-grey, with markings of the fore wings darker. In 1362, 1363, the melanism is not so strongly pronounced, the general tone being lighter and the hind wings not so completely suffused.

Anarta myrtilli Linn.

1957 1875 (Harwood).
287 Wolsingham, 1871 (Pickard).
288 " "
289 Sheffield, bred from pupa, 1878.
291 " "
290 " "
3608 " bred from pupa, 1877 (Doncaster).
3607 " "
3609 " "
3610 " "
1956 1875 (Harwood).

All the above specimens are var. "rufescens" Tutt.

Anarta cordigera Thun.

3227 Rannoch, 1876 (Robertson).
3132 " "
3133 " "
3228 " "
3229 " "
3042 " vii. 1877 (Clark).
3876 " 1878 "
3875 " "
3874 "
4117 Innerhadden, Kinloch, bred 1879 (Salvage).

There is in this beautiful series considerable variation in the distinctness or indistinctness of the central transverse black band, and in the size and shape of the reniform stigma, which is large and irregularly-shaped in 3132 (cf. Barrett, Plate 250, fig. 3b), large and kidney-shaped in 4177, and narrowly contracted in 3133, 3229, 3874.

3644 Isle of Lewis, 1887 (Salvage).

A very pretty form. Basal and outer areas distinctly ashy-grey. Cf. Barrett, Plate 250, fig. 3.

3643 Isle of Lewis, 1887 (Salvage).

Ab. "aethiops" Hoff. = ab. "suffusa" Tutt. The whole area of the fore wings deep black with the exception of the hind margin. Reniform stigma ochreous, as in the specimen recorded by Mr. Tutt.

1364 Continent, 1873 (Staudinger).}

Anarta myrtilli Linn.

1957 1875 (Harwood).
287 Wolsingham, 1871 (Pickard).
288 " "
289 Sheffield, bred from pupa, 1878.
291 " "
290 " "
3608 " bred from pupa, 1877 (Doncaster).
3607 " "
3609 " "
3610 " "
1956 1875 (Harwood).

All the above specimens are var. "rufescens" Tutt.

Ground colour brighter red than in the type form, and the white markings more distinct.

1954 Scotter, Lincs., v. 1885 †.
1955 " " †.

The type form: ground colour dark purplish-brown; the markings less clear, and the central spot blurred. [1955 has wings at rest].
Heliaca tenebrata Scop. = arbuti Fab.

- Bright green, the lines distinctly white.
- Yellowish-green, the lines indistinctly marked.

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<tr>
<th>Specimen</th>
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<td>1115</td>
<td>Kingston, Surrey</td>
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There is in the above specimens a slight variation in depth of the tone of the fore wings, and in width of the yellow band of the hind wings, this being much narrower in 1117, 1115, and 1154 than in the others of the series.

Metoponia koekeritziana Hüb. = flava Hüb. = flavida Ochs.

- Continent, 1876 (Staudinger).
- Continental, 1876 (Staudinger).
- The central black dot very indistinct.
- The central black dot obsolete.

Metoponia vespertalis Hüb. = vespertina Treit.

- Mauretania, 1885 (Staudinger).

Emmelia (Agrophila) trabealis Scop. = sulphuralis Linn. = sulphurea Esp.

- Cambridgeshire, vii. 1879 (Fleet).
- The three costal spots united, and forming a black streak.
- Cambridgeshire, vii. 1879 (Fleet).
- " " " |
- The yellow ground colour diminished in area by an increase in the width of the dark markings; the first two costal spots joined. (? ab. algira Ober.
- Cambridgeshire, vii. 1879 (Fleet).
- Cambridgeshire, vii. 1879 (Fleet).
- " " 1883 (Warren).
- The subterminal row of spots not joined together, and the other spots reduced in size. Cf. Barrett, Plate 248, fig. 1b.
- Germany, 1873 (Staudinger).
- The first two costal spots joined.
*5709 South Germany, 1883 (Staudinger).
*5707 " [Three-fourths grown]."
*5708 South Germany, 1883 (Staudinger).
*5914 viii. 1885 (Salvage).

**Xanthodes graëlsii Feisth.**

761 Continent, 1872 (Staudinger).
762 " The three spots below the costa obsolete.

**Acontia lucida Hufn. = solaris Esp.**

733 Hungary (?), 1872, from a French collection (Luff).
734 " " " "
735 " " " "
736 " " " "
71/43 Continent, 1874 (Staudinger).
2044 " " " "
2045 " " " "
2046 " " Var. albicollis Fab. ‘Considered by the French entomologists to be a distinct species’ (Kirby). Basal area of the fore wings entirely white, and the central dark band narrower than in the type. This band is much invaded by the white of the basal portions in 2046. In the hind wings the marginal dark band is also narrower (extremely narrow in 2044), and the basal area is clear white, except in 734, 735, and 736, where the three brown rays of the type persist, though they are much restricted. Cf. South, II. Pl. 19, fig. 9. Barrett, Plate 246, fig. 3. is a representation of this variety under the name of *Acontia solaris.*

2039 Continent, 1874 (Staudinger).
2040 " " " "
2041 " " " "
2042 " " " "

**Acontia luctuosa Esp.**

339 Droylesden, v. 1872 (White).
465 London, 1872 (Boulden).
466 " " " "
467 " " " "
464 " " " "
3296 Colchester, 1876 (Harwood).
3297 " " " "
3298 " " " "
3299 " " " "
3300 " " " "
3301 " " There is in the above series some variation in the size, shape, and colour of the light costal patch in the fore wings, which is white in 465, and tinged more or less with ochreous in all others of the series—most strongly in 466. The central white band of the hind wings is widest in 464, and narrowest in 3296.

*5560 Leipzic, 1884 (Heyne).
Uniform pale reddish-brown, without the markings shown in Buckler’s figures.

**Acontia urania Friv.**

4789 Continent, 1880 (Staudinger. ♀
4788 " " " " ♀
3540 " " 1876 " ♀
3541 Continent, 1876 (Staudinger). ♀
   The rose-coloured suffusion in the basal area of the fore wings more marked than in the preceding.

**Acontiola** (Acontia) **moldavicola** Herr.-Sch.
4276 Continent, 1880 (Staudinger).
4275 " " "

**Armada hueberi** Ersch.
5564 Turcomania, 1883 (Staudinger). ♀
5565 " " "

**Acontia titania** Esp.
4064 Continent, 1878 (Staudinger).
   A parallel form to *A. lucida* var. albicollis. The white basal area of the fore wings extended, and the black basal area of the hind wings lessened and broken up with white.
4063 Continent, 1878 (Staudinger).

**Armada clia** Staud.
6080 Turcomania, 1885 (Staudinger). ♀

**Erastria argenentula** Hüb.
5199 Ely, 1882 (Raynor).
5200 " " "
5201 " " "
1932 Germany, 1874 (Staudinger).
1929 " " "
1927 " " "
1928 " " "
1934 " " "
   The two teeth on the outer edge of the inner central transverse white line enlarged and very conspicuous.

**Erastria fasciana** Linn. = fuscula Hüb.
1520 Kingston, Surrey, vii. 1874 (Lulham).
1521 " " "
1522 " " "
1525 " " "
1526 " " "
1795 " " "
1796 " " "
1797 Norbiton, Surrey, 1879 (Ficklin).
1798 " " "
1799 " " "
1800 " " "
1801 " " "
1802 " " "
   The above specimens show a slight variation in the depth of the dark colouring in the apical region beyond the reniform stigma.

*6501 Bavaria, 1887 (Staudinger).

**Erastria venustula** Hüb.
3235 1876 (Meek).
3234 " " "
3238 1887 (Salvage).
3239 " " "
5705 South Germany, 1883 (Staudinger).
5706 " " "

**DRAWER XXXVII.**
Erasria uncula Clerck = unca Schiff.
1963 
1964 
1965 
5608 
5609 
3682 
3683 
1923 Germany, 1874 (Staudinger).
There is in the above specimens a slight variation in the size and shape of the 'hook,' this being widest in 1964 and narrowest in 3682.

Thalpochares (Erasria) scitula Ramb.
6219 Central France, 1886 (Staudinger).
6218

Thalpochares dardouini Boisd.
3193 Continent, bred from pupa, 1876 (Heyne).
3194 
3195

Thalpochares candidana Fab. = minuta Hüb.
6016 Granada, 1885 (Ribbe).
6014 
6015 Ground colour suffused with greyish-brown. [Abdome
men lost].
6018 Spain, 1885 (Staudinger).
6017 As 6015 in ground colour, but with a strong pink suffusion over thorax, abdomen, and basal area of the wings.

Thalpochares paula Hüb.
2887 Germany, 1876 (Staudinger).
2888 
2889 
2890 
2891 
2892 
6516 Austria, 1887 (Staudinger).}
6517 
6518 
6519 Smaller (15 mm. as against 17 mm.); and suffused with pale grey, thus having a more uniform appearance.

Thalpochares parva Hüb.
2893 Continent, 1876 (Staudinger).
2895 
2896 
2894 The area beyond the central transverse line purplish-grey. [Apex of the right fore wing clipped].

Thalpochares ostrina Hüb.
1947 Germany, 1874 (Staudinger).
1948
Erastria deceptoria Sco/.) = atratula Hüb.

123

Central France, 1885 (Staudinger).}
6021 Syria, 1887 (Staudinger).}
6022 "Var. porphyrina Frey. (18 mm.-21 mm.); ground
colour pale whitish-ochreous; central band narrow,
broken and distinct; apical streak contracted.
Not larger than the type form preceding.
1943. Continent, 1874 (Staudinger).}
1944 " " 1882 "
5057 " "
5058 " Var. aestivalis Guen. (17 mm.-21 mm.); resembles
the type in general appearance, but the ground
colour is paler and the markings less pronounced;
only 1943 smaller than the type.
1945 Continent, 1874 (Staudinger).}
1946 " "
Var. carthami Herr.-Sch. A fine leucochroic form:
ground colour pale whitish-ochreous, and the mark-
ings obsolete, except for a slight persistence of the
apical streak.
Erasia deceptoria Sco/.) = atratula Hüb.

2900 Thalpochares purpurina Hüb.

2907 Germany, 1876 (Staudinger).
2898 " "
2899 " "
2900 " "

Thalpochares communimacula Hüb.

4272 Continent, 1880 (Staudinger).
4273 " The reddish-brown spot in the middle of the inner
margin of the fore wings very large.
4274 Continent, 1880 (Staudinger).

Thalpochares pannonica Frey.

5478 Hungary, 1883 (Staudinger).
[The right fore wing badly sprung].
5479 Hungary, 1883 (Staudinger).

Thalpochares rosea Hüb. = rosina Hüb.

1939 Continent, 1874 (Staudinger).
1939a " "
1940 " "
1941 " "
1942 " "

Thalpochares respersa Hüb. = amoena Hüb.

2946 Continent, 1876 (Staudinger).
2947 " "
2948 " "
2949 " "

Thalpochares communimacula Hüb.

4272 Continent, 1880 (Staudinger).
4273 " The reddish-brown spot in the middle of the inner
margin of the fore wings very large.
4274 Continent, 1880 (Staudinger).

Thalpochares pannonica Frey.

5478 Hungary, 1883 (Staudinger).
[The right fore wing badly sprung].
5479 Hungary, 1883 (Staudinger).

Thalpochares rosea Hüb. = rosina Hüb.

1939 Continent, 1874 (Staudinger).
1939a " "
1940 " "
1941 " "
1942 " "

Thalpochares respersa Hüb. = amoena Hüb.

2946 Continent, 1876 (Staudinger).
2947 " "
2948 " "
2949 " "

Erastria deceptoria Sco/.) = atratula Hüb.

2897 Germany, 1876 (Staudinger).
2898 " "
2899 " "
2900 " "

Thalpochares communimacula Hüb.

4272 Continent, 1880 (Staudinger).
4273 " The reddish-brown spot in the middle of the inner
margin of the fore wings very large.
4274 Continent, 1880 (Staudinger).

Thalpochares pannonica Frey.

5478 Hungary, 1883 (Staudinger).
[The right fore wing badly sprung].
5479 Hungary, 1883 (Staudinger).

Thalpochares rosea Hüb. = rosina Hüb.

1939 Continent, 1874 (Staudinger).
1939a " "
1940 " "
1941 " "
1942 " "

Thalpochares respersa Hüb. = amoena Hüb.

2946 Continent, 1876 (Staudinger).
2947 " "
2948 " "
2949 " "
**Erastria pusilla** View. = **candidula** Hüb.
5787 South Germany, 1884 (Staudinger).
5789
6020 " 1885 "
6019 " The white markings having a faint rosy tint.

**Thalpochares pura** Hüb.
6214 Central France, 1886 (Staudinger).
6216 " " "
6217 " " "
6215 " The central transverse line indistinct.

**Thalpochares lacernaria** Hüb. = **glarea** Treit.
4708 Continent, 1880 (Staudinger).
4709 " " "

**Erastria obliterata** Ramb. = **wimmeri** Treit.
6521 Tyrol, 1887 (Staudinger).
6520 " " "

**Eublemma (Thalpochares) arcuinna** Hüb. = **inamoena** Hüb.
5286 Hungary, 1883 (Staudinger). ♀
Larger than the ♂ (32 mm. as against 29 mm.), and paler, the hind wings especially so.
5284 Hungary, 1883 (Staudinger). ♀
5285 " " "

**Leocyma albonitens** Brem.
6355 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀
6354 " " "

**Metoptria monogramma** Hüb.
5563 Andalusia, 1883 (Staudinger).
6286 Algeria, 1886 (Staudinger).
6285 " The markings paler and yellower than in the preceding, and the subterminal pale line not so conspicuous.

**Megalodes eximia** Frey.
5678 Continent, 1884 (Gerhardt).

**Brephos parthenias** Linn.
2251 Bred 1874 (Harwood).
2252 " " "
2253 " " "
2254 " " "
2255 " The above specimens show a slight variation in the extent and distinctness of the central transverse white streak, this being wide in 2251, and nearly obsolete in 2254.
3328 Houghton, E. Yorks., 1882 ♂.
Ground colour brown, largely dusted with grey atoms in the basal area, and in a transverse band beyond the central white streak. This latter is very broad, as in the Amurland specimen, 6510.
3326 Rannoch, 1887 (Salvage).
3327 " Ground colour darker than in any of the others in the series, and the white markings correspondingly more distinct.
The central white streak broad, especially in 6510; in the hind wings the central lunule very sharply defined and the marginal band more regular in shape.

*5587 Dartford, vi. 1884 (Davis).
*5587a " " "
*5588 " " "
*5589 " " "

[Brephos infans Mösch.]
5528 Labrador, 1883 (Staudinger).
5529 " Indistinguishable from some specimens of the preceding species, except that the hind wings are distinctly redder in tone.

Brephos notha Hüb.
1466 Bred from pupa, iii. 1874 (Harwood).
A distinct dark transverse oblique band before the middle of the fore wings. Cf. South, II. Pl. 38, fig. 5.
2269 Bred from pupa, iv. 1875 (Harwood).
The usual pale markings obsolete, and the general appearance therefore more nearly unicolorous.

6510 Amurland, 1887 (Staudinger).
6512 Turcomania, 1887 (Staudinger).
*5864 vi. 1885 (Harwood).
Dorsal area green, sides purple.
*5862 vi. 1885 (Harwood).
As the preceding, but the contrast not so great.
*5863 vi. 1885 (Harwood).
*5861 " " "
*5860 vi. 1885 (Harwood).
*5859 " " "

Brephos puella Esp. = caelebs Hüb.
4068 Germany, 1878 (Staudinger).
A distinct dark transverse oblique band, as in the first specimen of the preceding species.

4067 " " "
4069 " " "
4070 " " "

Callopistria (Eriopus) purpureofasciata Pill. =pteridis Fab.
2066 Central Germany, 1874 (Staudinger).
2067 " " "
*6585 Berlin, 1888 (Gleissner).
Reddish-brown.
*6586 Berlin, 1888 (Gleissner).
Bright purplish-red.
*6587 Berlin, 1888 (Gleissner).
Green.

Callopistria (Eriopus) Latreillei Dup.
5758 Dalmatia, 1885 (Staudinger).
The ground colour darker than that of the following.
5759 Dalmatia, 1885 (Staudinger).
5760 " " "
5761 " " "
Eutelia (Eurhipia) adulatrix Hüb.  
3027 Continent, 1876 (Staudinger).
3028 
3029 

Telesilla amethystina Hüb.  
2100 Germany, 1874 (Staudinger).
2101 
2102 Central Germany, 1874 (Staudinger).
2103 Fore wings strongly flushed with purplish-red. A beautiful form.

Telesilla virgo Treit.  
4842 Continent, 1880 (Staudinger).
6357 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀
6356 The markings duller than in the preceding.

DRAWER XXXVIII.

Abrostola tripartita Hufn. = urticae Hüb.  
1021 Bred from larva, vi. 1873.
2300 Bred from pupa, 1875 (Harwood).
2301 
2302 
2305 
2306 
3563 Bred 1876 (Harwood).
3564 
3565 
3566 There is in the above series some variation in the distinctness of the grey markings at the base and along the hind margin of the fore wings.

*6208 Central Germany, 1886 (Staudinger).
*4678 Germany, 1880 (Staudinger).

Abrostola triplasia Linn.  
1020 Bred from larva, v. 1873.
2298 Bred from pupa, v. 1875 (Harwood).
2295 " " " " 
2296 " " " " 
2297 *5409 Germany, 1883 (Staudinger).
*5409a Germany, 1883 (Staudinger). 
Dull greyish-green.
*5165 Germany, 1882 (Staudinger). 
Dull reddish-brown.

Abrostola asclepiadis Schiff.  
3516 Germany, 1876 (Staudinger).
3517 " " " " 

126
Mr. Tutt describes this as 'a form intermediate between typical *tripartita* and the obscurely-marked form *urticae Hub.*'; but the larvae here shown are quite distinct from those of *A. tripartita*.

**Plusia cheiranti** *Tausch.* = *eugenia* *Ever.*

- 3005 Germany, 1876 (Staudinger).
- 3006 Amurland, 1888 (Tancré—taken by Graeser). ♀
  Larger (33 mm. as against 30 mm.); the markings at the tip more suffused, and the hind wings slightly darker.

**Plusia variabilis** *Pill.* = *illustris* *Fab.*

- [The right hind wing lost].

**Plusia modesta** *Hüb.*

- The double inner line curved instead of angulated on the median nervure, and the inner component of the double second line curved instead of being almost straight.

**Plusia consona** *Fab.*

- *Plusia c-aureum* *Knoch* = *concha* *Fab.*

  840 Germany, 1872 (Staudinger).
  839 Switzerland, 1889 (Rühl).
  *3997 Germany, 1878 (Staudinger).

- *Plusia moneta* *Fab.*

- *Plusia chryson* *Esp.* = *orichalcea* *Hüb.*

  3542 Germany, 1876 (Staudinger).
  3545 " " "
  3543 " " "
  3544 " " "
  6772 Cambridgeshire, bred from larva, 1889 (Salvage).
  5960 " bred 1885 (Warren).
  5965
Cambridgeshire, bred from larva, 1884 (Warren).

**Plusia chrysitis** Linn.

2486 Beverley, vii. 1875.
3645 , vii. 1877.
3803 , 1878.
1564 , vii. 1874.
2488 , vii. 1875.
442 , vi. 1872.

Ab. *juncta* Tutt. The two transverse metallic bands joined by a longitudinal band below the median nervure. 'Commoner in England than the type.'

2490 Molescroft, E. Yorks., vii. 1875.

An intermediate form between ab. *juncta* and the type, the separation between the internal projections on the two metallic bands being very slight.

6556 Amurland, 1887 (Staudinger).
6557 ,

An extreme form of ab. *juncta* Tutt, the junctional band being very wide, and very sharply defined.

*6583 Berlin, 1888 (Gleissner).

[? not full grown].

**Plusia bractea** Fab.

[Very worn specimens].

6601 Forres, bred by Curzon, 1888 (Salvage).
6635 , Ground colour and markings richer and darker than in the Continental specimens below.

3470 Germany, 1876 (Staudinger).
3469 ,
3013 ,
3014 ,

**Plusia festucae** Linn.

5894 Egerton, Lanes., bred from pupa, vi. 1885 (Smith).
5896 ,
5893 ,
5805 ,
22 Egerton, Lanes., 1885 (Smith).
23 ,
24 ,
25 ,
26 , [Wings at rest].

*5829 Egerton, Lanes., vi. 1885 (Smith).
*5830 ,
*5828 ,

**Plusia pulchrina** Haw. = *v-aureum* Guen.

4197 Carmarthen, bred 1879 (Hearder).
4198 ,
4199 ,
4200 ,
3901 Londonderry, viii. 1878 (Campbell).
3902 ,
3903 ,
3701 , 1877

These specimens show considerable variation in the size and shape of the lower metallic spot, this being
small and oval in 3901, 3902; large and circular in 4200; long and narrow in 3903 and 3700. The four Welsh specimens are brighter and redder in colour than the Irish specimens, besides being more uniformly large (40-41 mm. as against 36-39 mm.). Yet 'pulehrina is only 38 mm. in expanse' (Guenée, quoted by Mr. Tutt).

3700 Londonderry, 1877 (Campbell).

Ab. percontatrix Auriv. = ab. juneta Tutt. The two metallic markings joined and forming a 'gamma,' as in P. iota var. percontationis. Cf. South. II. Pl. 24, fig. 5.

[Wings at rest].

Plusia iota Linn.

1024 Beverley, vii. 1877 †.
1554 " " 

Ground colour slightly paler than in the following specimens, and the lower central area largely shaded with rust-coloured brown below the metallic spots.

1025 Beverley, vii. 1877 †.
1553 " vii. 1874 †.
1555 Beverley, vii. 1875 †.
1556 " 

Ab. percontationis Treit. The metallic spots joined, and forming a 'gamma' as in ab. juneta of the preceding species. Cf. South, II. Pl. 24, fig. 7.

1557 Beverley, vi. 1875 †.
1558 " " 

The ground colour very pale rosy, and the outer area and inner margin much paler than in the preceding specimen; the metallic spots very small.

6077 North Germany, 1885 (Staudinger). ♀
6078 " Ab. inscripta Esp. Fine purplish forms (38 mm., 43 mm.); the lower metallic dot obsolete in 6077, and almost so in 6078, the upper dot almost obsolete in both.

DRAWER XXXIX.

Plusia deaurata Esp. = aurea Hüb.

3011 Continent, 1876 (Staudinger). ♀
3010 " " " ♂
3012 " " " ♀

Plusia aemula Hüb.

5280 Styria, 1883 (Staudinger). ♀
5281 " " " ♂

Plusia zosimi Hüb.

6706 Amurland, 1888 (Tancre—taken by Graeser). ♀
6707 " " " ♂

Plusia v-argentum Esp. = mya Hüb.

4058 Continent, 1878 (Staudinger). ♀

Plusia chalcitis Esp. = chalsytes Hüb.

1284 Continent, 1873 (Staudinger).
1285 " " "
Plusia circumflexa Linn.
5119 Russian Turkistan, 1882 (Staudinger).
5120

Plusia ni Hüb.
5721 Dalmatia, 1885 (Staudinger).
5722
5777 Continent, 1884 (Gerhardt).
The lower white mark expanded laterally, and joined to the upper (36 mm.).
3171 Sicily, 1875 (Staudinger). (30 mm.).

Plusia gamma Linn.
2642 Beverley, viii. 1875 †.
2643
3367 " x. 1876 †.
3368 " " †.
3369 " " †.
3974 " ix. 1877 †.
3975 " " †.
2644 " viii. 1875 †.

{[Wings at rest].
*5312 Beverley, bred from ovum, 1883 †.
*5311 " " " †.
*5310 " " " †.
*6135 " 'summer brood,' 1886 †.
*6136 " " " †.

Plusia accentifera Lef.
1313 Continent, 1873 (Staudinger). ♀
1314 " [The right hind wing broken].

Plusia daubei Boisd.
6054 South France, 1885 (Staudinger). ♀
6055 ♂
2026 Continent, 1874 (Staudinger). ♀
2025 ♂

Plusia gutta Guen. = circumflexa Esp.
2027 Continent, 1874 (Staudinger).
2028 " (29 mm.); ground colour rich reddish-brown.

(32 mm.); ground colour greyish-brown, and the whole appearance duller.

Plusia interrogationis Linn.
2387 Wolsingham, bred from larva found feeding on heath on the high Fells, 1875 (Pickard).
2388 " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " 

The specimens of this series show much variation in the character of the central metallic marks, these gener-
ally being separated, one a much-curved line, and
the other a circular dot. In 2393 the dot is large,
and in 2394 it is united to the curved line, so forming
a shapeless blotch. Several specimens in the series
have the very rosy tint (pronounced in 2390), charac-
teristic of ab. rosea Tutt.

The lower central area less dark than in the preceding
specimens, and the costal, basal, and hind-marginal
areas of a paler and clearer grey.

Plusia ain Hoch.

3774 Switzerland, 1877 (Staudinger).
6598 Silesia, "bred 1888" (Teicher).
6597 Ground colour tinged with violet, and the dark mark-
ings more brilliant.

Plusia microgamma Hüb.
6071 Finland, 1885 (Staudinger). ♀

Plusia devergens Hüb.

Plusia hochenwarthi Hoch. = divergens Fab.
6406 Turkistan, 1881-1886 (Græser's expedition). ♀
6405 The subterminal line more irregular than in the type,
and in character like that of the preceding species.
In 6405 the ground colour is a suffused brown, and
the markings are indistinct, the metallic mark being
small and dark.
3778 Western Siberia, 1877 (Staudinger). ♀
3777 The subterminal line intermediate in character between
that of the form preceding and that of the type
following.
2021 Continent, 1874 (Staudinger).
2022
3776 Western Siberia, 1877 (Staudinger). ♀
3779 Var. tibetana Staud. Ground colour and markings
paler than in any of the preceding; the subter-
mal line as in 3778 and 3777, but not so distinct. All
the Asiatic specimens are slightly larger than the
Continental typeforms (31-33 mm. as against 29 mm.).

Calpe capucina Esp. = thalictrι Bork.
2023 Continent, 1874 (Staudinger). ♀ (39 mm.).
4060 Amurland, 1878 " (46 mm.).
4059 Notable for the curious form of the inner margin of the
fore wings.

Naenia typica Linn.
1627 Hull, bred 1874 (Sawyer).
1629 " "
2314 Rotterdam, 1875.

The wing-surface between the nervures much darker
than in the preceding specimens.
Mania maura Linn.

132

*5964 Perth, v. 1885 (Lawson).

*5965 " Pale reddish-brown; marked ‘? ?’ in Mr. Dobree’s diary.

*5892 Beverley, vi. 1885 ♀.

Pale yellowish-brown.

*5586 Weel, E. Yorks., iv. 1884 ♀.

Reddish-brown.

*5234 Oldham, 1882 (Rodgers).

*5235 " Dull brown.

**Mania maura** Linn.

2549 Loughborough, 1875 (Wieldt).

2550 " " "

2551 " Newcastle, Staffs., vii. 1872 (Earl).

The central dark band very conspicuous owing to light shading beyond the second line. A pale apical blotch, and traces of pale nervures across the outer area of the wings, thus approaching ab. *Sriata Tutt.* Cf. South, I. Pl. 142, fig. 3.

4294 Continent, 1879 (Staudinger).

Ab. *rosea Tutt.* A magnificent form. The central band darker than in the preceding specimens, and the area beyond it paler and tinted with pink. The apical blotch large, and also tinted with pink. Cf. Barrett, Plate 216, fig. 2c.

*5172 Germany, 1882 (Staudinger).

*5465 " 1883 "

**DRAwer xl.**

Scoliopteryx (Gonoptera) libatrix Linn.

The grey portions of the wing darker in tone, and the orange-red portions sharply and narrowly confined.

All the wing-surface suffused with whitish-grey scales, producing a very pale appearance.

6703 Amurland, 1888 (Tancrè—taken by Graeser). ♀

Large (47 mm, as against 41-45 mm.); the costal area broadly whitish.

*5175 Germany, 1882 (Staudinger).

Pale yellowish-brown. [*? colour gone].

**[Amphipyra pyramidoides Grote.]**

6200 Orillia, Canada West, 1876 (Norman).

6201 " Very much resembling *A. pyramididea*, but the outer area beyond the second line more uniformly pale, thus throwing into prominence the darker central band. Hind wings dull coppery brown, dark brown along the costal margin.
Amphipyra pyramidea *Linn.*

6332 Chabarofka, Amurland, 1881-1886 (Graeser's expedition).
6701 Amurland, 1888 (Tancrè—taken by Graeser.)

Var. *obscura* Ober. = var. *obliquilimbata* Graes. A melanochroic form (42 mm., 48 mm.): fore wings entirely suffused with dark brown, the transverse lines indistinct, the dark shading along the central portion of the median nervure constant; hind wings brownish, with hardly a trace of the normal colour.

1099 Beverley, bred 1879 †.
1100 † Finely marked type form: the white second line very conspicuous.
3585 Beverley, bred 1879 †.
1097 † Ground colour pale ochreous-brown; the central transverse band narrowed, and conspicuous only where it crosses the median nervure. Cf. Barrett, Plate 218, fig. 1c, and South, I. Pl. 154, fig. 3.

1095 Beverley, bred 1879 †.

Asymmetrical: as the type forms above, but the right hind wing much lighter in colour than that on the left.

*6109 vi. 1886 (Harwood).
*6108 † Dull yellowish-green. [?] colour gone.

Amphipyra perflua *Fab.*
4321 Germany, 1879 (Staudinger).
4745 † 1880 †
4746 † †
*4680 †

Amphipyra effusa *Boisd.*
4323 Continent, 1879 (Staudinger).

Var. *sciaphila* Staud. Ground colour of the fore wings much paler than in the type following, and the reniform stigma unicolorous with it.

4747 Continent, 1880 (Staudinger).
4748 † †

Amphipyra livida *Fab.*
3026 Germany, 1876 (Staudinger).
4744 † 1880 †
4743 † †

Amphipyra cinnamomea *Göze.*
3530 Germany, 1876 (Staudinger).
3531 † 1879 †
4510 † 1879 †

Amphipyra tetra *Fab.*
4741 Germany, 1880 (Staudinger).
4742 † The white costal spots very faint.

Exophyla rectangularis *Hüb.-Gey.*
4749 Continent, 1880 (Staudinger).
4750 † The transverse row of black dots in the outer area of the fore wings nearly obsolete.
The black dots form a complete series from the costa to the inner margin; seven in number, the lower five being very conspicuous.

**Amphipyra tragopogonis** Linn.

343 | Forres, viii. 1871.
344 | 2604 | Molescroft, E. Yorks., vii. 1875.
3310 | Colchester, ix. 1876 (Harwood).
5091 | Asia, 1882 (Staudinger).
5092 | Var. *turcomana* Staud. The entire ground colour and markings of a paler grey than in the type form.

*5581 | Beverley, bred v. 1884.
*5580 | 5579 | Var. *obscura* in Mr. Dobrée’s diary. The ground colour darker, and the transverse bands therefore less conspicuous; the central transverse shade wider, and the tiny white orbicular stigma conspicuous.

6301 | Russian Turkistan, 1881-1886 (Graeser’s expedition).
6302 | Var. *phantasma* Ever. Ground colour paler than in the type, but speckled all over with brown; the dark markings reduced and indistinct, except for one conspicuously dark blotch before the subterminal line and close to the inner margin.

**Apostes (Spintherops) cataphanes** Hüb.

6284 | Central France, 1886 (Staudinger).

**Apostes (Spintherops) spectrum** Esp.

3528 | Continent, 1876 (Staudinger).
4506 | Recorded as ‘var. *obscura*’ in Mr. Dobrée’s diary.

6092 | Isle of Lewis, 1887 (Salvage).
6095 | Var. *stagnicola* Treit. Inner and hind-marginal areas pale slaty-grey; distinct from others of the series.

**Stilbia anomala** Haw. = *hybridata* Hüb.
Isle of Lewis, 1887 (Salvage).
The only ♀ in the series.

**Apointes (Spintherops) gleibicolor** *Ersch.*

6347 Amurland, 1881-1886 (Graeser’s expedition). ♂
6730 Kuldja, Russian Turkistan, 1888 (Tantré—taken by Graeser). ♀
A melanic form: ground colour dark greyish-brown, and almost unicolorous.

**Pericyma albidentaria** *Frey.*

4699 Continent, 1880 (Staudinger).
4700 Slightly paler in ground colour than the preceding; intermediate between it and the following form.
4701 Continent, 1880 (Staudinger).
Var. squalens *Led.* Ground colour and markings very pale. ‘Possibly a distinct species.’ (Staudinger).

**Catephia alchymista** *Schiff.*

3495 Continent, 1876 (Staudinger).
*6086 Saxony, 1886 (Heyne).
*6085 [Three-fourths grown].

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**DRAWER XLI.**

**Catocala fraxini** *Linn.*

1335 Germany, 1873 (Staudinger).
1336 The ‘sub-reniform’ stigma large and very conspicuous.
1337 Germany, 1873 (Staudinger).
The markings darker, and the whitish-grey areas reduced in size; the hind-marginal area distinctly pale.
*5466 Germany, 1883 (Staudinger).

**Catocala lara** *Brem.*

6396 Chabarofka, Amurland, 1881-1886 (Graeser’s expedition). ♀
The ‘sub-reniform’ stigma very conspicuous.
6397 Chabarofka, Amurland, 1881-1886 (Graeser’s expedition). ♂
A darker and more suffused form, with the markings correspondingly less distinct.

**Catocala nupta** *Linn.*

1138 Kingston, Surrey, 1873 (Lulham).
1137 The inner portion of the fore wings, up to the reniform stigma, conspicuously paler than the outer portion, and crossed at about its middle by the double first line. Cf. South, II. Pl. 31, fig. 3.
1133 Kingston, Surrey, 1873 (Lulham).
The ‘sub-reniform’ stigma and a patch before the reniform stigma conspicuously pale.
1134 Kingston, Surrey, 1873 (Lulham).
1135 *6499 South France,” 1887” (Staudinger).
Catocala elocata Esp. = uxor Hüb.

*5454 Hungary, 1883 (Staudinger).

Catocala electa Bork.

3522 Germany, 1876 (Staudinger).
1190 1873
6728 Amurland, 1888 (Tancre—taken by Graeser). ♀
The ground colour dark iron-grey, a broad black shade running along the inner margin, and the nervures of the outer area of the fore wings conspicuously black.
6729 Amurland, 1888 (Tancre—taken by Graeser). ♂
Ground colour a paler tone of the preceding, the black shading along the inner margin not so extensive, and the nervures as in the type.

*5445 Germany, 1883 (Staudinger).

Catocala dula Brem.

In Dr. Staudinger's 'Catalog,' 1901, this species is noted as being a 'Darwinian form' of C. sponsa.

6394 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀
6395 "Of a darker and more unicolorous appearance, owing to a dark suffusion of the typical whitish patches near the costa.

Catocala conjuncta Esp. = conjuga Hüb.

5525 Dalmatia, 1883 (Staudinger).
5526 " The area on each side of the second line darker, so that the line itself is not so conspicuous.

Catocala dilecta Hüb.

In Dr. Staudinger's Catalog, this species also is noted as being possibly a 'Darwinian form' of the following.

3827 Dalmatia, 1877 (Staudinger).
3828 " Ground colour suffused with brown, producing a more unicolorous appearance, but the sharply-pointed second line very conspicuous in its upper portion.

Catocala sponsa Linn.

2687 New Forest, 1875 (Spiller).
2688 "Ground colour' darker, and the usual pale markings inconspicuous.
2689 New Forest, 1875 (Spiller).
2690 "Ground colour' more ochreous in tone, and the area between the first and second transverse lines pale, the 'sub-reniform' stigma conspicuously so.
3699 Bred 1877 (Harwood).
Markings darker, but otherwise as the two preceding specimens.

*6013 Germany, 1885 (Staudinger).
*5717 Leipzic, 1884 (Gerhardt). [Small].
Catocala promissa Esp.
2685 New Forest, 1875 (Spiller).
2684 " viii. 1874 (Spiller).
1829 " 1828 "
1830 " " "
"Ground colour and markings decidedly ochreous in tone.

Catocala serenides Staud.
Sunk in Dr. Staudinger's 'Catalog,' 1901, as being a variety of C. bella Bulb.
6399 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀ 6398 ♂

Catocala puerpera Giorna.
5775 Switzerland, 1885 (Staudinger).
5776 " The hind wings orange-red rather than 'pale crimson' as described by Kirby. (?) var. pallida Alph.

Catocala pacta Linn.
3086 Germany, 1876 (Staudinger).

Catocala optata God.
3829 South France, 1877 (Staudinger).
3830 " The blackish-brown basal streak and sharply-pointed second line less pronounced than in the preceding.

Catocala neonympha Esp.
3524 Continent, 1876 (Staudinger).
3525 " " "

Catocala fulminea Scop. = paranympha Linn.

Catocala nymphaea Esp.
4740 Continent, 1880 (Staudinger).
4299 " 1879 "
4300 " Kirby states that this species 'has fore wings like those of C. conversa.' But the difference is considerable, especially noticeable being the pronounced character here of the 'sub-reniform' stigma, and the absence of the black trifid mark where the second line meets the inner margin.

Catocala conversa Esp. = uxor Hüb.
5752 Greece, 1885 (Staudinger).
5753 " " "
Var. agamos Hüb. A melanic form: ground colour of the fore wings darker, and the yellow of the hind wings suffused with smoky-brown.

Catocala diversa Hüb.-Gey.
4061 Continent, 1878 (Staudinger).
4854 " 1880 "
4855 " " "
**Catocala dissimilis** *Brem.*  
6409 Chabarofka, Amurland, 1881-1886 (Graeser’s expedition). ♂

**Catocala nymphagoga** *Esp.*  
6559 Dalmatia, 1887 (Staudinger).
6558 " " " "
6558a " " " "  
A parallel form to *C. conversa* var. *agamos*, 6558a being pronouncedly melanic. (?) ab. *anthracita* *Th.-Mieg.*

**Catocala eutychia** *Treit.=languida* *Herr.-Sch.*  
6555 Greece, 1887 (Staudinger).

**Catocala hymenaea** *Schiff.*

**Aedia funesta** *Esp.=leucomas* *Hüb.*  
2973 Germany, 1876 (Staudinger).
2974 " " " "
2975 " " " "
2976 " " " "

**Anophia leucomas** *Linn.=ramburii* *Ramb.*  
5723 Dalmatia, 1885 (Staudinger).
5724 " " " "
5725 " " " "  
The ‘sub-reniform’ stigma more conspicuously pale than in the others of the series.
5726 Dalmatia, 1885 (Staudinger).

**Pseudophia tirrhaca** *Cram.=tirrhaea* *Treit.*  
3527 Continent, 1876 (Staudinger).
3526 " ""
The ‘short, broad, black band beyond the middle’ of the hind wings is in 3527 only a blotch little larger than the reniform stigma, but in 3526 it has developed into a very broad black band, reaching almost to both the costal margin and the anal angle.

**Lagoptera juno** *Dalm.=elegans* *Van der Hoev.*  
6407 Wladiwostock, Amurland, 1881-1886 (Graeser’s expedition).
Ground colour pale purplish-grey, and all three pale tranverse lines bounded with reddish-brown.
6408 Wladiwostock, Amurland, 1881-1886 (Graeser’s expedition).
Ground colour reddish-brown, and the dark margin to the second and subterminal lines obsolete. Very conspicuous plumes on the inner margin of the hind wings.

**Pseudophia lunaris** *Schiff.*

A broad dark brown shade extending across the fore wings beyond the second line. Cf. Barrett’s figure of the species, Plate 252, fig. 2. The reniform stigma in this specimen is almost obsolete.

The fore wings paler grey, and the hind wings much paler than in the first of the series.

*4681 Germany, 1880 (Staudinger).*
DRAWER XLIII.

Pseudophia (Bolina) flavomaculata Brem.
6393 Chabarofka, Amurland, 1881-1886 (Graeser's expedition). ♀
6392 "Ground colour more whitish in tone and the dark markings therefore more conspicuous.

Leucanitis picta Christ.
6725 Kuldja, Russian Turkistan, 1888 (Tancre—taken by Graeser). ♀
6724 " " " " " " ♀

Agnomonia juvenilis Brem.
4530 Amurland, 1879 (Staudinger). ♀
4529 " " " " ♀

Leucanitis caucasica Koll. = astrida Ever.
5116 Russian Turkistan, 1882 (Staudinger). ♀
6722 Kuldja, Russian Turkistan, 1888 (Tancre—taken by Graeser). ♀
The much-curved black second line more pronounced than in the preceding, and the general appearance of the fore wings correspondingly brighter.

Leucanitis spilota Ersch.
Sunk as a variety of Palpangula atrosignata Walk. in Dr. Staudinger's 'Catalog,' 1901.
5547 Turcomania, 1883 (Staudinger). ♀
(30 mm.).

Leucanitis flexuosa Mén. = singularis Koll.
5548 Turcomania, 1883 (Staudinger). ♀
(32 mm.). [The abdomen greased].
6726 Kaschgar, Turkistan, 1888 (Tancre—taken by Graeser). ♀
(37 mm.).
6727 Kaschgar, Turkistan, 1888 (Tancre—taken by Graeser). ♀
(36 mm.). Ground colour and markings darker than in the preceding specimens.

Toxocampa pastinum Treit. = lusoria Hüb.
5741 Brighton, bred 1885 (Salvage).
Ground colour more whitish and the outer-marginal band paler than in the following; approaching ab. paillida Tutt. (?) var. dilutior Staud.
981 Forres, bred v. 1873 (Norman).
The reniform stigma expanded irregularly in its lower portion. Cf. Barrett, Plate 218, fig. 2b. The orbicular stigma is here conspicuously large.
4731 Germany, 1880 (Staudinger).
*4263 " " 1878 " " " "
*3996 " " " " " "
Pale yellowish-brown, with the dorsal area reddish-brown. Buckler's and Barrett's figures are much too highly coloured, judging from these specimens.

Sypna rectifasciata Graes.
6721 Amurland, 1888 (Tancre—taken by Graeser). ♀
6720 " The white central transverse band not so clearly defined on its outer margin as in the preceding.

Sypna picta Butler.
6718 Amurland, 1888 (Tancre—taken by Graeser). ♀
6719 " Var. fumosa Butl. A melanic form: the white central transverse band entirely absent.
**Cerocala scapulosa** Hüb.

4727 Continent, 1880 (Staudinger). ♀

4728 " The "markings" paler and the ground colour darker, hence losing the bright appearance of the preceding.

**Toxocampa craccae** Fab.

4718 Germany, 1880 (Staudinger).

4717 " " " 

4719 " " " 

4720 " " " 

4721 " " " 

4722 " " " 

*4689 " " " 

A form apparently near akin to *Pseudophia illunaris*. It is smaller than that species (34 mm., 37 mm. as against 40 mm., 43 mm.); the reniform stigma forms a white '8' as in that species, but the transverse lines are more distinct, and the subterminal line—composed of six dark reddish-brown crescents and a square spot, the latter beneath the costa—which is only faintly indicated in *P. illunaris*, is here conspicuous.

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**Palpangula** (Leucanitis) cestis ♀ Mén. = **punctata** ♀ Mén.

4528 Continent, 1879 (Staudinger).

**Toxocampa viciae** Hüb.

4723 Germany, 1880 (Staudinger).

4724 " " " 

4725 " " " 

4726 " " " 

**Toxocampa lusoria** Linn.

857 Continent, 1872 (Staudinger).

858 " " " 

6668 Austria, 1888 " Ground colour slightly darker and the outer marginal shade broader and more suffused; hind wings also darker. (?) var. *amasina* Staud.

*6630 Austria, 1888 (Staudinger).

**Eccrita ludicra** Hüb.

3050 Continent, 1876 (Staudinger).

3051 " " " 

**Toxocampa limosa** Treit.

3161 Continent, bred from pupa, iv. 1876 (Heyne).

3160 " " " 

6667 Austria, 1888 (Staudinger). " " 

6666 " " " 

**Pseudophia illunaris** Hüb.

6664 South France, 1888 (Staudinger).

[The left hind wing sprung].

6665 South France, 1888 (Staudinger).

**Grammodes algira** Linn. = **triangularis** Hüb.

3059 Continent, 1876 (Staudinger).

3058 " " " 

*6629 Central France, 1888 (Staudinger).
Grammodes geometrica *Fab.* = *parallelaris* Hüb. = *bifasciata* Petag.

6659 South France, 1888 (Staudinger).
6660 " " "
6661 " " "

Leucanitis stolida *Fab.* = *cingularis* Hüb.

6662 Asia Minor, 1888 (Staudinger).
6663 " " "

The subterminal line nearly obsolete.

Euclidia glyphica *Linn.*

The markings less distinct than those of the Continental type form below.

1991 Germany, 1874 (Staudinger).
1990 " Small (24 mm.)."
1988 Germany, 1874 (Staudinger).
(29 mm.); the transverse narrow band of the hind wings only faintly developed, and the yellow ground colour hence more noticeable.

1989 Germany, 1874 (Staudinger).
6280 Amurland, 1886 (Staudinger).
6281 " Var. *dentata* Staud. Large (33 mm., 29 mm.); the area beyond the second line paler, thus showing the remaining portion of the wing in greater contrast.

6289 North America, 1886 (Staudinger).
6290 " Var. *cuspidea* Ever. " A striking form. Large (33 mm., 31 mm.); the outer area pale, as in the preceding, four conspicuous blackish-brown marks developed: one, as in the type, on the costa before the apex; another, triangular in form, below the costa, and within the second line; a third transversely across the wing beyond the first line—which is deeply angulated at its middle point—the outer edge of this band being regularly curved; a fourth on the inner margin near the base, as in the following species. The hind wings of 6289 are entirely suffused with smoky-black, and those of 6290 almost so.

6282 Amurland, 1886 (Staudinger).
6283 " Recorded as ' var. anetta ' in Mr. Dobrée's diary. A very large (37 mm., 39 mm.) and remarkable form. The apex of the fore wings shaped as in *Hyphena proboscidalis*, to which insect there is an apparent resemblance at first glance; the first line evenly oblique, and followed by a transverse dark shade, narrow on the costa, but expanding laterally along the inner margin; some dark shading before the second line from the costa to the middle of the wing; the second line indistinct; the hind wings brown, with a suffused dark transverse band, and pale yellowish-brown costal area.
**Euclidia mi** Clerck.

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<tr>
<td>1873</td>
<td>Germany</td>
<td>(Staudinger)</td>
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<tr>
<td>1874</td>
<td>Germany</td>
<td>(Staudinger)</td>
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<tr>
<td>1874</td>
<td>Germany</td>
<td>(Staudinger)</td>
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<td>1874</td>
<td>Turcomania</td>
<td>(Staudinger)</td>
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</table>

The markings dull and inconspicuous.

**Euclidia triquetra** Fab.

There is in the above series some variation in the contrast shown between the lightness of the ground colour and the depth of colour in the markings, the contrast being greatest in 1995, and least in 1997.

**Euclidia munita** Hüb.

<table>
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<tr>
<td>1883</td>
<td>Sarepta, South Russia</td>
<td>(Staudinger)</td>
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**Zethes insularis** Ramb.

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<tr>
<td>1876</td>
<td>Continent</td>
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Remarkable for their resemblance in shape and general appearance to the species of the genus *Selenia* among the *Geometrae* (34 mm., 29 mm.).

**Protyhmnia sanctiflorentis** Boisd.

In his Catalog, 1901, Dr. Staudinger suggests the possibility of this being a 'Darwinian form' of *P. viridaria*.

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<td>1880</td>
<td>Spain</td>
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</table>
**Prothymnia leda** Herr.-Sch.

2954 Continent, 1876 (Staudinger).

**Prothymnia viridaria** Clerck—aenea Hüb.

536 1882 (Ovenden).

535 " "

1015 " "

3316 Colchester, 1876 (Harwood).

3317 " "

3318 " "

3241 1876 (Meek).

3242 " "

3243 " "

3244 " "

6712 Issyk-Kul, Turkistan, 1888 (Tancre—taken by Graeser).

Ab. **modesta** Carad. The purple bands very indistinctly marked, and the general appearance more unicolorous.

[The remaining eight Drawers of the Cabinet contain miscellaneous specimens of Insects—chiefly Lepidoptera—from South Africa and North America].
APPENDIX I.

Names and Addresses of the Correspondents referred to in the preceding pages. [The addresses given are those recorded in Mr. Dobrée's diary].

† Correspondents whose names are thus marked are known to be now deceased.

Anderson, W., 17 Stormont Street, Perth.

Baker, Geo., 17 Kedleston Street, Derby.
Billington, E. R., Wallasey, Cheshire.

† Bishoprick, —, Beverley.
Blackall, W., 9 Church Street, Folkestone.
Bloor, J., 125 Masborough Street, Masborough.
Boulden, P. C., 32 Marian Square, Pritchard's Road, Hackney.
Boul, J. W., 28 Wainfleet Terrace, Hull.
Bouttell, Chas. S., 3 Chestnut Villas, Woodford Road, Forest Gate.
Bower, Benj. A., Langley, Eltham Road, Lee.
Bright, Percy, M., Roccabruna, Bournemouth.
Brown, Lieut., West Kent Regiment, Portland.
Buckell, Dr. F. J., 316 Upper Street, Islington.
Buckell, W. R., Romney.

Buglass, Simpson, Ayton, Berwickshire.

Campbell, W. H., Ballynagard House, Londonderry.
Carpenter, H. J., The Observatory, Dunecht, Aberdeen,

† Cooke, T., London.
Couper, I., Quebec.

† Cox, H. Ramsay, Lyndhurst.
† Cross, W. J., Ely.

† Daltry, Rev. T. W., Madeley Vicarage, Newcastle, Staffs.
† Davis, J., Hythe Street. Dartford.
Decie, Miss Prescott, Bocketon Court, Tenbury.
Doncaster, A., Broomhall Road, Sheffield.

† Doubleday, Henry, Epping.
Downing, W., Whips Cross, Walthamstow.
Druitt, A., Christchurch, Hants.

Earl, E., Orme's School, Newcastle, Staffs.
Ensor, Arthur R., 42 Shakespeare Street, Nottingham.
Etheridge, R. D., 59 The Park, Sydenham.

Ficklin, W., Norbiton, Surrey.
Fleet, H., 9 Thompson's Lane, Cambridge.

Gardner, J., 8 Friar Terrace, Hartlepool.
Gerhardt, Bernhardt, Arndt Strasse, Leipzig.
Gleissner, Rector H., 160 Kurfursten Strasse, Berlin, W.
Graeser, Louis, 46 Ferdinand Strasse, Hamburg.
Grapes, G. J., Colchester.

† Greene, Rev. Joseph, Rostrevor, Clifton, Bristol.
HÄLSSEN, G., Mincing Lane, London.
HARRISON, J., 7 Gawber Road, Barnsley.
Harwood, W. H., St. Peter's, Colchester.
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Hedworth, Thos., Dunston, Gateshead.
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Hughes, W. Rathbone, Liverpool.
Hutchinson, Rev. T. W., Cambridge Villas, Osmaston Road, Derby.

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Johns, Wm., Fore Street, Plymouth.

Kay, R., 2 Spring Street, Bury.
Kenward, J. N., 4 Mount Pleasant Road, Lewisham.
King, G. H., Portland Road, London.
Kricheldorff, A., Berlin.

Lascelles, A. A., 7 Stanley Terrace, Plymouth.
Lawson, P., High Street, Perth.
Lees, Dr. F. Arnold, Macdonald Place, Hartlepool.
Long, C. F., Borough Asylum, Ipswich.
Luff, W. A., Junr., 12 Mansell Street, Guernsey.
Lulham, C., Oil Mill Lane, Kingston, Surrey.

McArthur, H., Toronto Terrace, Brighton.
McRae, W., Bournemouth.
Maling, W., Ellesmere Villa, Granville Road, Newcastle-on-Tyne.
Mann, J. K., Wellington Terrace, Clifton, Bristol.
Marsden, H. W., Gloucester.
Mason, J., Clevedon Court Lodge.
Mathew, Gervase, H.M.S. 'Britannia,' Devonport.
Meek, E. G., Brompton Road, London.
Meldrum, T., Ripon.
Mond, M., 38 High Street, Lewes.
Mosley, S. L., Huddersfield.
Mundie, J., 22 Watson Street, Aberdeen.

† Norman, George, Hull.

Obenauf, G., 4 Lange Strasse, Zeitz.
O'Reilly, The, 6 Denmark Terrace, Brighton.
Ovenden, J., Frindsbury Road, Strood.

† Parry, G., Church Street, Canterbury.
Partridge, Major, West Kent Regiment, Portland.
Pearce, W. G., 187 Caledonian Road, London, N.
Pepler, S., Retford.
Peters, J., The Hall, Worth, Crawley, Sussex.
Pickard, Alfred, Wolsingham.
Pickles, —, Leeds.
Porritt, Geo. T., Greenfield House, Huddersfield.
Potts, J., Wainfleet Terrace, Hull.
PRATT, D., 398 Mile End Road, London, E.
† Prest, Wm., Holgate Road, York.

Ralle, G. A., Zittau.
Raynor, Rev. G. H., Brentwood.
Ribbe, H., Zollner Strasse, Dresden.
Robertson, Duncan, The School, Camghouran, Rannoch.
† Robson, J. E., 15 Northgate, Hartlepool.
Rodgers, J. T., 226 Chadderton Road, Oldham.
† Ross, J. G., Bathampton, nr. Bath.
Rühl, Fritz, Zürich Hottingen.
Russ, Percy H., Culleenamore, Sligo.
Russell, J. W., 6 Leverton Street, Kentish Town.

Salvage, T. W., 22 Montreal Road, Brighton.
 Sawyer, J., Hull.
Sheldon, W. G., Oval Road, Addiscombe.
Sherwood, G., Market Place, Retford.
Smith, C., Egerton, nr. Bolton.
South, Richard, Goldbeater's Farm, Hendon, N.W.
Spiller, A. J., Stanstead.
† Staudinger, Dr. O., Dresden.

Tait, W., Bromend, Inverurie, Aberdeenshire.
Tancrè, R., Anklam in Pommern.
Tasker, Rev. J. C. W., Aigle, Canton Vurd, Switzerland.
Teicher, Theodor, Landeshut, Silesia.
Thurnall, A., Whittlesford, nr. Cambridge.
Treadgold, A. N. C., Grantham.
Turnbull, J., Gas Works, Lauder.
Tutt, J. W., Rayleigh Villa, Westcombe Park, S.E.

Wailly, A., Clapham Road, London.
Walker, Samuel, 8 Neville Street, Haxby Road, York.
Walpole, Thos., 48 Westgate, Grantham.
Wasserman, J. C., Newcastle-on-Tyne.
Watkins and Doncaster, Strand, W.C.
† Weir, J. Jenner, Blackheath, S.E.
Werner, —, Hilbersdorf bei Chemnitz.
Wheeler, F. D., City Saw Mills, Norwich.
White, John S., Droylesden Lane, Droylesden.
Wieldt, J. B., Baxtergate, Loughborough.
Williams, C. H., 7 Corburton Street, Gt. Portland Street, London.
† Williams, J. T., 5 Woodland Villas, Footscray, Kent.
Wittick, H., 38 Chestnut Terrace, Forest Gate.
Wilson, G., Howard Street, Wakefield.
Wilson, Owen, Cwmffrwd, Carmarthen.
Windybank, A. J., 27 Albert Road, Kingston-on-Thames.

† Young, John N., 85 Fitzwilliam Road, Rotherham.
APPENDIX II.

A List of Mr. Dobrée's Contributions to Entomological Literature.
[The titles here given are not necessarily those under which the contributions originally appeared, but are framed to show the subject-matter of the articles contributed.]

'The Occurrence of Eupithecia extensaria at Hull.'—Entomologist, 1875, p. 133.
'Acronycta myricae—? An insular form of A. euphorbiae.'—Ibid, 1878, p. 69.
'Identity of Crymodes exulis and Hadena assimilis.'—Ibid., 1879, p. 107.
'Dasypolia templi at Beverley.'—Ibid., 1881-1882, p. 82.
'The Varieties of Epunda lutulenta.'—Entomologist, 1884, p. 107.
'Asynomus aedilis at Hull.'—Naturalist, 1884-1885, p. 103.

'A New Method of Sugaring.'—Ibid., 1887, pp. 164-5.
'Sphinx convolvuli at Beverley and Hull.'—Ibid., 1887, p. 303.
'Agrotis fennica.'—Ibid., 1887, pp. 313-14.
'Sirex juvensus at Hull.'—Naturalist, 1888, p. 51.
'Report for Entomological Section of the Y.N.U. at Market Weighton' (August 6th).—Ibid., p. 279.
'Agrotis ashworthii Doubl.—A. candelarum Staud.'—Entomologist, 1890, p. 130.
'A New Variety of Plusia moneta occurring in Amurland.'—Ibid., 1890, p. 344.
'Cucullia scrophulariae probably identical with C. lychnitis.'—Ibid., 1891, pp. 146-7.
'A Hint to Breeders of Lepidoptera—Continental Method of Keeping Cuttings of Hollow-stemmed Plants Fresh.'—Ibid., 1892, p. 143.
'The Hairs of Acronycta alni Larva.'—Ibid., 1893, p. 164.
'Spilosoma mendica var. rustica and Amphidarys betularia var. doubleday-aria on the Continent.'—Ibid., 1894, p. 219.
'Acronycta alni at Beverley.'—Naturalist, 1901, p. 291.
'The Geographical Distribution of Leucanitis (Ophiusa) stolida.—Ibid., 1904, p. 158.

APPENDIX III.

Works of Reference dealing with European Lepidoptera that may be consulted at the Central Public Library, Albion Street, Hull.

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   II. Arctiadæ.
   III. Agaristidæ.
   IV.-VII. Noctuidæ.
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South, R., Butterflies of the British Isles, 1906.
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Staudinger, O. and Wocke, M., Catalog der Lepidopteren des Europäischen Faunengebiets, 1871.
Staudinger, O., and Rebel, H., Catalog der Lepidopteren des Palæarctischen Faunengebietes, 1901.
   Melanism and Melanochorom in British Lepidoptera, 1891.
   Natural History of British Butterflies: their World-wide Variation and Geographical Distribution, 1905-9 (in course of completion).
   Pterophorina of Britain: a Monograph, 1895.
Annals and Magazine of Natural History, from Vol. I, 1838 to date, excepting Vols. for 1848 to June, 1858; 1860 to June, 1864; and 1890.
Entomological Society of London, Transactions for the Years 1879-1881; 1886 to date.
Entomologist, Vols. II.-XXVII, 1864-1894; Vols. XXXV, 1902, to date.
Entomologists' Record, from Vol. I, 1890 to date.
Naturalist, The, Vols. I.-VIII, 1851-9; N.S., Vol. II, 1876 to date, excepting a few odd numbers.
Zoological Record, Vols. I.-XXXVIII, 1864-1901.
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Browne, Horace B.

A descriptive catalogue of the Dobree collection of European Noctuae.