XI. *Revision of the Heterocerous Lepidoptera of the family Sphingidae.* By **Arthur Gardiner Butler, F.L.S., F.Z.S., &c., Senior Assistant, Zoological Department, British Museum.**

Read April 6th, 1875.

[Plates XC.—XCIV.]

The extensive group of moths composing the family *Sphingidae* has always been a favourite one, not only with Lepidopterists, but with all lovers of nature; its representatives surpass most of the other families of Heterocera in size, whilst in their speed and long-sustained flights they are equalled by no other group with which I am acquainted. The highly specialized condition of some of the structural characters in this family has from time to time aroused a special interest in them: thus the complete resemblance which most of the *Macroglossinae* bear to humming-birds, owing to the remarkable expanded anal tuft and their habit of poising over a flower whilst sucking the nectar through their long outstretched proboscides, have rendered them objects of peculiar attraction to the uninitiated, many of whom fancy them to be true humming-birds, and refuse to be convinced of their error. In the *Naturalist on the Amazons* (vol. i. pp. 181–183), Mr. Bates tells us that the natives firmly believe that the moth changes into the bird just as the caterpillar into the moth; the resemblance between *Aellopus titan* and a humming-bird is so complete when upon the wing that he himself on several occasions shot the former in mistake for the latter. The *Charocampinae* are chiefly remarkable for their power of long sustained flight; there is, however, nothing extraordinary in their appearance in the perfect state; the *Ambulicicinae* and some genera of the *Charocampinae* have the anal segment of the abdomen in the males expanded at the sides, giving them somewhat the aspect of *Macroglossinae* in this respect; the *Smerinthinae* are often brilliantly coloured, and the antennae of the males are pectinated, much as in some genera of the *Bombycidae*. The remarkable genus of *Smerinthinae*, *Lophostethus*, has the spines on the tibiae marvelously developed. The object of these spines has yet to be discovered; I can only suppose that the larva undergoes its change to the pupa-state in very hard earth, and thus it becomes necessary for the moth to be provided with powerful weapons in order to effect its escape.

The *Acherontiinae* have attracted much attention on account of their peculiar coloration, which has given rise to their popular name of Death’s-head Moths; they possess...
the power of emitting sounds much resembling the cracking of a boot. The manner in which these sounds are produced has been the subject of discussion amongst naturalists since the year 1742; this point, however, has been satisfactorily settled by Mr. Moseley ('Nature,' vol. vi, pp. 151-153), who has demonstrated the existence of a cavity in the head, which by the alternate action of elevating and depressing muscles is caused to serve as a pair of bellows, by means of which air is forced through the exceedingly short proboscis; this organ is thus converted into a small trumpet. The *Sphinginae* are remarkable for the length of their proboscides, in which respect they offer a striking contrast to the preceding subfamily. *Amphionyx chenius*, as mentioned by Mr. A. R. Wallace in the 'Quarterly Journal of Science' for 1867 (p. 477), has this organ developed to the extraordinary length of 9\(\frac{3}{4}\) inches; and Mr. Wallace confidently looks forward to the discovery of a *Sphinx* in Madagascar with a proboscis 11 to 12 inches in length; his anticipation is based upon the fact that the nectaries of *Angraecum sesquipedale* vary in length from 10 to 14 inches, and must therefore in all probability be fertilized by some such hitherto undiscovered agent.

The first attempt at any thing like a comprehensive paper on the *Sphingidae* was published in 1855 by Burmeister in the 'Abhandlungen der naturforschenden Gesellschaft zu Halle,' and was entitled "Systematische Uebersicht der Sphingiden Brasiliens;" it contained descriptions of new genera and species, and gave a list of the then known *Sphingidae* of South America. This paper was followed in the succeeding year by the seventh volume of Mr. Walker's 'Lepidoptera Heterocera,' in which an endeavour was made to bring together the recorded species from all parts of the world; and, considering how little was then known respecting the family, there can be no doubt that this catalogue was the best that Mr. Walker ever produced. No attempt was made at classification; therefore it is not surprising that nearly allied species appeared in widely sndered genera. Still the omissions are not many, and, but for that indefatigable Lepidopterist Mr. W. F. Kirby, would probably, with a few exceptions, have still remained undiscovered. The next list of species appeared in 1857, in Horsfield and Moore's Catalogue of the Lepidoptera in the Museum of the East-India Company, and added a few descriptions; it was followed two years later by a very careful paper by Dr. Clemens in the 'Journal of the Academy of Natural Sciences of Philadelphia' (2nd ser. vol. iv.), entitled "Synopsis of North-American *Sphingidae.*" This communication was full of valuable information; and for the first time an effort was made to classify the genera and species; it was superseded, however, a few years afterwards by "A Synonymical Catalogue of North-American *Sphingidae*, with Notes and Descriptions," in the fifth volume of the 'Proceedings of the Entomological Society of Philadelphia,' from the pens of those well-known and able Lepidopterists Messrs. Grote and Robinson. This was a most important paper, inasmuch as it revised most of the New-World genera, throwing them into natural subfamilies. In the same volume of the 'Proceedings' appeared several of Mr. Grote's papers on the *Sphingidae* of Cuba, abounding with critical and interesting
notes on synonymy. In the volume for 1867 Mr. Grote gave a list of the Sphingidae of Cuba; and, lastly, in 1873 he again appeared as the author of a "Catalogue of the Sphingidae of North America," in the first volume of the 'Bulletin of the Buffalo Society of Natural Sciences.'

Dr. Boisduval's long expected work on the Sphingidae has recently appeared, bearing date 1874; that it was not, however, procurable earlier than February 22nd, 1875, I have evidence in a letter from the author, dated 18th of February, 1875, in which he says "Le spécies des Sphingides, Sésiides et Castniides sera mis au vente Lundi prochain, chez M. Roret, éditeur, Rue Hautefeuille, à Paris." The entire work is full of errors; and scores of species are omitted; but the author's worst fault is a too great appreciation of his own MS. names, for which he does not scruple to sacrifice both genera and species long described by other authors. The arrangement of the genera is most unnatural; and many of the species described as new are only individually distinct. The new species described by M. Boisduval, excepting those which clash with my own, will be added in an appendix; the genera and species which are identical with new forms described in the present paper will be substituted, in their proper places, for the names which I had proposed to employ.

It will be seen by the foregoing remarks that the only synonymic (and that not a systematic) list of the Sphingidae of the world is that published by Mr. Walker in 1856; this has now necessarily become very incomplete, not only on account of the numerous species subsequently described, but from our present much more perfect knowledge of the limits and affinities of the genera, which renders a revision of the whole family an absolute necessity.

I have to thank Mr. F. Moore for lending me his fine collection of Asiatic Sphingidae, enabling me to add considerably to our knowledge of the species of India, as also for lending me some exquisite drawings of larvae and pupae by native Indian artists. I am also greatly indebted to Mr. G. Lewis for the loan of his valuable drawings of Japanese Sphingidae in all stages, and for the residuum of his collection of these moths; also to Mr. W. F. Kirby for calling my attention to descriptions of species by Mr. Newman, to species described by Palisot de Beauvais, Van der Hoeven and Bertoloni, and to several species described during the last year or two, which I might otherwise have overlooked.

The following rough Table will give some idea of the geographical range of the various subfamilies and genera.

Subfamily 1. Macroglossinae. (Cosmopolitan.)

<table>
<thead>
<tr>
<th>Genus</th>
<th>Range</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lepiesia</td>
<td>Confined to British North America</td>
<td>2</td>
</tr>
<tr>
<td>2. Sataeas</td>
<td>Silhet to China</td>
<td>4</td>
</tr>
<tr>
<td>3. Hemaris</td>
<td>Ranges from Texas, through Europe, Asia, and Africa</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 × 2</td>
</tr>
<tr>
<td>Genus</td>
<td>Range</td>
<td>Number of Species</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>4. Rhopalopsycha</td>
<td>Silhet to South India</td>
<td>2</td>
</tr>
<tr>
<td>5. Macroglossa</td>
<td>Throughout the Old World</td>
<td>41</td>
</tr>
<tr>
<td>6. Aelloptis</td>
<td>Tropical America and Africa</td>
<td>6</td>
</tr>
<tr>
<td>7. Stenolophia</td>
<td>South Tropical America</td>
<td>1</td>
</tr>
<tr>
<td>8. Esagrohylusia</td>
<td>Pará to Mexico</td>
<td>2</td>
</tr>
<tr>
<td>9. Pringonia</td>
<td>Tropical America</td>
<td>9</td>
</tr>
<tr>
<td>10. Peripontia</td>
<td>Tropical America</td>
<td>4</td>
</tr>
<tr>
<td>11. Rhodossa</td>
<td>North India</td>
<td>1</td>
</tr>
<tr>
<td>12. Thyreus</td>
<td>United States</td>
<td>1</td>
</tr>
<tr>
<td>13. Amphion</td>
<td>United States</td>
<td>1</td>
</tr>
<tr>
<td>14. Deidamia</td>
<td>North America</td>
<td>1</td>
</tr>
<tr>
<td>15. Unzela</td>
<td>Tropical America</td>
<td>1</td>
</tr>
<tr>
<td>16. Pronocerus</td>
<td>Ranges from Europe, through Russia, into North America</td>
<td>4</td>
</tr>
<tr>
<td>17. Enepocerena</td>
<td>California</td>
<td>1</td>
</tr>
<tr>
<td>18. Tenana</td>
<td>Natal and (possibly) China</td>
<td>2</td>
</tr>
<tr>
<td>19. Lophena</td>
<td>South America, Asia, and Africa</td>
<td>11</td>
</tr>
<tr>
<td>20. Callinana</td>
<td>Confinned to Tropical America</td>
<td>8</td>
</tr>
<tr>
<td>21. Eugo</td>
<td>Tropical America and (possibly) Australia</td>
<td>5</td>
</tr>
<tr>
<td>22. Akrenon</td>
<td>Tropical America</td>
<td>3</td>
</tr>
<tr>
<td>23. Tygogonathia</td>
<td>South Tropical America</td>
<td>2</td>
</tr>
<tr>
<td>24. Gonesto</td>
<td>Tropical America</td>
<td>1</td>
</tr>
<tr>
<td>25. Hemeroplanes</td>
<td>Tropical America</td>
<td>4</td>
</tr>
</tbody>
</table>

Subfamily 2. Chilocampi. (Cosmopolitan.)

<table>
<thead>
<tr>
<th>Genus</th>
<th>Range</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aecosomeryx</td>
<td>North India to Queensland</td>
<td>5</td>
</tr>
<tr>
<td>2. Otus</td>
<td>From Siberia, through North America, to the West Indies</td>
<td>5</td>
</tr>
<tr>
<td>3. Ampelophaga</td>
<td>China and Japan</td>
<td>1</td>
</tr>
<tr>
<td>4. Ethion</td>
<td>North India</td>
<td>2</td>
</tr>
<tr>
<td>5. Pergesa</td>
<td>From Europe, through Asia and Africa</td>
<td>15</td>
</tr>
<tr>
<td>6. Danaca</td>
<td>Asia and Africa</td>
<td>17</td>
</tr>
<tr>
<td>7. Cizara</td>
<td>Australia</td>
<td>1</td>
</tr>
<tr>
<td>8. Macrosphina</td>
<td>South India</td>
<td>1</td>
</tr>
<tr>
<td>9. Basiothea</td>
<td>Africa</td>
<td>1</td>
</tr>
<tr>
<td>10. Gnathostigma</td>
<td>Cafraria</td>
<td>1</td>
</tr>
<tr>
<td>11. Diochosa</td>
<td>Africa</td>
<td>4</td>
</tr>
<tr>
<td>12. Cypta</td>
<td>Ceylon</td>
<td>1</td>
</tr>
<tr>
<td>13. Cheirolepia</td>
<td>Cosmopolitan</td>
<td>78</td>
</tr>
<tr>
<td>14. Darapayso</td>
<td>Haiti</td>
<td>1</td>
</tr>
<tr>
<td>15. Deilephila</td>
<td>From America, through Europe, Asia, and Africa</td>
<td>22</td>
</tr>
<tr>
<td>16. Daphinis</td>
<td>Europe, Asia, Moluccas, and Australia</td>
<td>9</td>
</tr>
<tr>
<td>17. Philebus</td>
<td>Tropical America and Africa</td>
<td>19</td>
</tr>
<tr>
<td>18. Pachytha</td>
<td>Tropical America</td>
<td>5</td>
</tr>
</tbody>
</table>

Subfamily 3. Ambulicin. (America and Asia.)

<table>
<thead>
<tr>
<th>Genus</th>
<th>Range</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ambulux</td>
<td>Tropical America and Asia, from Darjeeling to Java</td>
<td>23</td>
</tr>
</tbody>
</table>
Subfamily 4. Smerinthinæ. (Cosmopolitan.)

<table>
<thead>
<tr>
<th>Genus</th>
<th>Range</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Metamimas</td>
<td>Amboina and Australia</td>
<td>2</td>
</tr>
<tr>
<td>2. Minas</td>
<td>Europe, Asia, and South Africa</td>
<td>3</td>
</tr>
<tr>
<td>3. Polyptychus</td>
<td>Asia and Africa</td>
<td>7</td>
</tr>
<tr>
<td>4. Lophoisthas</td>
<td>Natal</td>
<td>1</td>
</tr>
<tr>
<td>5. Sphinganopis</td>
<td>Caffraria</td>
<td>1</td>
</tr>
<tr>
<td>6. Langia</td>
<td>India</td>
<td>2</td>
</tr>
<tr>
<td>7. Triptolemus</td>
<td>America, and from Manchuria, through Japan and China, into Java and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>India, and thence into Persia</td>
<td></td>
</tr>
<tr>
<td>8. Laothoe</td>
<td>Europe</td>
<td>2</td>
</tr>
<tr>
<td>9. Cressonia</td>
<td>North America to Texas</td>
<td>3</td>
</tr>
<tr>
<td>10. Poenias</td>
<td>United States</td>
<td>2</td>
</tr>
<tr>
<td>11. Calysus</td>
<td>North America and Amur</td>
<td>5</td>
</tr>
<tr>
<td>12. Smerinthus</td>
<td>Mexico to California and China, through Japan and Amur to Europe</td>
<td>5</td>
</tr>
<tr>
<td>13. Pseudosmerinthus</td>
<td>South-west Africa</td>
<td>2</td>
</tr>
<tr>
<td>14. Ophina</td>
<td>China to Borneo</td>
<td>3</td>
</tr>
<tr>
<td>15. Lencotibia</td>
<td>Java to Bengal</td>
<td>4</td>
</tr>
<tr>
<td>16. Bassicina</td>
<td>Asia and Africa</td>
<td>9</td>
</tr>
<tr>
<td>17. Clytus</td>
<td>Australia</td>
<td>1</td>
</tr>
</tbody>
</table>

Subfamily 5. Acherontinæ. (Europe, Asia, and Africa.)

1. Acherontia From Europe into Africa, and through Persia into Asia 4

Subfamily 6. Sphinginæ. (Cosmopolitan.)

<table>
<thead>
<tr>
<th>Genus</th>
<th>Range</th>
<th>Number of Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tatothoæanæ</td>
<td>South America</td>
<td>1</td>
</tr>
<tr>
<td>2. Ampelonymus</td>
<td>Tropical America</td>
<td>6</td>
</tr>
<tr>
<td>3. Ancyra</td>
<td>Tropical America</td>
<td>2</td>
</tr>
<tr>
<td>4. Isomathæus</td>
<td>Tropical America</td>
<td>9</td>
</tr>
<tr>
<td>5. Cautethia</td>
<td>Haiti and (possibly) &quot;East India&quot;</td>
<td>2</td>
</tr>
<tr>
<td>6. Dilophosote</td>
<td>Tropical America</td>
<td>11</td>
</tr>
<tr>
<td>7. Oryctes</td>
<td>South America</td>
<td>1</td>
</tr>
<tr>
<td>8. Micrasia</td>
<td>South America</td>
<td>2</td>
</tr>
<tr>
<td>9. Protopasca</td>
<td>Cosmopolitan</td>
<td>28</td>
</tr>
<tr>
<td>10. Pseudosphinx</td>
<td>Tropical America, Molucca, and India</td>
<td>6</td>
</tr>
<tr>
<td>11. Durcena</td>
<td>United States</td>
<td>1</td>
</tr>
<tr>
<td>12. Syzytia</td>
<td>Central America</td>
<td>1</td>
</tr>
<tr>
<td>13. Dolba</td>
<td>North India, and Massachusetts to Mexico</td>
<td>3</td>
</tr>
<tr>
<td>14. Euryglottis</td>
<td>Colombia</td>
<td>1</td>
</tr>
<tr>
<td>15. Dilusia</td>
<td>Asia, Australia, Africa, and Tropical America</td>
<td>24</td>
</tr>
<tr>
<td>16. Hyloicus</td>
<td>From America, through Europe, Asia, and Africa</td>
<td>9</td>
</tr>
<tr>
<td>17. Sphinx</td>
<td>America and Europe</td>
<td>17</td>
</tr>
</tbody>
</table>
The remaining genera, being doubtful *Sphingidae*, need not be considered.

The species which has the greatest range is *Charocampa celerio*. This insect is found throughout the Old World; it is very rapid and indefatigable on the wing, and is not unfrequently caught on board ship out of sight of land. Its food-plant is the vine.

### Characters of the Subfamilies.

1. **Macroglossine.**
   - Larva with the anterior segments tapering towards the head, retractile; horn long and curved; head rather small.
   - Imago generally with externally angulated palpi; the antennae often gradually thicker from the base to the apex; thorax large and prominent; abdomen of the male always with a more or less developed anal tuft of hair-scales.

2. **Charocampine.**
   - Larva with the anterior segments retractile, the fifth somewhat abruptly broader; the fifth, and sometimes all the segments laterally ocellated; horn variable; head rather larger.
   - Imago generally with externally rounded palpi, the antennae generally rather slender; eyes salient; thorax large and prominent; abdomen without an anal tuft.

3. **Ambulicin.**
   - Larva with the anterior segments non-retractile, tapering slightly towards the head, which is abruptly rather larger and rounded; horn oblique, not curved, but slightly pointing upwards at the tip; a series of lateral oblique stripes.
   - Imago with externally rounded palpi, the antennae slender in both sexes; eyes salient; thorax rather short; abdomen of the male produced behind, with lateral angular expansion.

4. **Smerinthine.**
   - Larva rugose, with the anterior segments tapering towards the head, which is abruptly and decidedly larger, flattened in front, and angular above; horn straight.
Imago with the head and thorax short and broad; palpi small, antennae of male more or less pectinated.

5. Acherontiæ.

Larva thick, clumsy, Sphink-like, but with the horn always more or less recurved at the tip, and tuberculated or granulose.

Imago clumsy; legs, antennæ, and proboscis thick, the latter very short; head, thorax, and abdomen short and broad.


Larva with the anterior segments very slightly smaller than the posterior, generally marked with oblique lateral stripes; horn (when present) rather long; head tolerably large; position of the larva in repose almost sigmoidal.

Pupa frequently with an external sheath for the proboscis.

Imago Charocampine in form, but with the head generally smaller, the thorax variable in length; proboscis very long.

Subfamily I. MACROGLOSSINÆ.

Genus 1. Lepisesia, Grote.

1. Lepisesia flavofasciata.


St. Martin's Falls, Albany River, Hudson's Bay (Barnston). Type, B.M.

The above is certainly more nearly allied to Hémaris than to Macroglossa, and appears to be a well-marked genus.

2. Lepisesia victoria.


British Columbia (Crotch).

Genus 2. Sataspes, Moore.


1. Sataspes infernalis.

Sesia infernalis, Westwood, Cab. Orient. Ent. p. 61, pl. 30. fig. 3 (1848).
Sataspes infernalis, Moore, Cat. Lep. E.I. Comp. i. p. 261. no. 597 (1857).

Silhet (Stainsforth), Nepal (Whitely), Coimbatoor (Walhouse).
2. *Sataspes uniformis*.

*Sataspes uniformis*, Butler, P. Z. S. 1875, p. 3. n. 1.


Silhet (*Stainsforth*). Type, B.M.

3. *Sataspes ventralis*.

*Sataspes ventralis*, Butler, P. Z. S. 1875, p. 3. n. 2.


Hong-Kong (*Bowring*), Silhet (*Stainsforth*). Type, B.M.

4. *Sataspes xylocoparis*.

*Sataspes xylocoparis*, Butler, P. Z. S. 1875, p. 239, pl. xxxvi. fig. 1.

Shanghai, China. Type, coll. F. Moore.


1. *Hemaris bombyliformis*.


*Cephanodes bombyliformis*, Hübnver, Verz. bek. Schmett. p. 131. no. 1403 (1816).


*Macroglossa bombyliformis*, Boisduval, Ind. Meth. p. 45. no. 369 (1816).

*Sphinx fuciformis*, Denis (nee Linnaeus), Wien. Verz. p. 44. no. 1 (1775).

*Sesia fuciformis*, Fabricius, Ent. Syst. iii. 1, p. 381. no 11 (1799).


Europe (*Becker*). B.M.

2. *Hemaris fumosa*.


Albany.

Allied to *H. diffinis*; Grote believes it to be = *H. tenuis*, in which the scales on the pellucid area of the wings are still adherent.

1 After wading through the long description of *Hemorrhagia*, Grote and Robinson, I am still unable to distinguish it structurally from *Hemaris*; indeed the authors themselves seem doubtful as to the generic position of one species, *Sesia radians*.
3. Hemaris palpalis.


British Colombia (Crotch).
Allied to H. tenuis.

4. Hemaris diffinis.

Macroflossa diffinis, Boisduval, Sp. Gén. Lép. pl. 15. fig. 2 (1836).
Sphinx fuciformis, Smith and Abbot (née Linnæus), Lep. Ins. Georg. vol. i. p. 85, pl. 43 (1797).

Canada West (Bush), United States (Doubleday), East Florida, Vancouver's Island (Lyall).

Allied to H. fuciformis; the larva is described by Mead (Canad. Ent. ii. pp. 157, 158, 1870).

5. Hemaris tenuis.

Hemaris tenuis, Grote, Bull. Buff. Soc. Nat. Sci. i. p. 4, pl. 1. fig. 6 (1873).

New York and Pennsylvania (Strecker).

6. Hemaris thetis.


California (Lorquin).
Closely allied to S. diffinis.

7. Hemaris metathetis, n. sp.


Texas (Belfrage).

This species was sent by Belfrage, labelled “S. axillaris, Grote and Robinson,” which has led to my error; it differs in its smaller size, narrower and not dentated border, with other minor characters.

8. Hemaris sieboldi.

Macrohosa sieboldi, Boisduval in De l'Orza's Lép. Japon. p. 35. no. 76 (1869).

♂ 2, Hakodadi (Stephens); ♀, Japan (Fortune). Type, B.M.

vol. ix.—part x. No. 2.—October, 1876.
The Japanese representative of *H. fuciformis*. M. Boisduval having described it as a *Macroglossa*, I unfortunately overlooked his description.

9. **Hemaris mandarina**.

*Hemaris mandarina*, Butler, P. Z. S. 1875, p. 239, pl. xxxvi. fig. 2.

Shanghai. Type, coll. F. Moore.

10. **Hemaris fuciformis**.

*Sphinx fuciformis*, Linnaeus, Syst. Nat. i. 2, p. 803. no. 28 (1766).
*Sesia fuciformis*, Schaeffer, Icon. Ins. p. 21 (1766–79).
*Sphinx bombyliformis*, Esper (nee Ochsenheimer), Eur. Schmett. ii. p. 180, pl. 23 (1777).
*Sesia bombyliformis*, Fabricius, Ent. Syst. iii. 1, p. 382. no. 12 (1793).

Europe (Becker).

11. **Hemaris affinis**.

*Sesia affinis*, Bremer, Lep. Ost-Sib. p. 85, pl. iii. fig. 13 (1864).

Amur (Druce). Type, B.M. Closely allied to the preceding species, but rather darker.

12. **Hemaris saundersii**.


North India (Stevens, Doubleday). Type, B.M. This species is a complete link between the *H. fuciformis* group and *H. hylas*; the latter though different in aspect (owing to the narrow-scaled border of primaries), does not, so far as I can see, differ structurally from the other species of *Hemaris*.

13. **Hemaris venata**.


Amboina. Allied to *H. fuciformis*, but one third larger, the body longer, different in character.

14. **Hemaris radians**.


Shanghai (Fortune). Type, B.M. Approaching *H. thysbe* in character.
15. **Hemaris alternata.**


**Hakodadi (Whiteley).**

Type, B.M.

16. **Hemaris axillaris.**


**Texas (Belfrage).**

B.M.

17. **Hemaris marginalis.**


*Michigan (Strecker).*

Section **Hemorrhagia,** Grote1.

18. **Hemaris thysbe.**

*Sphinx thysbe,* Fabricius, Syst. Ent. p. 548 (1775).

*Sesia thysbe,* Fabricius, Mant. Ins. i. p. 99 (1787).


*Sphinx pelagius,* Cramer, Pap. Exot. iii. p. 93, pl. 248. fig. B (1782).

*Sesia pelagius,* Harris, Cat. N.A. Sphinx., Sill. Journ. xxxvi. p. 308 (1839).


Massachusetts (*Doubleday;* United States (*Milne).)

B.M.

19. **Hemaris ruficaudis.**


Canada West (*Bush;* United States.)

B.M.

This species has been much discussed by Messrs. Grote and Robinson, who make the following statement (Proc. Ent. Soc. Phil. v. p. 175):—"Kirby’s description presents too many points of difference with *H. gracilis* to allow us to refer that species as intended, while Mr. Walker evidently describes our species as intended by Kirby." Now although Walker included one example of *H. gracilis* with our examples of *H. ruficaudis,* it is impossible to say that he "evidently describes" that specimen. I believe myself that the Walkerian type (registered "United States") is referable to the present species. It might be considered the American representative of *H. faciciformis;* but it is in some respects more nearly allied to *Hemorrhagia floridensis* of Grote and Robinson.

This may, perhaps, be a genus, the species being more densely scaled than in *Hemaris,* and having consequently a somewhat different aspect; on the whole, however, I prefer to regard it for the present as a section.
20. **Hemaris buffalœnsis.**


Buffalo.

Very closely allied to, if not identical with *H. ruficaudis* of Walker (? Kirby); the body, however, seems greener in colouring, and the cell of primaries less open.

21. **Hemaris gracilis.**


Trenton Falls, New York (*E. Doubleday*).

This may at once be distinguished from even the most similar examples of *H. ruficaudis* (Kirby ?) Walker, by the straight inner edge of the external brown border of primaries, the more heavily scaled discocellulars, and the smaller hyaline patch on secondaries. Grote separates it as a distinct group under the name of *Chamaesesia* (Bull. Buff. Soc. Nat. Sci. i. p. 8, 1873).

22. **Hemaris floridensis.**


Florida.

Allied to *H. fuscicaudis*, but with the external margin narrower and not dentated; in *H. fuscicaudis* it is much more strongly dentated than in *H. thybæ*.

23. **Hemaris fuscicaudis.**


Georgia (*Abbot*).

Unquestionably the finest species in the genus.

Section Cepioodes, Hübner.

(*Potidæa*, Wallengren.)

24. **Hemaris hylas.** (Plate XC. figs. 4, 5.)

*Sphinx hylas*, Linnaeus, Mantissa, i. p. 539 (1771).

*Sesia hylas*, Fabricius, Ent. Syst. iii. 1, p. 379, no. 3 (1793).

*Cepioodes hylas*, Hübner, Verz. bck. Schmett. p. 131. no. 1402 (1816).


*Macroglossa cunninghami*, Schauffuss, Nunquam Otiosus, i. p. 22 (1870).

Var. *Macroglossa apus*, Boisduval, Faun. Ent. de Madag. p. 79. no. 2, pl. 10. fig. 4 (1833).
China (Bowring, Harrington, Reeves); Japan (Whitely); Moulmein (Clerck); Ceylon (Wenham); North India (James); Nepal (Ramsay); Moreton Bay (Gibbons); Australia (Hunter); Congo (Curror); West Africa (Argent); South Africa (Angas); Natal (Gueinzius, Trimen).

One of our Natal examples agrees very fairly with the figure of M. apus; it is, however, rather less like typical H. hylas. Mr. Lewis tells me that when H. hylas first leaves the pupa the primaries are covered with yellow scales; he found the larva feeding on Gardenia.

25. Hemaris virescens.


East Caffraria.

Allied to H. hylas.


Sphinx croatica, Esper, Eur. Schmett. p. 33, pl. 45. fig. 2 (1777).

Cephalodes croatica, Hübner, Verz. bck. Schmett. p. 131. no. 1406 (1816).

Macroglossa croatica, Boisduval, Ind. Meth. p. 32 (1840).

Sphinx sesia, Hübner, Eur. Schmett. ii. figs. 89 & 130 (1793-1827).

South-east Europe, Asia Minor, Armenia.

Judging from Hübner's figures alone, I should be satisfied that this was not a Macroglossa. The form of the antennae in the figure seems to indicate a distinction from Hemaris; but I have recently examined two specimens in the collection of Mr. Herbert Sharpe, and I now feel convinced that Hübner rightly referred it to his genus Cephalodes.

Genus 4. Rhopalopsychie, Butler.

Rhopalopsychie, Butler, P. Z. S. 1875, p. 239 (1875).

1. Rhopalopsychie bifasciata.

Rhopalopsychie bifasciata, Butler, P. Z. S. p. 239, pl. xxxvi. fig. 4 (1875).

South India (Ward). Type, coll. F. Moore.

2. Rhopalopsychie nycteris.

Macroglossa nycteris, Kollar, Hägeli's Kaschmir, iv. 2, p. 458, pl. 19. fig. 5.


Silhet (Doubleday); North India (Argent, Steeven); Barrackpore (Hearsey). B.M.
Genus 5. Macroglossa, Ochsenheimer.


1. Macroglossa stellatarum.

Sphinx stellatarum, Linnaeus, Syst. Nat. i. 2, p. 803. no. 27 (1766).

Sexa stellatarum, Fabricius, Ent. Syst. iii. 1, p. 380. no. 5 (1793).


Europe (Becker); Tripoli; Teneriffe; Turkey (Loftus); Syria (Lowne); North China (Fortune).

Mr. Moore has an example of this species from Scinde; I can find no constant character whereby to separate it from the European form.

2. Macroglossa vacillans.


Timor.

3. Macroglossa affictitia.

Macroglossa affictitia, Butler, P. Z. S. 1875, p. 240, pl. xxxvi. fig. 7.

Canara. Type, coll. F. Moore.

4. Macroglossa vialis.

Macroglossa vialis, Butler, P. Z. S. 1875, p. 240, pl. xxxvi. fig. 5.

Canara. Type, coll. F. Moore.

5. Macroglossa gyrans.


North India (Stevens); Madras (Elliot); Ceylon (Templeton). Type, B.M.

In Mr. Moore's collection from Kurnool, Neilgherries; also from Bengal and Ceylon.


North Australia (Elsey). Type, B.M.

Differs from the preceding species in the better-defined tawny spots on each side of the abdomen, the absence of the interrupted white band on preanal segment, and the less-defined transverse lines on primaries.

7. Macroglossa milvus.

Macroglossa milvus, Boisduval, Faune Ent. de Madag. p. 78. no. 1, pl. 10. fig. 3 (1833).

Bourbon and Mauritius; Madagascar (Peckover).
8. **Macroglossa fervens.**

*Macroglossa fervens*, Butler, P. Z. S. 1875, p. 4, pl. i. fig. 3.

**Canara (Ward).**

Type, B.M.

9. **Macroglossa avicula.**


**Java (Argent).**

Type, B.M.

10. **Macroglossa bombylans.**


**North India (Stevens); Hong-Kong (Bowring).**

In Mr. Moore's collection labelled "Deyra Doon."

11. **Macroglossa pylene.**


**Amboina.**

12. **Macroglossa tristis.**

*Macroglossa tristis*, Schaufuss, Nunquam Otiosus, i. p. 22 (1870).

**China.**

I believe this to be *M. bombylans* faded; if so, the name will take priority.

13. **Macroglossa trochilus.**

*Psithyros trochilus*, Hübner, Samml. exot. Schmett. ii. pl. 158. figs. 1–4 (1806).


**Natal (Gcinzius); South Africa (Smith); Cape (Drège).**

B.M.

14. **Macroglossa trochoideas.**

*Macroglossa trochoideas*, Butler, P. Z. S. 1875, p. 5. no. 6.

**Sierra Leone (Foxcroft).**

Type, B.M.

15. **Macroglossa glaucoptera.**

*Macroglossa glaucoptera*, Butler, P. Z. S. 1875, p. 241, pl. xxxvi. fig. 9.

**Ceylon (T. Skinner).**

Type, coll. F. Moore.
16. **Macroglossa nigrifasciata.**

*Macroglossa nigrifasciata*, Butler, P. Z. S. 1875, p. 241, pl. xxxvii. fig. 3.

Ceylon. 

Type, coll. F. Moore

17. **Macroglossa belis.** (Pl. XC. figs. 6, 7.)

*Sphinx belis*, Cramer, Pap. Exot. i. p. 147, pl. 94. fig. C (1779).

*Macroglossu assimilis* (sic), Swainson, Zool. Ill. 2nd ser. vol. i. pl. 64 (1820).

North India (Stevens); Canara (Ward). 

B.M.

In my recent paper on new species of *Sphingidae* I have regarded this merely as a variety of *M. passalus*, allied to my *M. proxima*; I am now, however, convinced that it is a distinct species. I hesitated to separate it at first, on account of Cramer’s locality for *M. belis* being “China;” it is, however, quite possible that both species occur in China, and still retain their distinctive characteristics. They are not more nearly allied than other *Sphingidae* inhabiting far more restricted regions; and in a revision of any group of animals I am satisfied that it is far safer to err on the side of too much subdivision than of too little, much mischief having arisen as regards the multiplication of synonyms through the incautious association of different-looking forms together; Mr. Moore received *M. belis* from the Himalayas.

18. **Macroglossa luteata.**

*Macroglossa luteata*, Butler, P. Z. S. 1875, p. 241, pl. xxxvii. fig. 5.

Silhet. 

Type, coll. F. Moore.

19. **Macroglossa alcedo.**

*Macroglossa alcedo*, Boisduval, Voy. de l’Astrolabe, Ent. p. 188. no. 2 (1832–1835).

Dorey (Wallace). 

B.M.

Nearly allied to *M. proxima*. It is badly described, inasmuch as the primaries have two indistinct broad shining lilacine fasciae across them which are not mentioned; they are also chocolate-brown rather than black-brown; the orange band of secondaries is also dusky in the centre (a character not mentioned); and the anal tuft of abdomen is not varied with yellow, but terminates in a broad tawny band. The description is not quoted by Walker.

20. **Macroglossa proxima.**

*Macroglossa proxima*, Butler, P. Z. S. 1875, p. 4, pl. i. fig. 1.

Ceylon (Templeton); Canara (Ward); Silhet. Type, B.M.; Cambogia, coll. Moore.

21. **Macroglossa interrupta.**

*Macroglossa interrupta*, Butler, P. Z. S. 1875, p. 242, pl. xxxvii. fig. 2.

Darjeeling.

Type, coll. F. Moore.
22. Macroglossa passalus.

Macroglossa passalus, Drury, Exot. Ins. ii. p. 52, pl. 29. fig. 2 (1773).


Shanghai (Fortune); Hong-Kong (Bowring).

Mr. Moore has an example of what I believe to be a variety of this species from Penang.

23. Macroglossa sitiene.


Silhet?

Under this species Mr. Walker placed several examples of M. belis, several of a small species near M. divergens, and one specimen of M. trochilus; fortunately the type was marked.

24. Macroglossa pyrrhosticta. (Plate XC. fig. 8.)

Macroglossa pyrrhosticta, Butler, P. Z. S. 1875, p. 242, pl. xxxvi. fig. 8.

Shanghai.

Bred in Japan by Mr. George Lewis.

25. Macroglossa insipida.


Ceylon (Skinner).

Type, coll. F. Moore.

26. Macroglossa corythus.


Java (Horsfield).

A constant and tolerably well-marked species strictly confined to Java. Several other species were placed with it by Mr. Walker; and the labels to M. corythus and M. gilia were transposed in the cabinet.

27. Macroglossa gilia. (Plate XC. figs. 9, 10.)

Macroglossa gilia, Herrich-Schäffer, Samml. annsereurop. Schmett. pl. 23. fig. 107 (1850-1858).

Nearly allied to M. corythus, but all the markings of primaries darker and better-defined, the inner transverse bar filled in with blackish towards internal margin; secondaries with subcostal area (uniting with transverse band) orange; body rather darker; under surface of wings redder. Expanse of wings 2 inches.

Silhet (Stainsforth).

Type, coll. F. Moore.

A local representative of M. corythus. We have two examples in the collection of the British Museum; it is in Mr. Moore’s collection from Darjeeling.

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The larva of *M. gilia* is white, speckled with green; the anterior segments, horn, a lateral longitudinal line, and seven oblique streaks between the spiracles (which are minute and orange) green. It feeds upon *Paxeria fictida*.

28. **MacroGLOSSA CATAPYRRA.**

*MacroGLOSSA catapyrra*, Butler, P. Z. S. 1875, p. 243, pl. xxxvi. fig. 6.

North India (coll. Moore); Ceylon (Templeton).

29. **MacroGLOSSA OBCURA.**

*MacroGLOSSA obscura*, Butler, P. Z. S. 1875, p. 5, pl. i. fig. 2.

Java (Horsfield).

30. **MacroGLOSSA ORIENTALIS, n. sp.**

Allied to the preceding and to *M. sitiene*; primaries as in *M. fervens*, but larger and rather paler; secondaries as in *M. passalus*, but with the yellow band rather broader, clearer, and more sharply defined; body as in *M. belis*; wings and body below almost precisely as in *M. corythus*. Expanse of wings 2 inches 1 line.

Moulmein (Clerck).

31. **MacroGLOSSA DIVERGENS.**


Ceylon (Templeton).

This species is intermediate in character between *M. sitiene* and *M. proxima*; it is in Mr. Moore's collection from Canara.

32. **MacroGLOSSA FARO.**


Java (Horsfield).

33. **MacroGLOSSA HEMICHRMA.**


Silhet.

34. **MacroGLOSSA RECTIFASIA.**

*Rhamphoschisma rectifascia*, Felder, Reise der Nov. Lep. iv. tab. 75. fig. 7 (Nov. 1874).

Allied to *M. sitiene* and *M. imperator*; it more nearly approaches the latter. I can see no reason why this species should be separated from *MacroGLOSSA*. 
35. **Macroglossa scottiabum.**

*Rhamphoschisma scottiabum*, Felder, Reise der Nov. Lep. iv. tab. 75. fig. 8 (Nov. 1874).

——?

36. **Macroglossa imperator.**

*Macroglossa imperator*, Butler, P. Z. S. 1875, p. 243, pl. xxxvii. fig. 4.

Ceylon (T. Skinner).

Type, coll. F. Moore.

37. **Macroglossa hirundo.**

*Macroglossa hirundo*, Boisduval, Voy. de l' Astrolabe, Ent. p. 188. no. 1 (1832–35).

Taiti.

Possibly the variety of *M. errans* in which the transverse white band is interrupted; the description of *M. hirundo* was overlooked by Walker.

38. **Macroglossa errans.**


Moreton Bay (Gibbons); Australia (Strange).

Type, B.M.

The type is from Moreton Bay, and has the transverse band of primaries distinct and white.

39. **Macroglossa micacea.**


Moreton Bay (Gibbons); Australia (Strange).

Type, B.M.

The example described as the female of this species is quite distinct.

40. **Macroglossa nox.**


Rockingham Bay (*Macquillay*).

Type, B.M.

41. **Macroglossa erato.**


Los Angeles (*Lorquin*).

Not like any other species; the primaries ashy grey, with a broad black border; several little transverse black lines at the base; secondaries white, with a very broad black border; fringes whitish; body black; pectus greyish white; palpi white.


1. **Aellopus tantalus**.

*Sesia tantalus*, Fabricius, Ent. Syst. iii. 1, p. 379, no. 1 (1793).
*Sphinx zonata*, Drury, Ins. Exot. i. p. 57, pl. 26, fig. 5 (1770).
*Sphinx tripunctata*, Goze, Beytr. iii. 2, p. 216, no. 43 (1780).

Jamaica (Gosse); Haiti (Tweedie); St. Thomas.

Mr. Walker confounded this with the next species in his Catalogue.

2. **Aellopus fadus**.

*Sphinx fadus*, Cramer, Pap. Exot. i. p. 95, pl. 61. fig. C (1779).
*Sesia fadus*, Fabricius, Ent. Syst. iii. 1, p. 378 (1793).
*Macroglossum annulosum*, Swainson, Ill. iii. pl. 132. fig. 1 (1823).

Venezuela (Dyson); Mexico (Hartweg); Brazil.

3. **Aellopus blaini**.


Cuba.

4. **Aellopus sisyphus**.


Rio Janeiro.

5. **Aellopus commasi**.


Sierra Leone (Morgan).

This species at first sight looks very like *M. tantalus*; but the primaries are destitute of hyaline spots, and the body has two segments blue-white instead of one segment snow-white.
6. Aëllopus hirundo.


September, 1862, Mombas (Gerstäcker).

Allied to *A. commasia*, but constantly differing in the clothing of the upper surface of the head, thorax, base of abdomen, and of the wings, which are greyish mouse-brown; the bands of the primaries are also not arranged in pairs, but are wide apart; the dorsal region of the abdomen has the third and fourth (not the second and third) segments banded with blue-white.

This species is also said to occur at the Cape.

**Genus 7. Stenolophia, Felder.**


*Stenolophia tenebrosa*.

*Stenolophia tenebrosa*, Felder, Reise der Nov., Lep. iv. tab. lxxxii. fig. 3 (Nov. 1874).

? Very like *Perigonia glaucescens*, Walker; and (not having seen the insect) I am rather inclined to think it is a nearly allied *Perigonia* with the anal tuft rubbed off.

**Genus 8. Eupyrrihoglossum, Grote.**


1. *Eupyrrihoglossum sagra*.


*Macroglossum harpygus*, Schaffuss, Nunquam Otiosus, i. p. 22 (1870).

Brazil (*Doubleday*); Colombia (*Becker*). B.M.

2. *Eupyrrihoglossum ! ceculus*.


*Macroglossum fasciatum*, Swainson, Ill. iii. pl. 132. fig. 2 (1823).


Pará (*Smith*); Brazil (*Doubleday and Mornay*); Mexico (*Argent*). B.M.
Genus 9. **Perigonia** (Herrich-Schäffer), Walker.


1. **Perigonia glaucescens**.


Haiti (Tweedie).

Somewhat similar to *Macroglossa tantalus*.

Type, B.M.

2. **Perigonia divisa**.


Cuba (Gundlach and Poey).

3. **Perigonia restituta**.


Mexico (Hartweg); Venezuela (Dyson); Pará (Smith).

In the ‘Supplement’ Mr. Walker retained the name of *P. lusca* for this species, renaming the typical form *P. interrupta*.

Type, B.M.

4. **Perigonia ilus**.


“Honduras and Mexico” (Boisduval); ——— ?

B.M.

I should hardly call the primaries of *Perigonia* “sinueuses;” they are rather waved, but only slightly so. The present species may, I think, be a variety of *P. lusca*; I must confess my inability to discover its resemblance to *Thyresus abbotii*; it would even have been better to have compared it with *Lophura continua*.

5. **Perigonia lusca**.

*Sphinx lusca*, Fabricius, Sp. Ins. iii. p. 140. no. 5 (1781).


Guatemala (Sallé); Haiti (Tweedie); Mexico (Argent).

Type, B.M.

There can be no doubt about the identification of this species; for Fabricius says, “Postice supra atra, fascia magna fulva, que tamen marginem tenuiorem hanc attingit. Angulus ani cinereus, litura fulva. Habitat in America meridionalis insulis.”

6. **Perigonia lefebvrei**.


Cuba (Poey).

Smaller than the preceding, with no orange spot at anal angle.

1 The italics are mine
7. Perigonia stulta.

*Perigonia stulta*, Herrich-Schäffer, Samml. aussercurop. Schmett. fig. 106 (1850–1858).

Cuba (Poey).

In this species the orange band of secondaries absorbs the entire base of the wing.


*Macroglossa doto*, Schaufuss, Nunquam Otiosus, i. p. 21 (1870).

"Africa?"

If this is a *Perigonia* the locality is unquestionably wrong, as Dr. Schaufuss suspects (believing that Dr. Kaden, in the dark, labelled it with a blue ticket instead of a green one). The species is said to be allied to *P. stulta*.


*Macroglossa affinis*, Schaufuss, Nunquam Otiosus, i. p. 21 (1870).

Venezuela.

Described as a variety of the preceding, and (according to what Dr. Schaufuss says) scarcely differing from it.


Allied to *Eupyrrohoglossum*. Primaries with the apex produced and excavated; inner margin deeply excavated below external angle (rendering the angle very acute). Palpi less strongly angulated. Antennae comparatively rather shorter. Anal tuft of abdomen very broad, short, and dense.

Type *P. subhamata*.

1. Pachygonia subhamata.


*Pachygonia caliginosa*, Felder, Reise der Nov., Lep. iv. tab. 75. fig. 10 (1874).

*Macroglossa gigauena*, Schaufuss, Nunquam Otiosus, i. p. 20 (1870).

♀, Mexico (Argent); ♂, Venezuela (Dyson); Pará (Bates). Type, B.M.

Boisduval’s descriptions will of course take priority over Felder’s figures, excepting (as in the present case) when they are forestalled by those of other authors.

2. Pachygonia coffi.e.


Brazil (Stevens) Type, B.M.
3. **Pachygonia abboti**.

*Macroglossa abboti*, Schauffuss, Nunquam Otiosus, i. p. 21 (1870).

Colombia.

Seems to be nearly allied to *P. coffeae*.

4. **Pachygonia magna**.

*Perigonina magna*, Felder, Reise der Nov., Lep. iv. tab. 75. fig. 12 (Nov. 1874).

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Possibly identical with the preceding; it comes better with *Pachygonia* than with *Perigonina*, although it may eventually have to be placed with *P. coffeae* in a new genus.

**Genus 11. Rhodosoma, n. gen.**

Allied to *Perigonina*. Primaries elongate, triangular. Secondaries subtriangular, rounded at apex, subangulated at anal angle. Discocellulars of all the wings convex. Discoidal cell of secondaries very short. Head small. Palpi obtuse, conical in front. Antenne long and slender. Thorax and abdomen very robust; the latter compressed, truncate behind, with small lateral and terminal tufts. Tibiae of second and third pairs of legs terminating in two strong diverging spines.

Type *R. triopus*.

**Rhodosoma triopus**.


Siluet (*Stainsforth*).

The type was described as from Assam.

**Genus 12. Thyreus, Swainson.**

*Thyreus*, Swainson, Zool. Ill. vol. i. pl. 60 (1821).

**Thyreus abboti.**

*Thyreus abbotii*, Swainson, Zool. Ill. vol. i. pl. 60 (1821).


Georgia (*Abbot*); New York (*Doubleday*).

The larva is also figured by Scudder in Harris's 'Correspondence,' pl. iii. fig. 1 (1869), and by Packard in his 'Guide,' p. 276. fig. 203.


**AMPHION NESSUS.**


Trenton Falls (*Doubleday*); Orilla, Canada West (*Bush*). B.M.


**DEIDAMIA INSCRIPTA.**


"Atlantic district" (*Grote*).

Mr. Grote queries this as the *Sphinx japix* of Cramer. I can hardly believe it to be that species; but if so, Mr. Walker's genus *Unzela* will take priority.

Genus 15. Unzela, Walker.

**UNZELA JAPIX.**

*Unzela japix,* Cramer, Pap. Exot. i. p. 137, pl. 87. fig. C (1779).

*Enyo japix,* Hübner, Verz. bek. Schmett. p. 132. no. 1416 (1816).


*Unzela discrepans,* Walker, i. e. no. 1 (1856).

*Cornipalpus succinctus,* Felder, Reise der Nov., Lep. iv. tab. 82. fig. 6 (Nov. 1874).

Rio Janeiro (*Stevens*). B.M.

For information respecting Cramer's locality for this species see Proc. Ent. Soc. Phil. vol. v. p. 192 (1865).


**PROSERPINUS JANOTHEAE.**

*Proserpinus antherae,* Fabricius, Sp. Ins. ii. p. 141. no. 10 (1781).

*Proserpinus antherae,* Hübner, Verz. bek. Schmett. p. 132. no. 1413 (1816).

vol. IX.—Part X. No. 4.—October, 1876.
Pterogon anothere, Boisduval, Ind. Meth. p. 46. no. 372.
Sphinx proserpina, Pallas, Spic. Zool. ix. p. 26, pl. 2. fig. 7 (1772).

Europe (Becker).

2. Proserpinus clarkie.
Pterogon clarkie, Boisduval, Ann. Soc. Ent. Fr. 2e sér. x. p. 319 (1852).

California (Lord Walsingham).

3. Proserpinus gaurè.
Sphinx gaurè, Smith and Abbot, Ins. Georgia, vol. i. p. 61, pl. 31 (1797).
Thyreus gaurè, Walker, Lep. Het. viii. p. 100. no. 9 (1836).

Georgia (Abbot); ? Texas (Clemens).

4. Proserpinus gorgon.
Sphinx gorgon, Esper, Eur. Schmett. ii. Cont. 22, pl. 47. fig. 5 (1777).
Pterogon gorgon, Duponchel, Hist. Nat. Lép. Fr., Suppl. ii. p. 23, pl. 3. fig. 2 (1832).
Pterogon gorgoniades, Boisduval, Ind. Meth. p. 32.

South Russia.

Genus 17. Euproserpinus, Grote and Robinson.


Euproserpinus phaëton.


California (Weidemeyer).


1. Temnora natalis.


Natal (Goezinzius)
2. Temnora (!?) caudata.


North China.

I do not believe this to be either a *Thyreus* or a *Temnora*; but not having seen it, I am unable to refer it to its right genus.


1. **Lophura plagiata.**


Port Natal (*Gueinzius*). Types, B.M.

2. **Lophura sardanus.**


Sierra Leone (*Morgan*). Type, B.M.

3. **Lophura? excisa.**


Port Natal.

4. **Lophura masuriensis.**

*Lophura masuriensis*, Butler, P. Z. S. 1875, p. 244, pl. xxxvi. fig. 3.

Masuri, North-west Himalayas. Type, coll. F. Moore.

5. **Lophura pusilla.**

*Lophura pusilla*, Butler, P. Z. S. 1875, p. 244. n. 17.

Silhet. Type, coll. F. Moore.

6. **Lophura nana.**


Port Natal (*Gueinzius*). Type, B.M.

7. **Lophura zanthus.**

*Lophura zanthus* (sic), Herrich-Schäffer, Exot. Schmett. pl. 23. fig. 105 (1850–1858).

Cape of Good Hope.

A large species having the form of _L. hyas._
8. *Lophura hyas.* (Plate XC. figs. 1–3.)


Hong-Kong (*Champion*); Silhet (*Doubleday*); Java (*Horsfield*). Type, B.M.

The larva of this species is green, varied with red-brown; or red-brown, with lateral oblique whitish lines and greenish anterior segments; the horn always very long and hair-like. The horn of one larva is frequently devoured by another.


*Sphinx asiliformis*, Fabricius, Ent. Syst. iii. 1, p. 357. no 7 (1793).

India.

The secondaries of this species are described as “red, with a black margin.”

10. *Lophura continua.*


Espirito Sancto (*Stevens*); Brazil (*Becker*). Type, B.M.

11. *Lophura pylas.*


*Lophura brisæus*, Walker, i. c. no. 2 (1856).


Caffraria (*Becker*); South Africa (*Smith*); Cape (*Drège*); Port Natal (*Gneinzius and Plant*). B.M.


1. *Calliomma? pluto.*


Brazil (*Stevens*). B.M.

I cannot agree with Mr. Grote in placing this insect with *Hemeroplanes*; it is much nearer in form to *Calliomma*, but seems in some respects to approach *Zonilia*; Cramer’s figure exaggerates the angulation of the primaries, which in reality is very slight.
2. **Calliomma nominus.**


Brazil (Becker). Type, B.M.

3. **Calliomma licastus.**


*Calliomma parce*, Ramon de la Sagra, Hist. Cuba, tab. 17. fig. 2.


Santa Cruz, St. Vincent (Doubleday); St. Thomas (Hornbeck); Haiti (Tweedie). B.M.

4. **Calliomma parce.**


West coast of South America (Kellett & Wood). B.M.

We have two examples of this species in the collection; I have compared them with the Banksian type, and have no doubt of their identity; they differ from *C. licastus* as follows:—Above and below altogether paler; the lilac marginal area of primaries replaced by buff; the bright multilunulate ochrous patch beyond cell of primaries obsolete; the silver marking smaller and more oblique; the spots on body obsolete. In form it differs also as follows:—wings longer; primaries narrower, outer margin less convex.

5. **Calliomma galiana.**


Altogether darker in tint than *C. licastus*; the primaries with the lilac area more diffused, the pale line from it to apex straight instead of inarched, and not edged outwardly with black; the multilunulate postcellular patch deeper in colour, distinctly interrupted, its outer edge curving outwards instead of slanting inwards; a dark discal nebulus between it and the external angle; all the transverse grey lines better defined; secondaries less uniform in colouring, the external area dusky; the dark patch on anal border quite black, but interrupted as usual; body more purplish in tint; abdomen with three increasing dark brown cordiform spots.

In form:—wings shorter; primaries with outer margin far less convex, inner margin more distinctly waved, the external angle consequently more prominent; outer margin scalloped; abdominal margin longer. Expanse of wings 75 millims.

Rio Janeiro (Steevens). B.M.

This species is probably confined to Southern South America; I have no doubt that it is quite distinct from *C. licastus.*
6. Calliomma calliomenae.

Philampelus calliomenae, Schaufuss, Nunquam Otiosus, i. p. 19 (1870).

Venezuela.

Unquestionably a Calliomma allied to C. lutescens.

7. Calliomma lutescens.

Calliomma lutescens, Butler, P. Z. S. 1875, p. 5, pl. 1. fig. 6.

Haiti (Tweedie).

I found this insect associated with C. thorates in the genus Pergesa.

8. Calliomma thorates.

Oreus thorates, Hübner, Zutrage, figs. 525, 526 (1825).


Haiti (Tweedie); St. Thomas (Hornbeck); St. Vincent (Doubleday); Oaxaca (Hartweg); New Granada.

Mr. Walker has been followed by Messrs. Clemens, Morris, and Grote in his reference of this species to the genus Pergesa; the latter appears, however, to be an exclusively Old-World group, with much less waved margins to the wings, and generally more prominent vertex to the head; the coloration of the primaries also shows a different character, whilst there is much in common between those of C. thorates and C. licastus. So far as I can see, the principal reason for the exclusion of C. thorates from Calliomma was the absence of the silver spot on the primaries; yet its position is indicated by a pale spot on the under surface.


1. Enyo lugubris.

Sphinx lugubris, Linnæus, Mantissa, ii. p. 537; Drury, Ill. Exot. vol. i. p. 61, pl. 28. fig. 2 (1770).


?, Enyo lugubris, Hübner, Zutrage, figs. 595, 596 (1825).


Haiti (Tweedie); Venezuela (Dyson); Mexico (Hartweg); St. Thomas (Hornbeck); Honduras (Dyson); Santarem (Bates); Rio (Stevens); Brazil (Doubleday). B.M.

On account, probably, of the difference in the sexes, and the difficulty of at once recognizing them, Mr. Walker confounded this species with E. cameratus, gorgon, and danum.
2. Enyo camer tus.

* Pterogon camer tus*, Burmeister, Sph. Bras. p. 16.

♂, ——— ? (Doubleday); ♀, Oaxaca (Hartweg). B.M.

Excepting in its usually slightly shorter wings, redder tint, and the pale subapical border, I see nothing to separate this from the preceding species; and as our female of *E. lugubris* from Haiti is of a redder tint still, and has the wings as short as *E. camer tus* ♂, whilst a female from St. Thomas has the wings even shorter than *E. camer tus* ♀, I have very little doubt that the two forms are variations of one species (see also Wallengren, *Ef. Vet. Akad. 1871*, p. 913); no doubt it would be easy to render it in appearance quite distinct were we to pick out all the small and pale females of *E. lugubris* (as it seems to me that my friend Grote must have done?); but as in our case the sexes arrived together from Haiti, this would be impossible.

3. Enyo danum.

* Pterogon danum*, Burmeister, Syst. Ueb. Sph. Bras. p. 16 (1856?).


Tabatinga, Peru (Degand); Bolivia (Buckley); Haiti (Tweedie). B.M.

This is a well-marked species, at once recognized by the fusiform sulphur-yellow patch on the abdominal margin of secondaries; I believe this to be the *Sph. ozypete* of Linnaeus.

4. Enyo gorgon.


♀, Brazil, ♀, Rio (Steenes); ♀, Venezuela (Dyson). B.M.

Hübner's *E. lugubris* is unquestionably the typical female of that species; it has the same scalloped outer margin, which, however, is wanting in this species.

1 If I have done Mr. Grote an injustice in this supposition, I know he will forgive me; but he mentions only "three female specimens" in his comparative description.
5. **Enyo cinnamomea.**


North Australia.

I very much doubt this being a true *Enyo*.

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**Genus 22. Aleuron, Boisduval.**


*Callenyo*, Grote (1873).

*Tylognathus*, Felder (1874), ex parte.

1. **Aleuron chloroptera.**

*Sphinx chloroptera*, Perty, Del. Anim. Artie. Bras. pl. 31, fig. 3.


Honduras.

The form of the palpi at once separates the above species from *Enyo*.

2. **Aleuron iphis.**


*Tylognathus scriptor*, Felder, Reise der Nov., Lep. iv. tab. 82. fig. 4 (1874).

Brazil (*Stevens*).

This differs a little from the type of the genus in the outline of the primaries.

3. **Aleuron prominens.**


Brazil.

Possibly a variation of the preceding species.

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**Genus 23. Tylognathus, Felder.**


1. **Tylognathus smerinthoides.**

*Tylognathus smerinthoides*, Felder, Reise der Nov., Lep. iv. tab. 82. fig. 5 (Nov. 1874).

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If the palpi of this species are correctly figured, it has a right to be considered distinct from *Aleuron*, although in general pattern it nearly approaches *A. chloroptera*; moreover in the form of the primaries it agrees with *Gonenyo carinata*. 
2. Tylognathius philampeoides.

*Tylognathius philampeoides*, Felder, Reise der Nov., Lep. iv. tab. 75. fig. 11 (Nov. 1874).

But for the palpi I should have supposed this to be the female of *Gonenyo carinata*.


*Gonenyo* (part.), Grote.

**Gonenyo carinata.**


Para (*Smith and Bates*).

At once distinguishable from *Enyo* by the form of the palpi, it differs also from *Callenyo* in the more highly developed palpi, the length of the abdomen, the undulation of the outer margin of primaries, &c.; whether it can be separated from *Tylognathius* can only be decided when we see examples of Felder’s species.


1. **Hemeroplanes triptolemus.**


Brazil (*Stevens*); Para (*Bates*); Ega (*Bates*). B.M.

Our example from Ega is rather paler than the type, and slightly redder in tint, the brown streak on the head and thorax obsolete, the abdomen more uniformly dark brown and distinctly annulated with yellow; it is probably only an individual variation.

2. **Hemeroplanes oiclus.**


Surinam.

3. **Hemeroplanes? pseudothyreus.**


“Tropical Insular District!”

Vol. ix.—Part x. No. 5.—October, 1876.
The figure of this species seems hardly to agree with Hemeroplanes, the antennæ being represented as thicker than in H. triptolemus, and without the terminal curvature common to that species and represented by Cramer in his species of this genus; in the form of the primaries also it seems almost to approach Philampelus.


Hemeroplanes pan, Hübner, Verz. bek. Schmett. p. 133. no. 1425 (1816).

Surinam.
I am inclined to think that this is an exaggerated Callionima.

Subfamily II. Chêrocampinæ.

Genus I. Acosmeryx, Boisduval.


1. Acosmeryx cinerea.

Acosmeryx cinerea, Butler, P. Z. S. 1875, p. 245 (1875).
Silhet (Argent). Type, B.M.

2. Acosmeryx sericeus.

♂ ♀, Silhet (Stainsforth and Argent); North India. Type, B.M.
Two species were confounded under this name by Mr. Walker.

3. Acosmeryx anceus. (Plate XC. figs. 11, 12.)

Philampelus anceus, Moore, Cat. Lep. E.I. Comp. i. p. 270. no. 624 (1857).
♀ "Amboina" (Cramer); ♂ ♀, Java (Horsfield). B.M.
Mr. Moore has specimens from Silhet and South India.

4. Acosmeryx miskini.

Queensland (Miskin). Type, B.M

1 This genus has the aspect of the genus Triptogon (Smerinthina); but the structure of the larva proves it to belong to the Chêrocampinæ.
The type of this species was presented to the collection by the Rev. R. P. Murray. It is exceedingly closely allied to *A. anceus* of Cramer, from the female of which it scarcely differs, excepting in its superior size, slightly broader and less angular primaries, and a dark brown longitudinal streak on the thorax; it may, I think, be the female of *Zonilia mixtura* of Walker.

5. *Acosmetryx mixtura.*


Aru.

Not having seen the type, I can only judge by the description that *Z. mixtura* is referable to this genus.


1. *Otus syriacus*.


*Siberia* (Lederer).

Allied to *O. cheirilus* of Cramer.

The genus *Otus* was restored to the first three species of Walker's *Darapsa* in 1865, thus restricting the group to nos. 4–10. But, as I have shown, all the species excepting no. 4 are referable to other genera previously formed; so that Mr. Grote, to all intents and purposes, fixed *D. rhodocera* as Walker's type. I find, however, that in the first vol. Bull. Buffalo Soc. Nat. Sci. p. 22 he has restored Walker's name to *Otus* of Hübner, a genus which is structurally distinct from the type already fixed; I am therefore unable to follow this later decision of his. He does not state his reasons for the alteration in the Bulletin, nor am I aware that he has done so elsewhere; still I am satisfied that so sound an entomologist has not acted capriciously.

2. *Otus cheirilus*.


*Sphinx azalea*, Smith and Abbot, Ins. Georg. vol. i. p. 53, pl. 27 (1797).

*Sphinx clarinda*, Martyn, Psyche, pl. 25. figs. 66, 67 (1797).

United States (*Doubleday*); West Canada (*Bush*).
3. *Otus myron.*


*Otus myron,* Hübner, Verz. bck. Schmett. p. 142 (1816).


*Sphinx pampinatrix,* Smith & Abbot, Ins. Georg. vol. i. p. 55, pl. 28 (1797).

*Charocampa pampinatrix,* Harris, Sill. Journ. vol. xxxvi. p. 301 (1839); Seudder, Harris's Correspondence, p. 283, pl. 1. fig. 10 (1869).


4. *Otus versicolor.*

*Charocampa versicolor,* Harris, Sill. Journ. vol. xxxvi. p. 303 (1839).


“Atlantic District!” (Grote).


5. *Otus pholus.*

*Sphinx pholus,* Cramer, Pap. Exot. i. p. 137, pl. 87. fig. B (1779).


“West Indies” (Cramer).

**Genus 3. Ampelophaga, Bremer & Grey.**

*Ampelophaga,* Bremer & Grey, Beitr. Schmett.-Fauna nördlichen China's, p. 11 (1853).

1. *Ampelophaga rubiginosa.* (Plate XCI. figs. 4, 5.)

*Ampelophaga rubiginosa,* Bremer & Grey, Beitr. zur Schmett.-Fauna nördl. China's, p. 11. no. 52 (1853).


Pekin; Japan (Lewis).

I have examined a specimen of this species taken by Mr. Lewis in Japan. It appears to be more nearly allied to the genus *Otus* of Hübner than to any thing else. I have also seen an example with a doubtful locality in Mr. Moore's collection. The larva, which feeds on a very common large-leaved creeping plant, is dark green at the sides, irrorated
and laterally striped with white; anterior segments and dorsal region sap-green, golden green in front of each segment; prolegs reddish; spiracles orange; the pupa is rather pale, red-brown, with the pectus and wing-covers whitish brown.

**Genus 4. Elibia, Walker.**


1. **Elibia dolichus.**

*Charocampa dolichus,* Westwood, Cab. Orient. Ent. p. 61, pl. 30. fig. 1 (1848).


Silhet (*Sowerby, Doubleday*).

2. **Elibia dolichooides.**

*Philampelus dolichooides,* Felder, Reise der Nov., Lep. iv. tab. 76. fig. 8 (Nov. 1874).

*Pergesa dolichooides,* Moore, P. Z. S. 1874, p. 577.

Sikkim (*Jerdon*). Coll. F. Moore.

This species has the same general pattern (with the exception of the whitish dorsal line) as the Sacrinthine *Polypteryx dentatus*.

**Genus 5. Pergesa, Walk.**


1. **Pergesa porcellus.**

*Sphinx porcellus,* Linnaeus, Syst. Nat. i. 2, p. 801. no. 18 (1766).

*Theretra porcellus,* Hübner, Verz. bck. Schmett. p. 135. no. 1148 (1816).


*Charocampa porcellus,* Westwood & Humphrey, Brit. Moths, i. p. 23, pl. 23. figs. 9, 10 (1843–5).


England (*British Collection*); Germany (*Becker*). B.M.

2. **Pergesa? acuta.**


Silhet (*Doubleday*).

Our two examples of this species differ much from one another in detail; but between them they perfectly answer (except in being rather larger) to Walker's description of *Z. acuta.* That his species is not a *Zonilia* I feel satisfied, not only from the name which he applies to it, but from the following points in his description:—"Abdomen with two
dorsal rows of black dots. Fore wings glaucous along the exterior border, and with several oblique rows of black dots. Hind wings brown, with an incomplete tawny stripe."

3. Pergesa acteus.


Silhet (Stainsforth); North India (James); East India, Bengal, Moulmein (Clerck); Ceylon (Templeton); Borneo (Lowe); Java (Horsfield).

B.M.

4. Pergesa irregularis.


West Africa (Doubleday).

Type, B.M.

5. Pergesa velata.


Darjeeling (Russell).

Type, B.M.

Mr. Moore has an example from the North-west Himalayas.

6. Pergesa castor.


Java (Henry).

B.M.

7. Pergesa olivacea.


*Pergesa castor*, var. β, Walker, l.c. (1856).

——— (? E. Doubleday).

B.M.

Walker asserts that this species is from Silhet, but there is no locality given for it in the register. It was presented to the collection by Mr. Doubleday along with many other species, most of them without localities. It is a well-marked species, and perfectly distinct from *P. castor*. The type in Mr. Moore's collection comes from Simla, North-west Himalayas, 7000 feet; it was taken by Capt. Lang.

8. Pergesa swinhoei.


Formosa (Swinhoe).

Type, coll. F. Moore.

This appears to me to be better placed in *Pergesa* than in *Charocampa*.


Darjeeling.
Possibly referable to *Panacra*, but certainly not to the New-World genus *Perigonia*; I have not seen the type.

10. **Pergesa castanea.**


Bombay. Type, coll. F. Moore. This is a curious dark little species, with a broad plumbaginous or silky greyish border to primaries.

11. **Pergesa vampyrus.**

*Sphinx vampyrus*, Fabricius, Mant. Ins. ii. p. 98. no. 66 (1787).

East Indies? Evidently a *Pergesa* with reddish secondaries.

12. **Pergesa agrota.** (Plate XCII. fig. 2.)

*Pergesa agrota*, Butler, P. Z. S. 1875, p. 246.

Silhet. Type, coll. F. Moore.

13. **Pergesa aurifera.**

*Pergesa aurifera*, Butler, P. Z. S. 1875, p. 7. no. 11.

Sikkim (Whitely); North India. Type, B.M. Mr. Moore has two examples of the brownish variation of this species, labelled “North-east Himalayas,” and a third, labelled “Darjeeling.”

14. **Pergesa fusimacula.**

*Pergesa fusimacula*, Felder, Reise der Nov., Lep. iv. tab. 76. fig. 1 (1871).

— Allied to the preceding, and to *P. castor*.

15. **Pergesa gloriosa.** (Plate XCII. fig. 3.)

*Pergesa gloriosa*, Butler, P. Z. S. 1875, p. 246.

Darjeeling. Type, coll. F. Moore.

**Genus 6. Panacra, Walker.**


1. **Panacra busiris.**


Silhet (Stainsforth, Doubleday). Type, B.M.
2. **Panacra testacea**.


——— ? (*Doubleday*); Ceylon (*Green*). Type, B.M.

3. **Panacra ella**. (Plate XCII. fig. 7.)

*Panacra ella*, Butler, P. Z. S. 1875, p. 246.

Silhet. Type, coll. F. Moore.

4. **Panacra assamensis**.


Silhet (*Stainsforth*). Type, B.M.

5. **Panacra truncata**.


Silhet (*Stainsforth*). Type, B.M.

6. **Panacra automedon**.


Silhet (*Stainsforth, Doubleday, Sowerby*). Type, B.M.

7. **Panacra mydon**.


Silhet (*Argent, Sowerby, Doubleday*); Barrackpore (*Hearsay*). Type, B.M.

8. **Panacra ? minus**.

*Sphinx minus*, Fabricius, Mant. Ins. ii. p. 96. no. 44 (1787).


India.

9. **Panacra metallica**.

*Panacra metallica*, Butler, P. Z. S. 1875, p. 6. no. 9.

North India (*Parry*). Type, B.M.

10. **Panacra orpheus**.

*Charocampa orpheus*, Herrich-Schäffer, Samml. aussereurop. Schmett. pl. 23. fig. 104 (1850-1858).

Cape of Good Hope.

11. **Panacra variolosa**.


Silhet.
12. Panacra scapularis.


Var. Panacra elegans, Herrich-Schäffer, Samml. ausseren. Schmett. pl. 83. fig. 479 (1850-58).

Java (Horsfield); Silhet (Sowerby). Type, B.M.

The example from Silhet and one of the Javan examples are quite different in appearance from the typical form, the ground-colour of the wings being much paler and without the usual reddish tint, and the bands and spots on the wings much darker; they agree with Herrich-Schäffer's figure. The transformations are figured by Moore.


Sumatra.

14. Panacra regularis. (Plate XCI. fig. 4.)


Java.

15. Panacra vigil.

Sphinx (Deilophila) vigil, Guérin-Méneville, in Delessert's Souv. Voy. dans l'Inde, pt. ii. p. 80, pl. 23. fig. 1 (1843).

Sphinx phaune, Herrich-Schäffer, Samml. ausseren. Schmett. pl. 83. fig. 478 (1850-58).


Colombo, Ceylon (Nietner); Ceylon (Templeton); Coimbatore, South India (Walhouse); B.M.

The larva is described by Dr. Semper, Verhandl. zool.-botan. Gesellsch. Wien, p. 699 (1867).


Cape York (Macleillray & Higgins). Type, B.M.

"The Ceylon specimen" mentioned by Mr. Walker is P. violet; it not only differs from P. lignaria in being "much smaller," but in its much paler wings with the black lines in the light band very indistinct.

17. Panacra ? bubastus.

Sphinx bubastus, Cramer, Pap. Exot. ii. p. 84, pl. 149. fig. E (1779).

Amblyptera bubastus, Hübnner, Verz. bek. Schmett. p. 133. no. 1431 (1816).

Caliooma bubastus, Walker, Lep. Het. viii. p. 112. no. 6 (1856).

Coromandel.

vol. ix.—part x. No. 6.—October, 1876.
Genus 7. Cizara, Walker.

Cizara ardeniae.

Sphinx ardeniae, Lewin, Prodr. Ent. iii. pl. 2 (1805).
Cizara ardeniae, Walker, Lep. Het. viii. p. 120. no. 1 (1856).

Australia (Strange, Stevens).


Allied to Pergesa and Panacea; at once distinguished by the strongly arched outer margin of the primaries, abruptly excavated above the external angle, also by the shorter body and much less prominent head.

Microlophia sculpta.

Microlophia sculpta, Felder, Reise der Novara, Lep. iv. pl. 75. fig. 9 (1874).

Primaries with basal two-thirds olive-brown, with the outer margin very irregular, festooned, with a buff edge; external third of wing whitish brown, darker along the margin; a transverse central horizontal whitish bar, terminating at the end of the cell in a hyaline spot; secondaries with basal third and abdominal area fulvous, costal area testaceous, remainder of the wing chocolate-brown, marked near anal angle by a whitish submarginal litura and two or three small black buff-zoned ocellated spots; body pale brown, with the pterygodes and a central prothoracic streak red-brown; wings below clay-coloured, and transversely crossed by indistinct dots and lines; primaries with end of cell brownish, a reniform discocellular hyaline white spot; body below sordid clay-colour. Expanse of wings 2 inches 2 lines.

South India (Ward).

Type, coll. F. Moore.


Basiothea idricus.

Sphinx idricus, Drury, Ill. Nat. Hist. iii. p. 2, pl. 2. fig. 2 (1773).
Deilephila idricus (sic), Boisduval, Faune Ent. de Madagascar. p. 73. no. 73, pl. 10. fig. 5 (1833).
Charocampa idricus (sic!), Guéné, Notes sur l’île de la Réunion, Lép. p. 21 (1862).
Sphinx echo, Fabricius, Ent. Syst. iii. 1, p. 377. no. 65 (1793).
Sphinx omoththinha, Martyn, Psych. pl. 22. figs. 58, 59 (1797).
Port Natal (Plant, Gueinzius); Sierra Leone (Morgan). B.M.
Wallengren (Öfvs. Vet. Akad. 1871, p. 913), publishes his opinion that his C. trans-
figurata is = B. idricus.


Allied to Charocampa. Antennae with recurved apex, furnished with a fasciculus of rigid hairs. Palpi ascending, forming a projection in front of the head as in Charocampa, hairy; last joint large, aciculier, pilose, robust; intermediate joint laterally compressed, with a slender fringe of hairs separated from the last joint by an interval destitute of hairs on its outer edge. Proboscis long, not concealed. Head porrect; vertex convex, crested. Thorax sloping from the vertex, very convex on the dorsum, smooth, with the pterygodes appressed. Abdomen thick. Form of the wings almost as in Charocampa, but broader; primaries with the apex not falcate, external angle more rounded; second-
aries with outer margin not excised.

Gnathostypsis ostracina.


Caffraria.


1. Diodosida murina.

Darapsa marginata, var. β, Walker, t. c. p. 185. no. 5 (1856).
♀, Port Natal (Stevens, Gueinzius). Type, B.M.

2. Diodosida marginata.

♂♀, Port Natal (Gueinzius). Type, B.M.

Very distinct from the preceding, but unquestionably belonging to the same genus.

3. Diodosida fumosa.

Cong ® (Richardson). Type, B.M.

The palpi in this species are rather long for the genus, and the prothorax is rather prominent; but the distinctions are scarcely sufficiently well marked to warrant its generic separation.
4. **Diodosida rhadamistus**.

*Sphinx rhadamistus*, Fabricius, Mant. Ins. ii. p. 93. no. 10 (1787).

Sierra Leone.


**Cypa ferruginea.**


Ceylon (*Stevens*).

**Type*, B.M.

**Genus 13. Chlerocampa, Duponchel.**


1. **Chlerocampa elpenor.**


*Charocampa elpenor*, Westwood & Humphrey, Brit. Moths, i. p. 22, pl. 51. figs. 7, 8 (1843-5).

Germany (*Becker*); England (*British Coll.*).

2. **Chlerocampa lewisi.** (Plate XC. figs. 13-15.)


Japan (*Lewis*).

Type, B.M.

3. **Chlerocampa macromera.**


*Silhet* (*Macgilliway*); ——— ? (*Doubleday*).

Type, B.M.

4. **Chlerocampa fraterna.**


Simla (*coll. F. Moore*); North India.

B.M.

5. **Chlerocampa mirabilis.** (Plate XCII. fig. 1.)

*Charocampa mirabilis*, Butler, P. Z. S. 1875, p. 248.

North-west Himalayas.

Type, *coll. F. Moore*.

1 Seems allied to *Pergesa*; but the head is much smaller and almost concealed by the thorax, as seen from above. It may belong to the *Smerinthince*, as suggested by Dr. Boisduval.
6. Chlorocampa alecto.

*Sphinx alecto,* Linnaeus, Mus. Lud. Ulr. p. 357 (1764); Drury, Ill. Exot. Ins. ii. p. 48, pl. 27. fig. 4 (1773).


*Deilephila alecto,* Boisduval, Ind. Meth. p. 46. no. 376.

*Chlorocampa alecto,* Walker, Lep. Het. viii. p. 139. no. 3 (1856).

*Deilephila cretica,* Boisduval, Faune Ent. de Madag. p. 71. no. 2 (1833).

North India (*James*); Landoor (*Hearsay*); Silhet (*Stainsforth*); Hong-Kong (*Stevens*);
Borneo (*Lowe*); Java (*Horsfield*). Var. ? altogether paler (possibly faded).

Turkey (*Loftus*). B.M.

7. Chlorocampa suffusa.


Hong-Kong (*Bowring*); Borneo (*Lowe, Wallace*). Type, B.M.

Allied to the preceding species.

8. Chlorocampa cecrops.


Cape.

This seems to be a remarkable variety of *C. capensis*; but it may be distinct.


*Sphinx immaculata,* Gmelin, Syst. Nat. i. 5, p. 2386; Zschach, p. 95. pl. 3. fig. 283.


Cape (*Drege, Milne, Becker*); Natal (*Gueinzius*); Zoolu (*Angas*). Somewhat like *C. alecto*, but altogether much paler. B.M.

10. Chlorocampa eson.


*Deilephila eson,* Boisduval, Faune Ent. de Madag. p. 71. no. 2 (1833).


Natal (*Gueinzius*); Cape (*Becker*). Evidently quite distinct from the Indian *C. theylia*; it is as large as *C. suffusa*, which it is not unlike.
11. Chtherocampa gracilis.

Chtherocampa gracilis, Butler, P. Z. S. 1875, p. 8, pl. ii. fig. 2.

Congo (Richardson); Sierra Leone (Morgan). Type, B.M.


Chtherocampa elegans, Butler, P. Z. S. 1875, p. 8, pl. ii. fig. 1.

♂, Java (Horsfield); ♀, Silhet (Stainsforth).

In Mr. Moore's collection from North-east Bengal. Type, B.M.

13. Chtherocampa thylia.


Chtherocampa thylia (sic), Moore, Cat. Lep. E.I. Comp. i. p. 276. no. 638 (1857).

Sphinx boehmite, Fabricius, Syst. Ent. p. 542. no. 22 (1775); Sulzer, Gesch. Ins. p. 40. no. 3, pl. xx. fig. 3 (1776).

Sphinx pinastrina, Martyn, Psyche, pl. 30. fig. 85 (1797).

Sphinx octoquincula, Gmelin, Syst. Nat. i. 5, p. 2386; Zschach, p. 95. no. 286.


North India (Argent, Hearsay); Ceylon (Templeton); Hong-Kong (Bowring); Sàràwak (Walace). B.M.

14. Chtherocampa rafflesii, Horsfield, MS.

Sphinx thylia ♂, Cramer, Pap. Exot. iii. 1, p. 58, pl. 226. fig. F (1782).

♂, Java (Horsfield); ♀, Canara (Ward).

The above is easily distinguished from C. thylia, Linneus (see Cramer, Pap. Exot. iii. pl. 226. fig. F), by its deeper coloration, the two continuous parallel dark bands of the primaries, and the uniformly dark dull red of the secondaries; it may, perhaps, be only a dark variety. Mr. Moore has it from Madras. Type, B.M.

15. Chtherocampa trilineata.


Venezuela (Dyson).

Type, B.M.

Very similar to the preceding, but much larger, with more elongated primaries.


Surinam.

Only differs from the preceding in the narrower red band of the secondaries.
17. Charocampa curvata.

♀, Charocampa curvatus (sic), Schaufuss, Nunquam Otiosus, i. p. 17 (1870).
Cuba (Gundlack).
Allied to the preceding according to the author.

18. Charocampa † brasiliensis.

Charocampa brasiliensis, Schaufuss, Nunquam Otiosus, i. p. 18 (1870).
Brazil.
The author of this species merely indicates the differences existing between it and
"C. jason," Linn. That species is not described in the 'Systema Naturaë'; nor is it referred
to in Fabricius, Ent. Syst. As he places it next to the Thorates of Hübner, I doubt its
being a Charocampa.


♀ ?, Port Natal (Guèinzius, Higgins).
B.M. 
Differ from C. charis in its superior size, broader wings, the single silver line on the
body, and the single brown line in the whitish band of primaries.

20. Charocampa charis.

Port Natal (Plant, Guèinzius, Stevens).
Type, B.M.
This and the preceding species have much the aspect of Deilephila.


Congo (Richardson).
Type, B.M.
Perhaps a faded example of the preceding.

22. Charocampa osiris.

Deilephila osiris, Dalman, Analecta Entom. p. 48. no. 21 (1823); Boisduval, Icon. Hist. Lép., Sph.
p. 18, pl. 49. fig. 1 (1832).
Natal (Guèinzius); Madagascar (Pfeiffer) —— ? (Doubleday); Sierra Leone
(Morgan).
B.M.

23. Charocampa celerio.

(1779).
Hippotion ocyx, Hümer, Verz. lck. Schm. p. 135. no. 1451 (1816)
Deilephila insignita, Harris, Ex. p. 33, pl. 28. fig. 1.

England (British Coll.); Natal (Krauss, Gueinzius); Zoolu country (Angas); South Africa (Smith); Cape, Teneriff, North India (Argent, Stevens); Borneo (Lowe); Java (Horsfield); Fiji (Voy. Herald); Australia (Stutchbury); South Australia (Bakewell); Sidney (Lambert).

B.M.

The examples from Australia and the Fiji Islands are more brilliantly silvered than those from other parts of the world; otherwise there is no variation in the species.

24. Chromocampa boisduvalii.
Deilephila celerio, Boisduval, Icon. Hist. Lép., Spb. p. 20. no. 2, pl. 49. fig. 2 (1832).

Caucasus.

Intermediate in character between the C. celerio and C. oldenlandiae groups; Hopffer, in the Stettin. ent. Zeit. p. 42. no. 130 (1874), remarks of C. lucasi, "Lucasii wird kaum als Varietät von Boisduval's celerio zu trennen sein," an idea as absurd as it is original: the paper in which it appears is full of equally useful and suggestive observations, the only synonymic notes of any value being, almost without exception, adopted from previously published Lepidopterous Catalogues and their "Errata;" he has, however, rightly restored Daphnis hypothoös to its genus, which Walker had most incomprehensibly failed to do.

25. Chromocampa celano.
Sphinx celano, Esper, Schm. ii. tab. xxviii. Cont. iii. fig. 2 (1779).

Natal (Gueinzius); Cape (Drège); Zoolu (Angas); South Africa (Pamplin). B.M.

Esper's figure unquestionably represents the *Sphinx gordius* of Cramer.

*Sphinx caius,* Cramer, Pap. Exot. ii. p. 80, pl. 146. fig. F (1779).
*Xylophaeus caius,* Hümer, Verz. bek. Schm. p. 136. no. 1459 (1816).

Cape.

Mr. Walker queries this as *C. oldenlandia*, var. I believe myself that it is a bad representation of *C. celano*.

27. Chromocampa sactavorum.
Deilephila sactavorum, Boisduval, Faune Ent. de Madag. p. 71. no. 1, pl. 10. fig. 6 (1833).

Madagascar.

This species may perhaps belong to the *D. clotho* group.
28. **Cheerocampa drancus.**


*Charocampa drancus* (sic), Proc. Ent. Soc. Phil. 1861, Index.

"East Indies" (Cramer).

29. **Cheerocampa oldenlandiae.** (Plate XCI. fig. 1.)


North India (James, Argent, Stevens); Landoor (Hearsey); North Bengal (Saunders); Shanghai, Java (Horsfield).

The larva is dark slaty-brown, with continuous lateral series of varied but chiefly red-brown ocellated spots; the anterior segments sometimes black laterally and dorsally; the remaining segments sometimes laterally speckled with whitish; the falces, legs, and anal clasps black; a black style-shaped anal horn, much like a needle sticking out of the body; it feeds on *Cissus*, *Colocasia*, and *Balsaminea*.

30. **Cheerocampa argentata.**

*Charocampa argentata*, Butler, P. Z. S. 1875, p. 8, pl. ii. fig. 3.


Moreton Bay (Gibbons); Sidney (Lambert); North Australia (Elsey); Australia (Stutchbury, Stevenson, Stevens).

Type, B.M.

The only example which could be Walker’s type was placed in the collection amongst our examples of *C. oldenlandiae* without any distinguishing label; it is evident, therefore, that (if it be the type) Mr. Walker must subsequent to his description of the species have considered it identical with *C. oldenlandiae* and abandoned it, throwing away the ticket; and as none of his types were labelled by him, this act would at once destroy the best means of identifying his species. As it is, the example obtained from Mr. Stevens of *C. argentata* differs in several important points from the description of *C. firmata*.

31. **Cheerocampa rosina.**

*Charocampa rosina*, Butler, P. Z. S. 1875, p. 248, pl. xxxvii. fig. 6.

Masuri, N.W. Himalayas (Hutton).

Type, coll. F. Moore.
32. **Chlorocampa silhetensis.** (Plate XCII. fig. 8.)


*Chlorocampa bicincta*, Moore, Cat. Lep. E.I. Comp. i. p. 278 (1857).

North India (*Stevens, James*); Silhet (*Stainsforth*); Ceylon (*Templeton*); Borneo (*Lowe, Wallace*); Java (*Horsfield Coll.*).

The larva is bright green or pale green, with the dorsal area red-brown, with a lateral pale stripe uniting a series of ocellated spots; the green form has also a pale lateral ventral fold, and a dark dorsal line, horn yellow; the dark form has a pale dorsal line, horn red-brown. It feeds on *Colocasia*, according to Mr. Lewis.

33. **Chlorocampa balsaminæ.**


Port Natal (*Plant, Gueinzius*).

Allied to *C. japonica*.

34. **Chlorocampa japonica.** (Plate XCI. figs. 7–9.)

*Chlorocampa japonica*, Boisduval, in De l'Orza's Lép. Japonais, p. 36. no. 79 (1869).

Hakodadi (*Stevens, Whitely*); Shanghai (*Fortune*); Japan (*Lewis*).

B.M.

Closely allied to *C. lycetus*, but compared by M. Boisduval to *C. oldenlandiae*.

The larva, collected by Mr. Lewis in Japan, is either pale green with a darker green white-bordered lateral longitudinal streak from the sixth segment to the horn, or pale clay-colour with a similar streak, sometimes with the first two or three segments greenish, two or three lateral ocelli, beginning from the front of the fifth segment, horn, and prolegs reddish; the clay-coloured variety with a lateral series of cornucopia-shaped markings between the spiracles. It feeds on *Cissus*.

35. **Chlorocampa lycetus.**

*Sphinx lycetus*, Cramer, Pap. Exot. i. p. 96, pl. 61. fig. D (1779).


"Bengal" (*Cramer*).

Mr. Walker thinks this may be a variety of *C. oldenlandiae*; excepting in the silver lines on abdomen, it is more like *C. japonica*.

36. **Chlorocampa lucasi.**


North India (*Doubleday, James*); Silhet (*Stainsforth*); Ceylon (*Nietner, Templeton*); Hong-Kong (*Bowring*); Borneo (*Lowe, Wallace*).

Type, B.M.
Mr. Moore has this species from Silhet and Bombay, also a very dark example from Ceylon; the latter may prove to be distinct.

37. **Chcerocampa comminuens.**


Moreton Bay (*Diggles*).

38. **Chcerocampa inornata.**


North Australia (*Elsey*).

39. **Chcerocampa porcus.**

*Oreus porcus*, Hübner, Samml. exot. Schmett. ii. pl. 162 (1806).

"Tropical Insular District" (*Grote*).

40. **Chcerocampa velox.**

*Sphinx velox*, Fabricius, Ent. Syst. iii. 1, p. 378. no. 68 (1795).

East India.

Seems allied to *C. porcus*, but according to Fabricius comes near *C. tersa*.

41. **Chcerocampa butus.**

*Chcerocampa butus*, Herrich-Schäffer, Samml. auss. Schm. ii. fig. 559 (1860).

Coromandel.

42. **Chcerocampa cyrene.**


♀, Java (*Horsfield*).

Allied to *C. lucasii*, but lighter and redder in tint, and with usually a larger testaceous patch at anal angle of secondaries; abdomen of female with a distinct black spot on each side at base.

43. **Chcerocampa clotho.**

Var. ♀ *Sphinx butus*, Fabricius, Ent. Syst. iii. p. 377. no. 64 (1793).
Silhet (Sowerby); North India (James, Stevens); Moulmein (Clerk); Ceylon (Templeton).

The larva and pupa of C. clotho are figured by Dr. Semper, Verhandl. zool.-botan. Gesellsch. Wien, 1867, pl. xxii. figs. 3a, 3b, 3c.

Mr. Moore has this species from Masuri and Bombay; it varies much in tint.

44. Clarocampa punctivenata.


Masuri (Hutton); Silhet.

Type, coll. F. Moore.

45. Clarocampa bistrigata.

*Charocampa bistrigata*, Butler, P. Z. S. 1875, p. 249.

Java (Horsfield).

Colls. Moore and B.M.

46. Clarocampa gonograpta.

*Charocampa gonograpta*, Butler, P. Z. S. 1875, p. 249.

Bombay and South India.

Type, coll. F. Moore.

47. Clarocampa minor.

*Charocampa minor*, Butler, P. Z. S. 1875, p. 249.

Masuri (Hutton).

Type, coll. F. Moore.

48. Clarocampa major.

*Charocampa major*, Butler, P. Z. S. 1875, p. 249.

Darjeeling (coll. Moore); Silhet.

B.M.

49. Clarocampa lineosa.


Silhet (Stainsforth).

Type, B.M.

50. Clarocampa anubus.


Brazil, Rio (Stevens).

Our examples are smaller, paler, and have larger spots on secondaries than the figure by Cramer.

B.M.

51. Clarocampa falco.


Mexico (Doubleday, Hartweg).

Type, B.M.
52. Chaerocampa robinsonii.

Chaerocampa robinsonii, Grote, Proc. Ent. Soc. Phil. v. p. 51, pl. 1. fig. 2 (1865); Herrich-Schäffer, Samml. ausseur. Schm. ii. fig. 555 (1869).


"Tropical Insular District" (Grote).

53. Chaerocampa tersa.

Sphinx tersa, Linneus, Mantissa, p. 538; Drury, Ill. Nat. Hist. i. p. 61, pl. 28. fig. 3 (1770).

Theretra tersa, Hübner, Verz. bek. Schmett. p. 135. no. 1449 (1816).

Deilephila tersa, Westwood in Drury’s Ill. i. p. 56, pl. 28. fig. 3 (1837).


Metopsilis tersa, Duncan, Nat. Libr. vol. xxxvii. pl. 5. fig. 1, pl. 6. fig. 1 (1852).


? Sphinx sagittata, Goeze, Beytr. iii. 2, p. 216. no. 42 (1780).

B.M.

Brazil (Mornay); Mexico (Hartweg); Jamaica, St. Thomas (Hornbeck); Haiti (Tweedie).


Chaerocampa hystrix, Felder, Reise der Nov., Lep., iv. tab. 76. fig. 5 (Nov. 1874).

I do not for a moment believe this to be a Chaerocampa; the form of the palpi and primaries (in Felder’s figure) differ entirely from this genus. However, as I have not seen the insect, I leave it provisionally in that group of Chaerocampa which it most resembles.

55. Chaerocampa crotonis.


Venezuela (Dyson).

Type, B.M.

56. Chaerocampa aristor.


"Guatemala" (Boisduval); Venezuela (Dyson).

B.M.

Differs from the preceding species in the colour of the primaries, the less distinct oblique lines crossing them, and the absence of the dorsal grey streak on the body.

57. Chaerocampa virescens. (Plate XCIV. fig. 2.)


Bogota (Stevens).

Type, B.M
58. **Chcerocampa nitidula.**


Mexico (Sallé).

Our example is intermediate between *C. nitidula* and *C. levis*; it possesses the "lateral caputal and thoracic discolorations," and the "abdominal double row of dark brown dots;" the primaries are "sparsely irrorate with black scales, especially terminally;" they also possess the angulated oblique line, but it is not so strongly defined as in Mr. Grote’s figure.

59. **Chcerocampa versuta.**


Mexico.

60. **Chcerocampa procne.**


California.

61. **Chcerocampa thalassina.**


?

Seems allied to *C. amadis*.

62. **Chcerocampa docilis.** (Plate XCIV. fig. 1.)

*Chcerocampa docilis*, Butler, P. Z. S. 1875, p. 9, n. 17.

Ecuador (Buckley).

Type, B.M.

63. **Chcerocampa amadis.**


Surinam.

64. **Chcerocampa gundlachii.**

*Chcerocampa gundlachii*, Herrich-Schäffer, Corr.-Blatt. 1863, p. 149.

"Tropical Insular District!" (Grote).

65. **Chcerocampa irrorata.**


"Tropical Insular District!" (Grote).
66. **Chcerocampa haitensis.**

*Chcerocampa haitensis*, Butler, P. Z. S. 1875, p. 9. no. 18.

Haiti (*Tweedie*). 

Type, B.M.

67. **Chcerocampa chiron.**


Brazil (*Saunders*); Monte Video (*Darwin*). 

B.M.

68. **Chcerocampa nechus.**


*Chcerocampa hortulanus* (sic), Schaufuss, Nunquam Otiosus, i. p. 18 (1870).

Mexico (*Doubleday*). 

B.M.

69. **Chcerocampa fugax.**


Honduras and Mexico.

Apparently allied to *C. ceratomioides*.

70. **Chcerocampa ceratomioides.**


Brazil (*Becker*); Rio (*Stevens*); Venzuela (*Dyson*). 

B.M.

71. **Chcerocampa nessus.**


*Sphinx equesbris*, Fabricius, Ent. Syst. iii. p. 365. no. 29 (1793).

Var. *Chcerocampa rubicundus*, Schaufuss, Nunquam Otiosus, i. p. 18 (1870).

Silhet (*Stainsforth*); North India (*James*); Moulem (*Clerc*); Canara (*Ward*); Ceylon (*Templeton*); Hong-Kong (*Bowring*); Java (*Horsfield*).

B.M.

Dr. Schaufuss describes the Javan type.

Mr. Lewis took the larva of *C. nessus* upon the wild yam (*Dioscora*); it is of a chalky-green colour, whitish above, with paler dorsal and a lateral longitudinal subdorsal white streak, also six oblique white stripes between the spiracles, one or two rounded whitish lateral spots on the anterior segments; anal horn yellow, prolegs also yellow.
The dark variety of the larva is pale brick-red above and pale purplish brown below; the lateral longitudinal and oblique lines dusky brown; lateral rounded spots with pale bluish superior areas; anterior segments greyish; horn olivaceous.

72. *Chcerocampa scrofa.*

*Deilephila scrofa,* Boisduval, Voy. de l’Astrolabe, Ent. p. 185. no. 3 (1832–35).


South Australia (Bakewell); Australia (Ker).

Dr. Boisduval speaks of this as perhaps only a variety of *thyelia,* a species to which it bears no resemblance.

73. *Chcerocampa ignea.*

*Chcerocampa ignea,* Butler, P. Z. S. 1875, p. 10, pl. i. fig. 4.

Moreton Bay (Gibbons).

This may perhaps be the undescribed form quoted by Koch (Indo-Austral. Lep. Fauna, ii. p. 53, 1873) under the name of *C. bernardus.*

74. *Chcerocampa brennus.*


*Amphion brennus,* Hübnner, Verz. bck. Schmett. p. 135. no. 1445 (1816).


Amboina.

75. *Chcerocampa pallicosta.*


Silhet (Stainsforth); Hong-Kong (Harrington).

76. *Chcerocampa erotus.*


*Chromis erotus,* Hübnner, Verz. bck. Schmett. p. 138. no. 1479 (1816).


Australia (Steevens, Stevenson); Cape York (Macleay); Solomon Islands (Brenchley).

All our examples are females; so that I doubt the distinctness of this and the next species. See, however, Koch (Stett. ent. Zeit. 1871, pp. 239–41).

77. *Chcerocampa erotoides.*


Australia (Becker, Wood): Navigators' Islands.

The typical C. erotus, although perhaps a second form of the female of this species, may at once be distinguished by its slightly superior size, deeper colouring, the glossy character of the primaires above, the broader black border to the secondaries, and the deep reddish coloration of the under surface of all the wings, which almost obliterates the mottled hatchings so distinctly seen in C. erotoides.

78. Chßerocampa eras.

Deilephila eras, Boisduval, Voy. de l'Astrolabe, Ent. p. 185. no. 4 (1832-35); Feisthamel, Mag. de Zool., Ins. pl. 21. fig. 2 (1839).


Australia.

Nearly allied to the preceding species.


Madagascar.

I have been unable to obtain the above work, and therefore have failed to identify the species.


This genus was founded upon most heterogeneous material, the first three species being referable to Hübner's genus Otus, the fifth to Walker's genus Diodosida, the sixth and eighth to the genus Daphnis of Hübner, the seventh, ninth and tenth to Chßerocampa of Duponchel; there therefore remains only the fourth species, allied to Chßerocampa, but apparently sufficiently distinct. It differs as follows:

Primaires comparatively shorter, costal margin more arched at apex, outer margin much arched and shorter, inner margin strongly waved, almost sigmoidal; secondaries comparatively much longer and narrower.

Darapsa rhodocera.


Haiti.

Most like the C. clotho group of Chßerocampa in colouring.
Genus 15. **Deilephila**, Ochsenheimer.


1. **Deilephila livornica**.

*Sphinx livornica*, Esper, Ansl. Schmett. ii. pp. 87, 196, pl. 8. fig. 4 (1785).


*Sphinx kochlini*, Fuessly, Arch. Insectengesch. t. 33. figs. 1–6 (1781).

South France, Turkey (*Loftus*); Landoor (*Hearsay*); North India (*Stevens*). B.M.

The larva of this species has been carefully described by Bignell, Farn, Hobbs, and Hellins (1870).

2. **Deilephila lineata**.

*Sphinx lineata*, Fabricius, Ent. Syst. p. 541 (1775).


New York (*Milne*); Nova Scotia, Canada West (*Bush*); California, Oaxaca (*Hartweg*); Haiti (*Tweedie*); St. Thomas (*Hornbeck*); New Granada, Jamaica (*Redman*). B.M.


3. **Deilephila biguttata**.


Madagascar (*Stevens*). Type, B.M.

4. **Deilephila opheltes**.


*Hyles opheltes*, Hübner, Verz. bek. Schmett. p. 137. no. 1471 (1816).


Cape.

5. **Deilephila spinifascia**.


Buenos Ayres (*Burmeister*); Patagonia (*Cunningham*). Type, B.M.

I believe that this species also occurs in Chili.
6. Deilephila galii.

Sphinx galii, Fabricius, Sp. Ins. ii. p. 147. no. 33 (1781).
Hyles galii, Hübner, Verz. bek. Schmett. p. 137. no. 1470 (1816).
Sphinx euphorbia (part), Linnaeus, Syst. Nat. i. 2, p. 802. no. 19 (1766).

Europe (Becker).
Larva described by Newman and Buckler (1870).

7. Deilephila chamænerii.

Sphinx epibahi, Harris (nee Boisd.), Cat. p. 530 (1833).

West Canada (Bush); York Factory (Rae); United States (Doubleday). B.M.
There is an example of this species in the British cabinet from the Stephensian Collection; other American species are also in this collection.
According to Strecker (Canad. Ent. iv. p. 206) D. chamænerii is = D. galii.

8. Deilephila intermedia.

Deilephila intermedia, Kirby, Fauna Amer.-Bor. vol. iv. p. 302 (1837).

“Canada” (Kirby).


“Tropical Insular District” (Grote).

10. Deilephila costata.


“Neighbourhood of Kjachta” (Poppoff).
Somewhat like D. chamænerii, but the tapering discal band intersected by white nerves.

11. Deilephila dahlii.

figs. 161–164.

Europe (Becker); South Europe (Pierret). B.M.

We have what appears to be a hybrid between this species and D. euphorbia (not unlike Godart’s figure of D. tithymali, although utterly unlike Boisduval’s); it approaches very close to D. lathyrus of Walker, from North India, chiefly differing, in fact, in its more vivid colouring.
12. Deilephila tithymali.


Canaries (Wollaston).

Possibly a variety of the preceding, but without the third black spot on each side of the abdomen, and with the band of primaries sometimes narrower.


Deilephila mauritania, Staudinger, Cat. Lep. Europ. Faun. i. p. 36. no. 466 (1871).
Deilephila euphorbiae, Lucas, Expl. Alg. p. 370, pl. ii. fig. 8 (1848).

Mauritania; Madeira.


Sphinx zygophylli, Oehsenheimer, Eur. Schmett. iii. p. 226. no. 5; Hübner, Samml. europ. Schmett. pl. 27. fig. 125.
Deilephila zygophylli, Boisduval, Icon. Hist. Lép., Sph. p. 32. no. 8, pl. 51. fig. 2 (1832).

Shores of the Caspian.

Allied to D. tithymali, but smaller.

15. Deilephila euphorbiae.

Sphinx euphorbiae, Linnaeus, Syst. Nat. i. 2, p. 802. no. 19 (1766).
Hyles euphorbiae, Hübner, Verz. beck. Schmett. p. 137. no. 1475 (1816).
Deilephila euphorbiae, Curtis, Brit. Ent. i. pl. 3 (1823–40).

Europe (Becker).


North India.

Apparently a very common species.

17. Deilephila nicea.

Deilephila nicea, Boisduval, Ind. Méth. p. 47. no. 381.
Hyles nicea (sic), Hübner, Verz. beck. Schmett. p. 137. no. 1474 (1816).

South Europe (Becker).
18. Deilephila annei.

*Deilephila annei*, Guérin, Mag. de Zool. 2nd ser. i. Ins. pl. 2 (1839).

Santiago, Chili.

In the coloration and pattern of the wings this species nearly approaches *D. hippophaës*; but in size and the tint of the primaries it seems to come nearer to *D. nicca*. The body is peculiar, the abdomen being white at the sides, interrupted by five transverse black spots; in this respect it resembles *D. spinifascia*.

19. Deilephila esulè.


Calabria.

Nearly allied to *D. hippophaës*.

20. Deilephila bienerti.


Persia.

Size of the largest examples of *D. hippophaës*, to which it is nearly allied.


*Sphinx hippophaës*, Esper, Eur. Schmett. ii. p. 6, pl. 38. figs. 1, 2 (1777).


*Deilephila hippophaës*, Boisduval, Ind. Méth. p. 47. no. 388.


*Deilephila vespertilioëdes*, Boisduval, Icon. Hist. Lép., Sph. p. 22. no. 3, pl. 49. fig. 3 (1832).

Hybrid. *Deilephila epilobi*, Boisduval, loc. cit. p. 24. no. 4, pl. 51. fig. 3 (1832).

Europe (Becker).

*B.M.*

*D. epilobi* seems scarcely to differ from *D. hippophaës*, excepting in the more decided markings of primaries. *D. vespertilioëdes* is apparently a hybrid between *D. hippophaës* and *D. vespertilio*, and is quite intermediate in character between them.

22. Deilephila vespertilio.


Europe (Becker).

*B.M.*

Characteristically figured by Hübner, Samml. eur. Schmett. ii. pl. 21. figs. 103, 104; a variety, pl. 11. fig. 62; he also figures the larva.


1. **Daphnis nerii**.


*Drilephila nerii*, Boisduval, *Faune de Madag.* p. 74. no. 6 (1833).

Italy (Leach); Athens (Merlin); East India, Canara (Ward); Mauritius (Beke); Natal (Guenzius).

B.M.

The examples mentioned by Mr. Walker as coming from Ceylon are sexes of *D. hypothoïds* of Cramer.

2. **Daphnis hypothoïds**.


*Darapsa hypothoïds* (part.), Moore, *Cat. Lep. E.I. Comp.* p. 271. no. 627, pl. x. figs. 2, 2a, transformations (1857).

♀ 2, Ceylon (Templeton); Java (Horsfield); Labuan and Sarawak (Low). B.M.

The larva of *D. hypothoïds* is figured in Horsfield and Moore's Catalogue, pl. x. fig. 2.

3. **Daphnis pallescens**.


Queensland (Janson). Type, B.M.

4. **Daphnis protrudens**.

*Daphnis protrudens*, Felder, *Reise der Nov., Lep.* iv. tab. lxxvi. fig. 7 (Nov. 1874).

♀ 2?

Allied to the preceding.

5. **Daphnis angustans**.

*Daphnis angustans*, Felder, *Reise der Nov., Lep.* iv. tab. lxxvi. fig. 6 (Nov. 1874).

♀ 2?

Allied to the succeeding species, but altogether darker and differently coloured.

6. **Daphnis horsfieldii**, n. sp.


Smaller than *D. hypothoïds*; primaries with the outer margin much more waved,
acutely pointed at apex; colours similar but less green; the subbasal paler band wider; the broad band crossing the middle of the wing replaced by a broad nebulons area, crossed by an angular band of olive-brown; no white spot at apex; secondaries altogether redder, especially towards apex; underside altogether paler and testaceous instead of rosy. 

Expanse of wings, ♂ 2 inches 9 lines, ♀ 3 inches 3 lines. 

♂, Java (Horsfield).

The pupa-skin of the female shows that this species differs in that stage from D. hypothous by being much less heavily spotted with black longitudinally; the two species, however, are so abundantly distinct that it does not require differences in the early stages to separate them with ease.

7. Daphnis minima, n. sp. (Pl. XCII. fig. 5.)

Much like a minute, pale, undercoloured D. horsfieldii. Wings above whitish brown or brownish grey; primaries crossed by a basal and an angulated central clay-coloured band; a brown-edged greyish transverse discal line; outer margin, especially near apex, chocolate-brown; inner margin chocolate-brown at external angle; discal area from external angle to end of cell suffused with clay-colour; secondaries with external two thirds reddish-brown, interrupted by a disco-submarginal whitish line from anal angle to apical costa; body as in D. horsfieldii, but paler: wings below nearly as in D. horsfieldii; no white point in cell of secondaries. 

Expanse of wings 1 inch 9 lines. 

South India (S. N. Ward). Type, Coll. F. Moore.

By far the smallest species in the genus. The larva is golden green, with a lateral-white-dotted longitudinal blue line, and above it a reddish orange line, terminating towards the head in two small white-zoned black ocelli; the lateral and ventral surfaces are covered with granular white dots; the feet, claspers, and horn orange; the latter black-tipped; spiracles reddish orange; an oblique white line on anal claspers.

8. Daphnis placida.


Sumatra.


Darapsa bhaga, Moore, P. Z. S. 1865, p. 794.

N.E. Bengal (Russell). Type, Coll. F. Moore.

A very remarkable species, having a long curved apical hook to the primaries.
Genus 17. Philampelus, Harris.


Section Dupo, Hübner.

1. Philampelus vitis.


*Sphinx fasciatus*, Sulzer, Gesch. Ins. p. 151, pl. 20. fig. 1 (1776).


♀ *Eumorpha elegans jussieua*, Hübner, Samml. exot. Schmett. i. pl. 169. figs. 1, 2 (1806).

♀ *Dupo jussieua*, Hübner, Samml. exot. Schmett. ii. pl. 163. figs. 3, 4 (1806).


Mexico (*Sallé*); west coast of South America (*Kellet & Wood*); Haiti (*Tweedie*); Jamaica (*Redman, Gosse*); Brazil (*Stevens*).

Mr. Grote has very rightly restored Linne’s name to this species, the figure referred to in the original description (Merian, Surin. 47, t. 47, f. 1—that is, the upper figure) being evidently intended for the *S. fasciatus* of Sulzer (*Eumorpha jussieua*, Hüb.n.).

2. Philampelus Linnei.


Mexico (*Hartweg*); Haiti (*Cuming & Tweedie*); — — ? (*Stevens*).

3. Philampelus hornbeckiana.


“St. Thomas, West Indies.”—*Harris*.

Apparently allied to the preceding.

4. Philampelus strenuus.


“Haiti.”—Ménetr.éis.

Allied to *P. linnei*. 
5. Philampelus typhon.

*Sphinx typhon*, Klug, Neue Schmett. Heft i. pl. 3. fig. 1 (1836).

Mexico (*Doubleday*). B.M.

Section Philampelus (Harris), Grote.


6. Philampelus achemon.

*Philampelus achemon*, Harris, Sill. Journ. vol. xxxvi. p. 300 (1839); Scudder, Harris Corresp. p. 283, pl. 3. fig. 11 (1869).

New York (*Doubleday*).


7. Philampelus posticatus.

*Philampelus satellitia* (part.), Walker (nee Linnæus), Lep. Het. viii. p. 175. no. 3 (1856).

Bolivia (*Bridges*).

The rose colour at anal angle of secondaries is more strongly pronounced in our example than in Hübner's figure.

8. Philampelus mirificatus.


Cuba (*Wright*).

"Allied to *P. posticatus*, *P. linnæi*, and *P. strenuus*; from all differing by the white linear bands on the fore wings and their apical white line, and by the distinctly white-banded abdomen and tegula."

"While nearest to *P. posticatus* in the appearance of the hind wings, it is most dissimilar in the markings of the primaries, which are more like those of *P. linnæi* in the evenness of the ground-colour."


*Sphinx satellitia s*, Drury (nee Linnæus), Ill. Nat. Hist. i. pl. xxix. fig. 2 (1770).
I believe that Mr. Walker was quite right in separating this species from *P. satellitia* of Linnaeus (see Drury, pl. 29. fig. 1); the male of that species does not differ in size or colouring, but slightly in form and pattern, from the female. *P. pandorus* is, in fact, allied to *P. licaon*, Cramer (nee Hübner) more nearly than to *P. satellitia*; it shows also traces of affinity to *P. achemon* in the more angulated form of the line defining the clouded discal area of primaries.

10. **Philampelus eacus**.


Surinam.

This appears to me to be a variety of *P. pandorus*.

11. **Philampelus cissi**.

*Philampilus cissi* (sic), Schaufuss, Nunquam Otiosus, i. p. 19 (1870).

Venezuela.

Probably the male of *P. satellitia*, but so imperfectly described that it is impossible to identify it with certainty.

12. **Philampelus lycaon**.


Mexico (Sallé).

This species is of a redder tint than *P. satellitia*; the primaries exhibit more markedly than in any of the other species the apparent division into a basi-internal light and an apical dark area; the hind wings have no rosy flush (as in Hübner's species) at anal angle of secondaries; but they have on the underside an indistinct rusty reddish apical spot on secondaries. The insect is, as Cramer says, "en dessous de couleur minium et vers les pointes des ailes inférieures de couleur rousse." Mr. Grote appears to have mis-understood this description.

13. **Philampelus satellitia**.

*Sphinx satellitia*, Linnaeus, Mantissa, i. p. 539; Drury, Ill. Nat. Hist. i. pl. 29. fig. 1 (1770).


♂♀. Honduras (*Dyson*); Jamaica.


*Philampelus satellita* (part.), Walker, L. c. p. 175. no. 3 (1856).

Rio Janeiro (Stevens); west coast of South America (Kellett & Wood). B.M.

A larger and more heavily-coloured species than the preceding, the sides of the body much redder; with other less evident differences.

15. Philampelus helops.


*Philampelus orientalis*, Felder, Reise der Nov., Lep. iv. tab. 77. fig. 1 (1874).

"Port Natal (Krauss)."—Walker. Type, B.M.

I have examined a specimen of this species taken by Mr. W. L. Distant in Penang. It differs in no respect from the type; and therefore I have little doubt that our locality is wrong. Mr. Moore has a pale example taken by Mr. Grote in North India.

Section Argeus, Hübner (Chlorina, Guénée).

Argeus, Hübner, Verz. bek. Schmett. p. 134. no. 3 (1816).


*Sphinx megera*, Linnaeus, Mus. Lud. Ulr. p. 358 (1764); Clerck’s Icones, pl. 47. fig. 2.


Port Natal (Stevens & Gooch); Ashanti. B.M.

It is evident from M. Guénée’s note on "Chorocampa megera," and his description of a new genus to receive it, that he had neglected to examine Mr. Walker’s Catalogue, and consequently was not aware that recent naturalists had moved *Sphinx megera* to *Philampelus*.

The example of *P. megera* received from Mr. Gooch has the abdomen red.

17. Philampelus phorbas.


"Surinam."—Cramer.

Closely allied to *P. megera*.

18. Philampelus lacordairei.

*Deilephila lacordairei*, Boisduval, Faune Ent. de Madag. p. 73. no. 5, pl. 11. fig. 1 (1853).

*Chlorina Megara*, Guénée (nec Linn.), Notes sur l’île de la Réunion, Lép. p. 22. no. 21 (1862).

Madagascar and Bourbon.
I have seen an example of this species formerly in Mr. Herbert Sharpe's collection; it is allied to the two preceding species.


*Sphinx labrusce*, Linnaeus, Mus. Lud. Ulr. p. 352 (1761); Clerck's Icones, pl. 47. fig. 3.

*Eumorpha elegans labrusce*, Hübner, Samml. exot. Schmett. i. pl. 167. figs. 1, 2 (1806).


Mexico, Jamaica (Gosse); Haiti (Tweedie); Venezuela (Dyson); Columbia. B.M.


1. Pachylia Ficus.

*Sphinx ficus*, Linnaeus, Mus. Lud. Ulr. p. 352 (1761); Clerck's Icones, pl. 49. fig. 2.


*Var. Pachylia venezuelensis*, Schaufuss, Nunquam Otiosus, i. p. 16 (1870).

Mexico (Hartweg); Haiti (Tweedie). B.M.

2. Pachylia undatifascia, n. sp.

Nearly allied to *P. ficus*, but more ochraceous in tint; all the transverse lines much less defined (scarcely perceptible in the male); secondaries with the central black bar distinctly waved, not denticulate; discal line indistinct; body with the transverse darker bars much less distinct; wings below much more ochreous, the transverse lines obsolete. Expanse of wings—♂ 4 inches 4 lines, ♀ 5 inches 2 lines.

♂, Haiti (Tweedie); ♀, “Brazil.” Type, B.M.

Possibly an extreme variety of *P. ficus*; but the two males look very distinct.


—??

4. Pachylia syces.


MR. A. G. BUTLER ON THE SPIINGIDÆ.

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\( \sigma \), Brazil (Stevens); \( \varphi \), Jamaica (Argent); \( \sigma \), Haiti (Tweedie).

I have to thank Mr. Kirby for calling my attention to Hübner's name for this species.

5. Pachylia resumens.


Haiti (Tweedie); Honduras (Dyson); Rio Janeiro (Stevens). Type, B.M.

6. Pachylia inconspicua.


Jamaica.

Subfamily III. AMBULICINÆ.

Genus 1. AMBULYX, Walker.

*Amblyx*, Walker, Lep. Het. viii. p. 120. gen. 11 (1856).

1. Amblyx strigilis.

*Sphinx strigilis*, Linneus, Mant. i. p. 538 (1771); Cramer, Pap. Exot. ii. pl. 106. fig. B (1779).

*Sphinx strigiles* (sic), Drury, Ill. Nat. Hist. i. p. 62, pl. 28. fig. 4 (1770).


Haiti (Tweedie); west coast of South America (Kellett & Wood); Brazil (Saunders); Rio Janeiro (Stevens); Pará (Bates).

Var. rubripennis. Primaries much darker, the transverse lines and spots blacker, the hatchings less distinct; secondaries reddish castaneous, transverse lines obsolete; body less yellowish; wings below altogether darker and redder, transverse lines obsolete; whitish border of outer margin diffused internally. 4 inches to 5 inches 1 line.

Haiti (Tweedie). Two specimens. B.M.

This may possibly be specifically distinct, but I think not.

2. Amblyx eurycles.


Surinam.

Scarcely distinct from *A. strigilis*, so far as I can remember. Unfortunately, not having the above work by me, I have been obliged to depend upon notes made from it.

3. Amblyx substrigilis.

*Sphinx (Amblyx) substrigilis*, Westwood, Cab. Orient. Ent. p. 61, pl. 30. fig. 2.
MR. A. G. BUTLER ON THE SPIHINGIDÆ.

Silhet (Stainsforth).
Allied to A. striqilis. Mr. Moore has specimens from Darjeeling.

4. AMBULYX MACULIFERA.

Allied to the preceding species. Mr. Moore's examples of this species are rather less dusky than the type.

5. AMBULYX LITURATA. (Pl. XCI. figs. 2, 3.)


—?  
†  Type, coll. F. Moore.

6. AMBULYX RHODOPTERA. (Pl. XCIII. fig. 8.)

Darjeeling.

7. AMBULYX SUBOCELLATA.

*Ambulyx subocellata*, Felder, Reise der Nov., Lep. iv. tab. lxxvi. fig. 3 (Nov. 1874).

—?  
Allied to the preceding species, and still more closely to A. moorei.

8. AMBULYX SERICEIPENNIS.

Massuri, N.W. Himalayas (Hutton).

9. AMBULYX LAHORA. (Pl. XCIII. fig. 9.)

N.W. Himalayas.

10. AMBULYX TURBATA. (Pl. XCIII. fig. 7.)

*Ambulyx turbata*, Butler, P. Z. S. 1875, p. 252.
Darjeeling.
Var. Canara, South India.

11. AMBULYX MOOREI, n. sp.

Java (Horsfield).
12. **Ambulyx? constrigilis.**

*Ambulyx constrigilis*, Walker, *Characters of Lepidoptera Heterocera from Congo*, p. 4. no. 2 (1869).

Congo.

Judging from the description alone, I rather doubt this being a true *Ambulyx*.

13. **Ambulyx canescens.**


Cambodia.

Unquestionably an *Ambulyx*, apparently allied to *A. liturata*, but without the dark spots at base of primaries.

14. **Ambulyx tigrina.**


———?

Allied to *A. gannascus*, but with the hind wings golden yellow. It comes in well between the *A. strigilis* and *A. gannascus* groups.

15. **Ambulyx gannascus.**


*Amblypterus gannascus* (sic), Hübner, *Verz. bek. Schmett.* p. 133. no. 1429 (1816).


Jamaica (*Gosse*). B.M.

16. **Ambulyx rostralis.**


Amazons (*Bates*); Brazil (*Stevens*). B.M.

According to Boisduval, from Nicaragua and New Granada.

17. **Ambulyx marginata.**


Rio Janeiro (*Stevens*). Type. B.M.

18. **Ambulyx eurysthenes.**


———?

Allied to the preceding species.

*Ambulyx hyposticta,* Felder, Reise der Nov., Lep. iv. tab. lxxvii. figs. 2, 3 (Nov. 1874).

—?

Not nearly allied to any known species.


North China.


*Basiana superba,* Moore, P. Z. S. 1865, p. 793.

Darjeeling (Grote); Calcutta.

Coll. F. Moore.

Mr. Walker's description of this marvellously beautiful insect is very poor; I should never have recognized it. Fortunately Mr. Moore has been enabled to compare the types of *A. rubricosa* and *B. superba,* and finds them to be synonymous.

22. *Ambulyx sexoculata.*


Brazil (Grote).

We have an *Ambulyx* from Guatemala, placed by Mr. Walker with *A. gannascus,* which so nearly agrees with the description of the above, that I cannot help thinking it a variety of it. The only difference seems to be that the ocellate spots on the middle band of secondaries are so exceedingly undefined that, even with a lens, it is difficult to make them out.

23. *Ambulyx?? heuglini.*

*Smerinthus heuglini,* Felder, Reise der Nov., Lep. iv. tab. lxxviii. fig. 2 (Nov. 1874).

—?

Subfamily IV. *SMERINTHINÆ.*

Genus 1. *Metamimas,* n. g.


1. *Metamimas australasie.*

*Sphex australasie,* Donovan, Ins. New Holl. pl. 33. fig. 1 (1805).

*Acherontia australasie,* Boisduval, Voy. de l’Astrolabe, Ent. p. 181. no. 2 (1832-35).


Australia (*Strange, Stevens, Wood*).


Amboina.

**Genus 2. Mimas**¹, Hübner.


1. Mimas quercus.

*Sphinx quercus*, Denis, Wien. Verzeichn. p. 4, tab. 1 a. figs. 1 a, 1 b, tab. 1 b. fig. 1.  
*Merinthus quercus*, Meigen, Syst. Beschr. cur. Schmett. ii. p. 150. no. 4, pl. 78. fig. 5.

**Europe (Becker).**

2. Mimas tiliae.

*Sphinx tiliae*, Linnaeus, Syst. Nat. i. 2, p. 797. no. 3 (1766).  
*Merinthus tiliae*, Meigen, Syst. Beschr. cur. Schmett. ii. p. 149. no. 2, pl. 78. fig. 2.

**Europe (Becker); Sierra Leone (Morgan).**  
B.M.

The antennae of the male of this species are rather less strongly pectinated than in *M. quercus*.


Darjeeling (Grote).  
Coll. F. Moore.

Mr. Walker says that this species possesses the “structure of *S. tiliae*.” The secondaries, however, differ slightly; and the costa of primaries is not quite so much arched. In the outline of the outer margin it agrees better with *M. quercus*.


1. Polyptychus dentatus.  
(Plate XCI. fig. 10.)


¹ Easily distinguished from *Laoothr* by the form of the wings, the outer margin of secondaries deeply excavated below the apex, and the secondaries narrow and not denticulated. The type is *M. tiliae*.

♀, Bengal and Darjeeling, coll. Moore; ♂ ♀, North India (Hearsay, Stevens). B.M.
The larva is bluish green at the sides, with oblique purple stripes, with a broad dorsal longitudinal golden-green band bordered by subtriangular purple spots, one above each oblique stripe.

2. Polyptychus timesius.

*Sphing timesius*, Stoll, Suppl. Cramer, p. 172, pl. 40. fig. 1 (1791).

"Tranquebar" (Stoll); ♂, Nepal (Saunders); ♀, Silhet (Stainsforth) B.M.; ♀, Masmuri (Hutton), coll. F. Moore.

Nearly allied to the preceding species. I feel pretty sure about the identification; but Stoll's figure is not very good.

3. Polyptychus numosæ.


Caffraria.

4. Polyptychus grayii.


Port Natal (Gueinzius).

Apparently nearly allied to the preceding species.

5. Polyptychus andosus.


Sierra Leone (Morgan).

Type, B.M.


Zambesi river.


*Smerinthus subjectus*, Walker, Characters of Heterocerous Lepidoptera from Congo, p. 4. no. 1 (1869).

Congo.
MR. A. G. BUTLER ON THE SPHINGIDÆ.

Genus 4. LOPHOSTETHUS, Butler.


Form of wings as in _Triptogon_; metathorax and base of abdomen tufted with erect scales; collar wide; palpi small, with very short pointed terminal joint; tibiae of front pair of legs terminating externally in a formidable hooked claw, of second pair in two claws, external and internal, of third pair in three unequal internal spines; basal half of wings below densely clothed with long hair-scales.

Type _E. demolinii_.

I know of no other moth armed with such powerful weapons as this genus. It is impossible to guess their use, unless they are intended for scratching.

LOPHOSTETHUS DEMOLINII.

_Sphinx demolinii_, Angas, Kaffirs Illustrated, pl. xxx. fig. 11 (1849).

_Smerinthus demolinii_ (sic), Walker, Lep. Het. viii. p. 250. no. 12 (1856); Felder, Reise der Nov., Lep. iv. tab. 82. fig. 2 (Nov. 1874).

♂♀, Port Natal (Gueinzins).

Mr. Walker quotes Guérin's 'Iconographie' for this species, but gives no reference to page or plate. I have referred to the book, but cannot find it; and Angas states his belief that it is a new species, which renders it most probable that he was the first to publish it.

Genus 5. SPHINGONÉPIOPSIS, Wallengren.


Sphingonepiopsis gracilipes.


Interior of East Caffraria (Wahlberg).

I have not seen any examples of this curious little Smerinthine Sphingid.

Genus 6. LANGIA¹, Moore.


1. LANGIA ZENZEROIDES.


¹ This genus is nearly allied to _Triptogon_.
2. **Langia khasiana.**


Khasia hills (*Godwin-Austen*). Type, coll. F. Moore.

This is a magnificent species. Unfortunately the type is much ruined by mites.


1. **Triptogon cristata.**


2. **Triptogon gigas.**


Silhet (*Stainsforth*). Type, B.M.

3. **Triptogon albicans.** (Plate XCI. fig. 6.)


Massuri (*Hutton*). Type, coll. F. Moore.

4. **Triptogon sperchius.**


*Smerinthus dryas*, Boisduval (nee dryas [sic], Walker), in De l’Orza’s Lép. Jap. p. 37 (1869).

Japan (*Gaschkevitsch*).

5. **Triptogon dissimilis.**


Ussuri.

6. **Triptogon dyras.**


♂, Canara (*Ward*), coll. F. Moore; ♀, Ceylon (*Wenham*). Type, B.M.

Mr. Walker’s description of this species is evidently taken from the two insects (male and female) from Ceylon—the colour characters in part from the male (*T. ceylanica*, mihi), the size from the female. The male in Mr. Moore’s collection is very similar to our female, excepting that it is smaller.
M. Boisduval, in a note on his S. dryas, states that this is the correct spelling of the name (S. dyras being a misprint); all I can say is that one of our examples of T. silhetensis has attached to it a label bearing the name "Sm. dyras" (sic), very legibly inscribed in Dr. Boisduval's handwriting.

All the forms of the T. dyras group are at once distinguished from the Smerinthus sperchins of Ménétriès, by the shortness of their wings, the much less prominently undulated outer margin of primaries, and the entirely different disposition of the transverse lines.

7. Triptogon sinensis.

Triptogon sinensis, Butler, P. Z. S. 1875, p. 254. no. 41.

Hong Kong (Harrington).

8. Triptogon javanica.

Triptogon javanica, Butler, P. Z. S. 1875, p. 254. no. 42.

Java (Horsfield).


Triptogon ceylanica, Butler, P. Z. S. 1875, p. 255. no. 43.


Ceylon (Templeton).

10. Triptogon silhetensis.

Triptogon silhetensis, Butler, P. Z. S. 1875, p. 255. no. 44.

♂ ♀, Silhet, coll. F. Moore; ♀ (Stainsforth).

11. Triptogon orientis. (Plate XCIII. fig. 3.)

Triptogon orientis, Butler, P. Z. S. 1875, p. 255. no. 45.

N.E. India.

12. Triptogon massurensis. (Plate XCIII. fig. 5.)

Triptogon massurensis, Butler, P. Z. S. 1875, p. 256. no. 46.

Massuri (Hutton).

13. Triptogon fuscescens. (Plate XCIII. fig. 2.)

Triptogon fuscescens, Butler, P. Z. S. 1875, p. 256. no. 47.

Darjeeling.

Type, coll. F. Moore.

This and the six preceding forms are local representatives of T. dyras.
14. Triptogon decorata.

_Smerinthus decoratus_, Moore, P. Z. S. 1872, p. 568.

Sikkim (Lang).

15. Triptogon spectabilis. (Plate XCIII. fig. 1.)


Darjeeling. Type, coll. F. Moore.


Persia.

17. Triptogon ? pusillus.

_Smerinthus pusillus_, Felder, Reise der Nov., Lep. iv. tab. 82. fig. 1 (Nov. 1874).

I am not quite certain that this species belongs to the genus in which I have placed it; but it is more like it than any thing else.

18. Triptogon indica.


North India (Stevens). Type, B.M.

This little species differs from the normal type of the genus in having the primaries more rounded at apex. The specimen in our collection may, however, be stunted.

19. Triptogon complacens.


♂ ♀, Amoy (Stevens); ♀, Shanghai (Fortune); Japan (Whitely). Type e, B.M.

A well-marked and beautiful species.

20. Triptogon roseipennis. (Plate XCI. fig. 6.)

_Triptogon roseipennis_, Butler, P. Z. S. 1875, p. 257, no. 49.

Hakodadi (Whitely). Type, B.M.

Allied to _T. gaschkevitschii_.

Mr. Lewis bred this species from larvae found on the plum and cherry.

21. Triptogon gaschkevitschii.


Pekin; Mongolia. B.M.
22. Triptogon maackii.

*Smerinthus maackii*, Breuer, Bull. de l’Acad. Sci. St. Pétersb. iii. (1861); Lep. Ost-Sibirien, p. 34. no. 153, tab. iii. fig. 11 (1864).
Ussuri.

23. Triptogon modesta.


This is unquestionably the proper place for this species.


1. Laothoe populi.

*Sphinx populi*, Linnaeus, Syst. Nat. i. 2, p. 797. no. 2 (1766).


I find, after a careful comparison of the *Smerinthus modestus* of Harris with *L. populi* that they differ so much in structure from one another, that I cannot follow Mr. Grote in placing them in the same genus. The form of the wings, the direction of the discocellulars, and the length of the branches of the subcostal nervure, will at once distinguish them.

I have not thought it worth while to refer to the hybrid form between this genus and *Smerinthus*, although Mr. Strecker gives it, in his work, a distinct heading, as if it were a species.

2. Laothoe tremulæ.


Moscow.


1. Cressonia juglandis.

Amorpha decata juglandis, Hübn., Samml. exot. Schmett. i. pl. 171. figs. 1–4 (1806–24).

Sphinx instabilis, Martyn, Psyche, pl. xx. fig. 49, and pl. 21. fig. 53 (1879).

♂ ♂ North America, ♂ West Canada (Bush); East Florida (Doubleday). B.M.

We have a pair of what seems to be a second species; it is of a greyer tint and half as large again, the transverse lines wider apart, and the primaries with central band not darkened on the inner margin. I propose to call it C. robinsonii, n. sp.

2. Cressonia robinsonii.

Cressonia robinsonii, Butler, supra.

New York. Type, B.M.

It is quite possible that the above may be a large form of C. juglandis; but it differs noticeably from our six examples of that species.

3. Cressonia pallescens.


Texas.

In Mr. Strecker's jocular strictures on the excellent subdivision of the Smerinthinae proposed by Mr. Grote, he exhibits a weakness in admitting that S. juglandis and S. pallescens might be placed in one genus, provided that uniformity of shape in the wings were taken as the basis thereof. I find that dissimilarity in the outline of the wings is almost always accompanied by modification of the discocellular nervelets, which would be sufficient in the eyes of any Lepidopterist to warrant generic separation.


1. Paonias exccecatus.


1 Mr. Grote is confident that this is only a variety of C. juglandis. It looks quite distinct.
2 At once distinguished from Calasymbodes and Triptogen by the form of the secondaries, which approach Laothoe in outline.
Paonias pavonina, Hübner, Zuträge, figs. 835, 836 (1837).

New York (Doubleday); Canada (Barnston); Canada West (Bush). B.M.

2. Paonias myops.

Smerinthus jamaiicensis, Westwood, Drury, i. c. (1837).
Smerinthus rosacearum, Boisduval, Sp. Gén. Lep. pl. 15. fig. 4 (1836).

United States (Doubleday). B.M.

I believe Drury's locality to be incorrect; his name is therefore not appropriate. Although the primaries of this species agree with Calasymbolus in the absence of the undulation of outer margin, it agrees so closely in all other structural respects with P. excavatus, that I am satisfied to leave it in the same genus with it. The form of the secondaries in Paonias is markedly distinct from Calasymbolus, the apical part of costa being abruptly convex, modifying the first branch of the subcostal nervure.


Differs from Smerinthus in the form of the primaries, and from Paonias in the form of the secondaries.

1. Calasymbolus astylus.

Smerinthus astylus, Westwood, Drury, i. c. (1837); Strecker, Lep. Rhop. & Het. pt. 7, p. 56. pl. 7. fig. 10 (1873).
Smerinthus io, Boisduval, Guérin's Icon. Règne Anim. Ins. pl. 84. fig. 2 (1829-44).

"Atlantic District!" (Grote and Robinson).

Strecker's figure of this species has the two opposite primaries rather different in outline; but, judging from Drury's figure, I have little doubt as to its genus.
2. CALASYMBOLUS GEMINATUS.

*Smerinthus geminatus*, Say, Am. Ent. vol. i. p. 25, pl. 12 (1824); Strecker, Lep. Rhop. & Het. pt. 7, p. 56, pl. vii. figs. 6, 7 (1873).

United States (*Doubleday*); W. Canada (*Bush*).

3. CALASYMBOLUS CERISI.


“Atlantic District!" (*Grote and Robinson*).

4. CALASYMBOLUS CAECUS.


Amur Land.

Nearly allied to *C. geminatus*.

5. CALASYMBOLUS KINDERMANNI.


Pontus.

Genus 12. SMERINTHUS, Latreille.


1. SMERINTHUS OCELLATUS.

*Sphinx ocellata*, Linnaeus, Syst. Nat. i. 2, p. 736. no. 1 (1766); Roessel, Ins. Belust. i. tab. 1 (1716).


*Sphinx salicis*, Hübner, Eur. Schmett. Sph. i. pl. 15. fig. 73.


England [Brit. coll.]; Europe (*Becker*). B.M.

2. SMERINTHUS OPHTHALMICUS.


California and Mexico. B.M.

According to M. Boisdulval, this species should be placed between *S. ocellatus* and *S. geminatus*. We have both sexes of an insect which agrees with the descriptions and figures of this species; but, unfortunately, our specimens have no locality upon them; they are, however, set in the same way and have the same green label as many of our
Californian Lepidoptera. A female example of a species from Vancouver’s Island is also in the collection; although rather a larger insect, it approaches very close to *S. ophthalmicus* ♀, as figured by Strecker, but has the primaries of a much browner tint, as in *S. ocellatus*, and less excavated below external angle; the central band forms a large oblong patch on inner margin; and the whitish submarginal streak is less distinct. The secondaries are bright rose-colour, excepting a narrow buff outer border and a diffused whitish patch at anal angle; the ocellus is larger. I propose to call it *S. vancouveriensis*.

3. *Smerinthus planus*. (Plate XCII. fig. 11.)


♂, North China (Cuming); ♀, Shanghai.

Type, B.M.

The larva is pale green, with white or yellow lateral stripes. It feeds on the “Yanagi,” or weeping willow. (Geo. Lewis, in litt.)

4. *Smerinthus argus.*


Amur Land.

Probably a local form of the preceding, from which it chiefly differs in being much paler.

5. *Smerinthus tatarinovii*. (Plate XC. fig. 16.)


B.M.

Japan (Fortune).

The larva of *S. tatarinovii* is figured among the unpublished drawings prepared for Mr. Lewis in Japan. It is pale sea-green, tuberculated with white, with seven lateral oblique crimson-edged white stripes; the horn red-brown or sordid rose-colour; prolegs yellowish.


At once distinguished from *Basiana* by its short and strongly falcated primaries, with short outer margin, and with the inner margin strongly excavated below external angle; prothorax very short; head small; palpi very short, not visible from above; antennae short, slender; secondaries subpyriform; upper discocellular longer than lower, oblique, strongly concave.
1. **Pseudosmerinthus submarginalis.**


*Sierra Leone (Foxcroft).*

Type, B.M.

2. **Pseudosmerinthus suffusus.**

*Basiona suffusa*, Walker, Characters of Heterocerous Lepidoptera from Congo, p. 5. no. 3 (1869).

Congo.

**Genus 14. Daphnusa, Walker.**


1. **Daphnusa ocellaris.**


*Borneo (Horsburgh); Sarawak (Wallace).*

Type, B.M.

2. **Daphnusa orbifera.**


*Sarawak (Wallace).*

I believe this to be the female of the preceding species.

3. **Daphnusa colligata.**


*North China (Stevens); Hong Kong (Bowring).*

Type, B.M.

**Genus 15. Leucophilebia, Westwood.**


1. **Leucophilebia lineata.**

*Leucophilebia lineata*, Westwood, Cab. Orient. Ent. pl. 22. fig. 2 (1848).

♂, Nepal (Hardwicke); ♀, Java (Horsfield).

B.M.

The description of the body is scarcely defined enough, as there are nearly allied species from other parts of India which chiefly differ from *L. lineata* in the colouring of the head and thorax. The head and antennae above are cream-coloured; the thorax pinkish cream-coloured, with a broad increasing central ochreous-brown patch; the abdomen above dull ochreous, pink at the sides; head, antennae, and palpi below ferruginous; pectus dull pale ochreous at the sides, rosy in the centre; legs white...
above, brownish rose-colour below; venter dull rose-colour. The larva is figured by Moore, Cat. Lep. E.I. C. i. pl. viii. fig. 5 (1857).

2. Leucophilebia rosacea.

Leucophilebia rosacea, Butler, P. Z. S. 1875, p. 15, pl. 2. fig. 1.

Coimbatore (Waltmane). Type, B.M. Altogether darker than the preceding; the vertex of the head dark brown. Mr. Moore has this species from Kussowlee, N.W. Himalayas.

3. Leucophilebia bicolor.

Leucophilebia bicolor, Butler, P. Z. S. 1875, p. 16, pl. 2. fig. 5.

Almorah (Boys); North India (Arey). Type, B.M. Allied to L. lineata and L. emitens. Mr. Moore has both sexes from Bombay.

4. Leucophilebia emitens.


India. Type, B.M.


1. Basiana deucalion.


North India (Mauger). Type, B.M.

2. Basiana bilineata.


Darjeeling (Russell). Type, B.M. I formerly believed this to be the male of the preceding species; but Mr. Moore has the female of B. bilineata in his collection from Shanghai. This doubtless gives the species a tremendous range; but I think there is no doubt of the specific identity of the two sexes.

3. Basiana exusta. (Plate XCH. fig. 4)


Kunavur (Lany). Type, coll. F. Moore. The larva feeds on poplar. I have seen a second example in Mr. Sharpe's collection.
4. **Basiana phalaris**.


♂ ♀, North India (*Stevens*). B.M.

Although Cramer’s figure appears far too deeply coloured for this species, I have very little doubt of the correctness of my determination. The type of *S. pagana* of Fabricius is in the Banksian Collection in the British Museum. The larva is clumsy, green, with seven oblique lateral white stripes and a very short, aborted anal horn.

5. **Basiana cervina**.


♂ ♀, North India (*Stevens*); Madras. Type, B.M.

6. **Basiana semifervens**.


Ternate (*Wallace*).

7. **Basiana pudorina**.


♂ ♀, North India (*Stevens*). Type, B.M.

8. **Basiana postica**.


Port Natal (*Gueinzius &c*.). Type, B.M.

8. **Basiana abyssinica**.


Abyssinia.

Closely allied to the preceding species.


Caequosa triangularis.

Sphinx triangularis, Donovan, Ins. New Holl. pl. 33. fig. 2 (1805).
Sphinx castaneus, Perry, Arcana or Mus. Nat. Hist. i. (1811).

Moreton Bay (Gibbons); Australia (Hunter).

Subfamily V. ACHERONTINÆ.

Genus Acherontia, Hübner.


1. Acherontia styx.

Acherontia styx, Westwood, Cab. Orient. Ent. p. 88, pl. 43. fig. 3 (1817).

North India (James); Turkey in Asia (Loftus).

The larva is very pale green, or bright golden yellow, irrated with black dots, with lilac-bordered oblique white streaks; it has also a dark brown form. It feeds on Paulownia imperialis.

2. Acherontia medusa, n. sp. (Plate XCII. fig. 10.)

Acherontia medusa, De Cerisy, MS.

Altogether darker than the preceding, and running to a larger size; primaries above without or with very indistinct longitudinal reddish streaks; subapical paler area less oblique, the intersecting transverse lines less strongly dentated; secondaries with the black bands, as a rule, closer together, better-defined, the inner one generally extending to third subcostal branch; body above darker, the scull-marking on thorax much darker, and consequently rather less conspicuous; head blacker; abdomen with the dorsal blue bar darker, the transverse bands blacker; primaries below with the outer border much more dusky; secondaries with the outer band more dusky. Expanse of wings 3 inches 5 lines to 4 inches 10 lines (A. styx measures 3 inches 2 lines to 4 inches 5 lines).
Java (Horsfield); Hong Kong (Bowring); Shanghai, China, East India, Philippines (Bowring).

I have received examples of this species from Mr. Lewis. The smaller form of it was bred by him in Japan; and as he has had the transformations carefully drawn by a native artist, I am now enabled to figure them, proving the entire distinctness of this species from _A. atropos_. He believes that the larger examples may be referable to a distinct species, the small Japanese examples being constant in size and in the absence of the ventral black spots upon the abdomen. The larva feeds on _Sesamum orientale_.

3. _Acherontia atropos_.

_Sphinx atropos_, Linneaus, Mus. Lud. Utr. p. 318, no. 8 (1764).

_Acherontia atropos_, Hübner, Verz. bek. Schmett. p. 139, no. 1494 (1816).

_England_ [Brit. coll.]; _Europe_ (Becker); _Sierra Leone_ (Morgan); _Mauritius_ (Becke); _South Africa_ (Smith).

This species may be at once distinguished from the two preceding (in its perfect state) by the deeper orange tint of the secondaries and abdomen, and by the transverse blackish belts on the underside of the abdomen. The larvae differ considerably.

4. _Acherontia morta_. (Plate XCII. fig. 9.)

_Sphinx atropos_, var., Cramer, Pap. Exot. iii. p. 74, pl. 237, fig. A (1782).
_Sphinx atropos_, Gray, Cuvier's Animal Kingdom, pl. 137, fig. 4 (1832).
_Acherontia satanas_, Boisduval, Hist. Nat. des Lép. pl. 16, fig. 1 (1836).
_Acherontia lethre_, Westwood, Cab. Orient. Ent. p. 87, pl. 12, fig. 2 (1818).

_Sphinx lachesis_, Fabricius, Ent. Syst. Suppl. p. 434, nos. 26, 27 (1798).

_Java_ (Horsfield); _Hong Kong_ (Bowring); _Ceylon_ (Templeton); _Silhet_ (Sowerby); _Assam_ (Warwick).

Mr. Walker adopted the most recent name for this species: Mr. Moore, however, recorded it as _A. satanas_, with a query as to Hübner's species being the same; but as Cramer's figure is clearly a representation of a Javese example of this species, we cannot avoid adopting Hübner's name for it.

Subfamily VI. SPHINGINÆ.

Genus 1. _Tatoglossum_, n. gen.

Allied to _Anecyr_ (restricted). Body more robust; thorax much shorter; prothorax not extending so far in advance of the wings; mesothorax not crested. Head shorter; palpi narrower, closely appressed to the front of head; proboscis long; anus of male
not tufted; primaries less pointed at apex; discocellulars more transverse; secondaries broader and more rounded at apex.

**Tatoglossum caricæ.**


*Eriargis caricæ*, Hübner, Verz. bek. Schmett. p. 139. no. 1493 (1816).

*Sphinx cacus*, Cramer, Pap. Exot. iv. p. 73, pl. 46. fig. E (1782).

♂ ♀, Colombia (Parzudaki).


1. **Amphonyx duponchel**.


♂ ♀, Haiti (Tweedie); ♀, Jamaica (Gosse).

2. **Amphonyx rivularis**. (Plate XCIV. fig. 6.)

*Amphonyx rivularis*, Butler, P. Z. S. 1875, p. 11. no. 22.

♀ ♂, —— ?; ♂, Ega (Bates).

3. **Amphonyx antæus**.


*Sphinx introphae*, Fabricius, Syst. Ent. p. 538. no. 8 (1775).

*Cocytius introphae*, Hübner, Verz. bek. Schmett. p. 140. no. 1497 (1816).


♀, Haiti (Tweedie).

4. **Amphonyx medor**.


♂ ♀, Mexico (Hartweg).

This species is altogether darker in colouring than the preceding; the body is of a dark gunpowder-grey tint, on which the orange spots stand out very vividly.

5. **Amphonyx hydaspus**.


Surinam.

Vol. IX.—Part X. No. 12.—November, 1876.
This species is certainly distinct; Cramer's figures of *A. medor* and *A. hydaspus* are evidently both taken from female examples; the white spots are most distinctive.

6. **Amphonyx cluentius.**

*Sphinx cluentius*, Cramer, Pap. Exot. i. p. 124, pl. 78. fig. B (1779).

*Phlegethontius cluentius*, Hübner, Verz. bek. Schmett. p. 140. no. 1500 (1816).


Brazil (Saunders); Rio Janeiro (Stevens); Haiti (Tweedie).

Genus 3. **Anceryx**, Walker (restricted)\(^1\).


1. **Ancyrex alope.**


Jamaica.

Comparing this species with the various allied but distinct forms in the genus *Dilophonota*, several of them sent by the same collector from Oaxaca, Mexico, I cannot believe that Drury's figure can be so gross as to be a representation of the *Sphinx alope* of Cramer; not only is the banding and coloration of the primaries utterly different, but the body is both described and represented as "clay-coloured;" I therefore adopt Swainson's name of *Sphinx fasciata* for Cramer's insect.

2. **Ancyrex fasciata.**


♀ ? , Haiti (Tweedie); Jamaica (Gosse); South America (Milne). B.M.

\(^1\) Allied to *Amphonyx*; thorax with a broad and very prominent dorsal tuft, dilated in front and excavated above; proboscis long, but shorter than in *Amphonyx*; head and thorax projecting a long way in front of primaries; secondaries narrow, especially towards apex.
Genus 4. Isognathus, Felder.


Section Erinnyis, Hübner (restricted).

1. Isognathus rimosus.

♀, Erinnyis rimosus, Grote, Proc. Ent. Soc. Phil. v. pp. 73 and 167, pl. 2. fig. 1 (1865).
Sphinx mnechus, Poey, in Grote’s ‘Notes on Cuban Sphingidæ,’ p. 75 (1865).

Haiti (Tweedie).

2. Isognathus laura, n. sp.

Nearly allied to the preceding, but rather smaller; the primaries more distinctly marked, the black discal dash shorter; the secondaries of a rather paler yellow colour, with the marginal border one third narrower; body darker; wings below darker, transverse bar more distinct. Expanse of wings 2 inches 4 lines.

Venezuela (Dyson).

3. Isognathus amazonicus, n. sp. (Plate XCIV. fig. 8.)


Villa Nova (Bates).

This is the species described by Walker; it is the largest in the genus. The primaries have a peculiar greyish tint, and the markings are strongly defined; the outer border of secondaries takes up a little more than one third of the wing; the bands on the abdomen are well defined, and scarcely interrupted in the centre.

4. Isognathus congratulans.

Cuba (Gundlach and Poey).

5. Isognathus fumosa.

Isognathus fumosa, Butler, P. Z. S. 1875, p. 258. no. 50.

Brazil (Stevens).

Type, B.M.

Mr. Grote remarks, Lye. Nat. Hist. New York, that E. rimosus and E. congratulans are a group “characterized by the elevated square thoracic parts, which are but slightly advanced before the insertion of the primaries.” They remind one of the genus Diludia in pattern.
6. *Isognathus leachii*.

*Sphinx leachii*, Swainson, Zool. Ill. 2nd ser. vol. iii. pl. 150 (1823).


—— ?

The primaries and body of this species are like my *I. fumosa*, but the secondaries like *I. laura*.

7. *Isognathus metascyron*. (Plate XCIV. fig. 7.)


Villa Nova (*Bates*). Type, B.M.

8. *Isognathus scyron*.


Surinam.

Not in the collection of the British Museum; the species most nearly allied to it was placed with *Anceryx alope*, and four other distinct species represent *Anceryx scyron*, in Mr. Walker's catalogue.

9. *Isognathus swainsonii*.


Rio Negro.

Very nearly allied to *I. scyron*.


1. *Cautethia noctuiformis*.


Haiti (*Tweedie*).

I think that *Enosandra* of Newman is too close to *Enosanda* for both names to be retained.

2. *Cautethia chinensis*.

*Enosanda chinensis*, Schaufuss, Nunquam Otiosus, i. p. 23 (1870).

"East India."

"Distinguished from *E. noctuiformis* by its narrower body, altogether more grey-brown.
colour without white dusting, and the denser yellow on the secondaries.” If this is all, it is evidently a variety of that species with a wrong locality; and, judging by the state of the localities in the Rhopalocera of Kaden’s collection, I should say this was highly probable.

**Genus 6. Dilophonota, Burmeister.**

*Dilophonota*, Burmeister, Abhandl. naturf. Gesellsch. Halle, p. 69. gen. 6 (1855).

1. **Dilophonota ello.**

*Sphinx ello*, Linnaeus, Mus. Lud. Utr. p. 351 (1764); Drury, Ill. Nat. Hist. i. p. 58, pl. 27. fig. 3 (1770).


♂ ♂, Mexico (Hartweg); ♀, west coast of South America (Kellett & Wood); New Granada, ♂ ♀, Haiti (Tweedie); St. Thomas (Hornbeck).

B.M.

2. **Dilophonota piperis.**

*Anceryx piperis*, Schausfuss, Nunquam Otiosus, i. p. 17 (1870).

Venezuela (Moritz).

Apparently nearly allied to *A. ello*, but with the blackish border of secondaries much broader.

3. **Dilophonota meriana.**


“Tropical Insular and Continental Districts!” (Grote).

4. **Dilophonota oenotrus.**


♀ *Erinnyis oenotrus*, Grote (nee Cramer), Proc. Ent. Soc. Phil. v. pl. ii. fig. 3 (1865).

♂ ♀, Mexico (Hartweg); ♀, Haiti (Tweedie).

B.M.

I cannot agree with Mr. Grote in thinking Cramer’s figure to be intended for this species; the distinctive apical and inner marginal pale areas of primaries are not marked in that figure, whilst the transverse wavy lines are far more like the *E. melancholica* of Grote.

5. **Dilophonota oenotrus.**


*Erinnyis oenotrus*, Hübner, Verz. bek. Schmett. p. 139. no. 1490 (1816)


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δ ♀, Mexico (Hartweg); δ ♀, Haiti (Tweedie); ♀, West coast of South America (Kellett & Wood); New Granada.

Mr. Grote, in his description of E. cinerosa, states that he formerly regarded it as the female of E. melancholica; his opinion seems to have been changed by some remarks of Mr. Gundlach, which, however, apply perfectly to good examples of E. anotrus δ (melancholica, Grote).

6. Dilophonota domingonis.

Dilophonota domingonis, Butler, P. Z. S. 1875, p. 258. no. 52.

Haiti (Tweedie).  

Type, B.M.

7. Dilophonota obscura.

♀, Sphinx obscura, Fabricius, Syst. Ent. p. 538 (1775).


♂ Sphinx penus, Fabricius, Ent. Syst. iii. 1, p. 360. no. 15 (1793).

♀ ♀, Mexico (Hartweg); Haiti (Tweedie).

Our examples from Haiti are paler than those from Mexico.

8. Dilophonota pallida.


Cuba (Poey).

This appears only to differ from D. gutturalis in being somewhat larger; I rather doubt its being distinct, although Mr. Grote had both species before him.


Haiti (Tweedie).  

Type, B.M.

10. Dilophonota lasauehi.


Buenos Ayres.

"It has altogether the character of Enothrus of Cramer and of Omphale of Central America, but is easily distinguished from all the Sphinxes of this genus by its black inferior wings, since they are yellow or fulvous, with a black border, in all the known species."—Boisduval.
Section Phryxus\textsuperscript{1}, Hübner (restricted).

11. Dilophonota caicus.

Phryxus caicus, Hübner, Verz. bek. Schmett. p. 137. no. 1469 (1816).

\(\delta\), South America, Honduras (Miller); \(\varphi\), Haiti (Tweedie).

Genus 7. Oryba, Walker.


Oryba robusta.


Brazil.


Differs from Diludia, Pseudosphinx, and allies in its narrower wings, the (in the type) more incurved external angle, more arched costa, and longer outer margin of primaries and the somewhat longer head.

1. Macrosila incisa.


\(\delta\), Rio Janeiro (Stevens).

The general coloration of the wings is that of Diludia; but the primaries have an oblique diffused brown bar across them from the costa to the outer margin; the thorax is grey, with a pitchy streak on each side; the abdomen above dark grey, a black streak on each side, and an ochreous spot on the four basal segments; wings below light chocolate-brown, whitish at base; body whitish testaceous.

2. Macrosila hannibal.

Phlegethontius hannibal, Hübner, Verz. bek. Schmett. p. 140. no. 1502 (1816).

Brazil (Stevens).

Cramer's figure gives an entirely false notion of the form of the wings, the primaries being more elongated than in Sphinx kalmine; they are not incurved above external angle as in the type of the genus; and the coloration is more like Sphinx lucetius of Cramer.

\textsuperscript{1} Characterized by its slightly smaller head, coarser antennae, and the entire margin to the wings; the style of coloration is also not quite the same.


If *M. rustica* were to be considered the type of *Macrosila*, Walker, as suggested by Mr. Grote, that genus would have to sink as a synonym of *Protoparce*, described the year previously; this, however, is unnecessary; I have therefore rejected Mr. Grote's emendation, and adopted as the type of *Macrosila* a species possessing a vague likeness to the whole of the groups placed under that name by its author.

1. Protoparce rustica.

*Sphinx rustica*, Fabricius, Syst. Ent. p. 510 (1775).
*Cecyllus rustica*, Hubner, Verz. bek. Schmett, p. 110. no. 1498 (1816).

Brazil (Children); Mexico (Hartweg); Haiti (Tweedie).

2. Protoparce fulvinotata.


♂, Port Natal (Plant); ♀ (Gueinzius); ♀, Ashanti.

Type, B.M.

Mr. Walker's ♀, var. β, is the typical female of his male; the darker form may be an extreme variety of the same species, but differs as follows:—“Body above dark brown, especially the thorax (the abdomen of the male paler), lateral yellow spots as usual, but the white segmental streaks better-defined, antennae more distinctly white-tipped; body below whiter; wings above darker, subapical patch whiter; secondaries below with the central bars nearer together.” I will call this form *P. mauriti*.

3. Protoparce mauritii, sp. n.? 


♂ ♀, Mauritius (Becker); ♀, Port Natal (Gueinzius).

B.M.

This may perhaps be a variation of the preceding; it is altogether much darker, with the subapical patch of primaries whiter.

4. Protoparce solani.

*Sphinx solani*, Boisduval, Faune ent. de Madag. p. 76, pl. xi. fig. 2 (1833); Herrich-Schäffer, Samml. neuer oder wenig bekannter ausseurop. Schmett. pl. 22. fig. 101 (1850–1858).

Madagascar (Stevens).

Type, B.M.

This is distinct from the South-African species named *Macrosila solani* by Mr. Walker. Irrespective of the different pattern and coloration of the wings, it may at once be distinguished by the white (instead of fulvous) lateral spots on the abdomen.
5. *Protoparce morganii.*


Sierra Leone (*Morgan*); Congo (*Richardson*). Type, B.M.


*Sphinx ochus,* Klug, Neue Schm. Heft i. p. 4, pl. 3. fig. 2 (1836).


“Mexico” (*King*); “Honduras” (*Clemens*).

7. *Protoparce diffissa.*

*Sphinx diffissa,* Butler, P. Z. S. 1871, p. 82.

Buenos Ayres (*Burmeister*). Type, B.M.

8. *Protoparce eurylochus.*


*Sphynx cestri,* Blanchard, Gay’s Hist. de Chili, Lep. pl. 5. fig. 9 (1854).

Santiago.

The figure in Gay’s ‘Chili’ is very poor; and the description is not precise.


*Sphynx carolina,* Donovan (see Linn.), Nat. Hist. Brit. Ins. ii. pl. 361 (1804).


United States (*Doubleday*).

All the stages of this species are described in Packard’s ‘Guide,’ p. 273.

10. *Protoparce trojanus.*

*Sphynx trojanus,* Schaffuss, Nunquam Otiosus, i. p. 15 (1870).

Venezuela.

11. *Protoparce carolina.*

*Sphynx carolina,* Linn, Mus. Lud. Utr. p. 346 (1764).


Delaware (*Doubleday*); Mexico (*Saté*); Panama !, Haiti (*Tweedie*); Brazil, Pernambuco (*Argent*). B.M.

The larva of *P. carolina* is described and figured in Packard’s ‘Guide,’ p. 274, fig. 200.

I believe the form from Jamaica to be distinct; it is larger, has most of the markings.

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of primaries confused, the submarginal irregular whitish line much more distinct, the subapical whitish patch more distinct, and the whitish ground-colour of secondaries replaced by dull pale brown. I shall call it *P. jamaicensis*.

12. **Protoparce jamaicensis**, n. sp.  
♂ ♀, Jamaica.

13. **Protoparce paphus**.  
*Phlegethontius paphus*, Hübner, Verz. bek. Schmett. p. 140. no. 1504 (1816).  

Surinam.  
Possibly a melanistic variety of *P. carolina*; but, from the deep colouring of the primaries, it has a very distinct appearance.

14. **Protoparce griseata**.  
*Protoparce griseata*, Butler, P. Z. S. 1875, p. 259. no. 53.  

Venezuela (*Dyson*).  

Type. B.M.

15. **Protoparce contracta**.  

Rio Janeiro (*Stevens*).  

Allied to *P. lucetius*.  

Type. B.M.

16. **Protoparce pellenia**.  
*Charocampa pellenia*, Herrich-Schäffer, Samml. aussereurop. Schmett. pl. 22. fig. 103 (1850-1858).  

South America.

17. **Protoparce lucetius**.  

Brazil (*Stevens & Becker*).  

B.M.

18. **Protoparce cingulata**.  
*Sphinx cingulata*, Fabricius, Syst. Ent. p. 545 (1775).  
*Sphinx convolvuli*, Drury (née Linn.), Ill. Nat. Hist. i. pl. 25. fig. 4 (1770).  
*Sphinx affinis*, Goze, Beytr. iii. 2, p. 215. no. 4 (1780).  
*Sphinx pungens*, Eschscholtz, in Kotzebue's Reise, p. 218, pl. xi. fig. 28 (1821).  

Jamaica, Mexico (*Hartweg*); Haiti (*Tweedie*); New Granada.  

B.M.
19. **Protoparce convolvuli**.

*Sphinx convolvuli*, Linnaeus, Syst. Nat. i. ii. p. 789. no. 6 (1766); Roesel, **Ins. Belust.** i. tab. vii. figs. 1–5 (1746).


England [British Coll.]; Europe (Becker); South Africa (Smith); Port Natal (Guein-zius).

I cannot find any difference between African and European examples.

20. **Protoparce distans**.


New Zealand (Sinclair, Bolton); Sydney (Lambert); Australia. Type, B.M.

This is altogether darker in both sexes, and has a more ashy hue than the European species; the early stages will probably be quite unlike.

21. **Protoparce orientalis**, n. sp. (Plate XCI. figs. 16, 17.)


North India (James, Hearsay); Scinde! (Warwick); North Bengal (Saunders); Moulmein (Clerck); Ceylon (Templetow); Hong-Kong (Bowring); Java (Horsfield); Hakodadi (Whitely). B.M.

This species is wonderfully like some African examples of *P. convolvuli*, being altogether paler than the European form; it differs from the African variety in always having the centre of the middle band of secondaries quite pale, and paler rosy bands on the abdomen; the larva differs considerably, being more slenderly formed, and without the double dorsal series of black spots. It feeds on the sweet potato.

22. **Protoparce pseudoconvolvuli**.

*Sphinx pseudoconvolvuli*, Schaufuss, Nunquam Otiosus, i. p. 15 (1870).

Natal.

“Like a small pale *Sphinx convolvuli*; the underside uniform grey, only the margin a little darker. Width 75 millimetres.” The above is the only description given of this insect.

23. **Protoparce tisiphone**.


“Indies.”

The description of this species is not sufficiently precise to enable me to determine it.
MR. A. G. BUTLER ON THE SPHINGIDÆ.


1. Pseudosphinx tetrio.

Sphinx tetrio, Linneus, Mantissa, i. p. 538; Fabricius, Syst. Ent. p. 540. no. 14 (1775).


♀, Sphinx hasdrubal, Cramer, Pap. Exot. iii. p. 90, pl. 246. fig. 8 (1782).

Hyloicus hasdrubal, Hübner, Verz. bek. Schmett. p. 139. no. 1488 (1816).


♀, Honduras (Miller); ♀, Haiti (Cuming, Tweedie); Brazil (Argent). B.M.

2. Pseudosphinx obscura, n. sp.

Allied to P. tetrio. All the wings darker, the lines more prominent, primaries clouded with blackish brown; bands on abdomen better-defined. Expanse of wings 5 inches 4 lines to 6 inches 5 lines.

♂, Honduras (Miller); ♂, New Granada, ♂, Brazil (Argent, Stevens). B.M.

I was at first inclined to consider P. obscura a dark form of P. tetrio; but Herr Flohr, who knows P. tetrio in all its stages, informs me that he has seen no such variety, and he is satisfied that it is distinct. The male is very unlike P. tetrio, owing to the broad dark nebulous band (interrupted at end of cell by a greyish white patch) which crosses the middle of the wing, and by the dark triangular apical area; these characters, however, are not so pronounced in the female. The Brazilian males are deepest in colour, and more elegantly formed than our male from Honduras.

3. Pseudosphinx luctifera.


New Guinea, Mysol, Ceram.

I have not seen the type of this species (formerly in Mr. Saunders's collection); therefore I am unable to be certain of its genus.

4. Pseudosphinx menephron.


Amboina.

5. Pseudosphinx nyctiphanes.


♂, Silhet (Doubleday, Sowerby, Stainforth, Dale). Type, B.M.
6. **Pseudosphinx inexacta.**


North India (*Hawes, Doubleday*).

Mr. Moore has the sexes collected in Masuri by Messrs. Grote and Hutton.

7. **Pseudosphinx cyrtolophia.** (Plate XCI. figs. 11–13, XCII. fig. 6.)

*Pseudosphinx cyrtolophia*, Butler, P. Z. S. 1875, p. 259. no. 54.

Madras.

**Genus 11. Daremma, Walker.**


**Daremma undulosa.**


*Sphinx brontes*, Boisduval (née Drury), Sp. Gén. Lép. pl. 15. fig. 6 (1833).


*Daremma repentinus*, Grote, l. c. p. 164. no. 88 (1865).

West Canada (*Bush*); United States (*Doubleday & Jones*).

Mr. Walker’s type is simply a rather small specimen; it does not differ more from the examples referred by Mr. Walker to *Sphinx brontes* than they do from each other, the primaries being 5 millims. less in expanse than Boisduval’s figure, and the pattern almost identical.


**Syzygia afflicta.**


*Syzygia afflicta*, Grote & Robinson, l. c. p. 164. no. 87, pl. 3. fig. 5 (1865).


“Tropical Insular District!”

*Sphinx pamphilius* of Cramer, placed by Messrs. Grote and Robinson as a second species of this genus (P. E. S. P. v. p. 189), is certainly a *Diludia.*

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1 Seems allied to *Daremma,* in the description a comparison is drawn between it and *Diludia.* Mr. Grote has proposed (1866) to withdraw it as a genus; but I rather doubt the advantage of this step.


1. **Dolba fo**.


North India (*Mager & Argent*).  

Type, B.M.

2. **Dolba hylæus**.


Philadelphia (*Milne*); United States (*Doubleday*); Massachusetts (*Sheppard*). B.M.  

The Mexican species is distinct.

3. **Dolba hartwegii**.

**Dolba hartwegii**, Butler, P. Z. S. 1875, p. 259. no. 55.  

Oaxaca (*Hartweg*).  

Type, B.M.


Allied to *Diludia*; primaries elongate subtriangular, inner margin slightly waved; discocellulars very oblique, basal half and costal area below clothed with hair-like scales, which obscure the venation; secondaries ovate-triangular, outer margin undulated, discocellulars obscured by elongate scales, oblique, upper about three times as long as lower, and slightly concave; head and thorax above, and entire body below, clothed with coarse erect bristling scales; antennæ two fifths the length of primaries; palpi large, closely compressed, very hairy.  

Type *E. aper*.

**Euryglottis aper**.


Bogota (*Stevens*); var. ? Columbia (*Becker*). Type, B.M.  

A very handsome and elaborately ornamented moth.


1. **Diludia brontes**.


Jamaica (Argent); Haiti (Tweedie).

I think it very probable that Drury's type came from Jamaica. It was described from the collection of Dr. Fothergill; and all the species noted as from that collection are said to come either from Jamaica or New York; so that a locality ticket may easily have been transposed. Moreover our example from Jamaica agrees better with Drury's figure than those from Haiti, although still differing in the indistinctness of the pale transverse band of secondaries. In the event of the two species proving not to be identical, the Insular type will, of course, have to take Walker's specific name and Grote's generic, and will then stand as Diludia collaris. I cannot but regret that Mr. Grote has thought it necessary to add to the synonymy by proposing names for species before they were required. It is true that he might otherwise have been superseded; but, as a fact, it does not matter who names a species, so long as the name given be euphonious, whilst on the other hand a cumbrous synonymy is a great evil.

2. Diludia Pamphilius.


Surinam.

This is certainly not Syzigia afflicta of Grote; but I strongly suspect it to be Diludia brontes badly figured.

3. Diludia Florestan.

Coetius florestan (sic), Hübner, Verz. bek. Schmett. p. 110. no. 1499 (1816).

♂♀, Rio Janeiro (Stevens).

4. Diludia Brevimargo.

Diludia bremargoi, Butler, P. Z. S. 1875, p. 12. no. 25.

Brazil (Becker).

Type, B.M.

5. Diludia Analis.

Sphinx analis, Felder, Reise der Novara, Lep. iv. tab. 78. fig. 4 (Nov. 1874).
6. **Diludia rufescens**.


Rio Janeiro (*Stevens*). Type, B.M.

7. **Diludia lichenea**.


♂ ♀, Brazil (*Brecker*). Type, B.M.

Mr. Walker's description is a compound one; it begins with the male, which I therefore consider the type. The description of the secondaries, "Hind wings whitish, tinged with brown and with several darker brown bands," is evidently taken from the example from Rio Janeiro, supposed by Walker to be a female variety, but clearly a distinct species; the secondaries of *D. lichenea* are very similar to those of *D. florestan*, excepting that the central whitish bands in the male are more distinct.

8. **Diludia sesquiplex**.

*Sphinx sesquiplex*, Boisduval, Lép. Guat. p. 73 (1870); Felder, Reise der Nov., Lep. iv. tab. 78. fig. 5 (Nov. 1874).

Guatemala.

One of the handsomest species in the genus.

9. **Diludia albiplaga**.


Rio Janeiro (*Stevens*). Type, B.M.

10. **Diludia obliqua**.


Ceylon (*Templeton*). Type, B.M.

11. **Diludia grandis**.

*Diludia grandis*, Butler, P. Z. S. 1875, p. 260. no. 56.

Nepal. Type, coll. F. Moore.

12. **Diludia latreillii**.

*Sphinx latreillii*, McLeay, in King's Survey of Australia, Appendix, p. 164. no. 165 (1827).

Australia.

McLeay quotes this as "*Dielophila latreillii*, De Cerisy, MSS."

*Sphinx godarti,* McLay, in King's Survey of Australia, Appendix, p. 464. no. 166 (1827).

Australia.

Quoted by McLay as "*Dielophila godarti,* De Cerisy, MSS." The two species above referred to are so insufficiently described that I have been unable to recognize them; I am satisfied that they are not referable to *Dielophila*; but they do not agree in all respects with any *Diludia* in the National collection. Walker omitted them from his catalogue. Possibly they are *Charcampa*.


Sidney (*Sinclair*); Australia, North Australia (*Elsey*). Type, B.M.

15. *Diludia nebulosa,* n. sp.


Cape York (*Macgillivray*).

This species is nearly allied to *D. discistriga*.

16. *Diludia discistriga.*


Hong-Kong (*Bowring*); North China (*Cuming*); Java (*Horsfield*). Type, B.M.

The larva and pupa of *D. discistriga* are figured by Dr. Semper, Verhandl. zool.-botan. Gesellsch. Wien, pl. xxiii. figs. 2 a, 2 b (1867). Mr. Moore has both sexes of the species taken by Captain Hutton at Masuri, and the female from Bombay.

17. *Diludia melanomera.*  (Plate XCV. fig. 4.)

*Diludia melanomera,* Butler, P. Z. S. 1875, p. 13. no. 27.

Silhet (*Dale*). Type, B.M.

Mr. Moore also has this species from Silhet, to which habitat it appears to be restricted.

18. *Diludia rubescens.*


North India. Type, coll. F. Moore.


Shanghai, North China (*Fortune*). Type, B.M.

I found the example registered "North China" among our examples of *D. discistriga*; it is not, however, quoted by Mr. Walker under that species. Mr. Moore has this species from Masuri and South India.
20. **Diludia vates.** (Plate XCl. figs. 18, 19.)

*Diludia vates*, Butler, P. Z. S. 1875, p. 13, no. 28.

*Anceryx pinastri* (g), Walker, t. c. p. 223 (1856).

Ceylon (Templeton); Madras, Moulmein (Clerck); Silhet (Sowerby); North India (Stevens).

The larva is pale green, with darker oblique green lines and reddish-edged spiracles; front segments and horn tuberculated. It feeds on *Gmelina arborea* according to W. Elliot, on privet, *Polonnia*, &c. according to Mr. George Lewis.

21. **Diludia natalensis.** (Plate XClV. fig. 5.)

*Diludia natalensis*, Butler, P. Z. S. 1875, p. 13, no. 29.

Natal (Gueinzius). Type, B.M.

**Genus 16. Hyloicus, Hübner.**


1. **Hyloicus pinastri.**

*Sphînx pinastri*, Linnæus, Syst. Nat. i. ii. p. 802, no. 22 (1766).  

England [Brit. Coll.]; Europe (Becker). Type, B.M.

2. **Hyloicus sequoiae.**

*Anceryx coniferarum* (g), Walker, Lep. Het. viii. p. 224, no. 2 (1856).

United States (Doubleday). Type, B.M.

The *Anceryx coniferarum* of Walker has been placed as a synonym of *Ellema harrisii*; his female, however, appears to me to be Abbot's species, whilst the male is undoubtedly generically distinct.

3. **Hyloicus asiaticus.**

Scinde ! (Warwick). Type, B.M.

4. **Hyloicus uniformis.**

North-west Himalayas. Type, coll. F. Moore.

The smallest species in the genus.
5. **Hyloicus strobi.**


California (*Lorquin*).

Also allied to *H. pinastri*. M. Boisduval thinks the species may possibly have been taken in Chili; but he is tolerably certain that California is the correct locality.

6. **Hyloicus plebeia.**


United States (*Doubleday*); Delaware (*Doubleday*). B.M.

7. **Hyloicus pecila.**


——— (?* Vigors's Coll.*).

Like a strongly marked female of *H. plebeia*, which I believe it to be.

8. **Hyloicus poeyi.**


“Atlantic District!”

9. **Hyloicus juniperi.**

*Sphix juniperi*, Boisduval, Voy. de Delagorgue, ii. p. 595. no. 112 (1847).


Port Natal (*Gueinzius & Stevens*).

This is the only Sphingid described by Dr. Boisduval in the above work. B.M.

**Genus 17. Sphinx, Linnaeus.**

*Sphinx*, Linnaeus, Syst. Nat. i. 2, p. 796 (1766).

1. **Sphinx cheiris.**

*Lethia cheiris*, Hübner, Samml. exot. Schmett. ii. pl. 167. figs. 1, 2 (1806).


*Sphix cinereus*, Harris, Cat. N.-Am. Sph., Sill. Journ. vol. xxxvi. p. 295 (1839) ; Scudder, Harris's Corresp. p. 282, pl. 2. fig. 6, larva (1869).

United States (*Doubleday*); North America. B.M.

4 x 2
2. Sphinx leucophæata.

Oaxaca, Mexico (*Hartweg*).  B.M.

3. Sphinx lugens.

Oaxaca, Mexico (*Hartweg*).  Type, B.M.

Although coming from the same locality as the preceding, and very like it in its general characters, I believe this species to be quite distinct. It is altogether shorter, broader, and darker, and has the pale bars of secondaries much narrower and whiter.

4. Sphinx jasminearum.
*Sphinx jasminearum*, Boisduval, Griffith’s Anim. Kingd. vol. ii. pl. 83. fig. 1 (1832).

New York, Pennsylvania.

5. Sphinx vancouverensis.

Esquimalt, Vancouver Island (*Bremner*).

Taken in August 1871. It seems closely allied to *S. gordius*.

6. Sphinx gordius.

United States (*Doubleday*); North America (*Jones*).  B.M.

I cannot see any reason for separating this generically from *Sphinx*.

7. Sphinx luscitiosa.

New York; Wisconsin.

8. Sphinx oreodaphne.

California.

Henry Edwards says:—"Taken on the wing, about flowers of Californian Laurel (*Oreodaphne californica*), near St. Helena, Napa County, in June 1872. A strongly
marked species, readily distinguished by its pale fore wings, and by the triangular mark of the thorax."

9. *Sphinx justiciei*

- Brazil (*Stevens*); Rio Janeiro (*Stevens*).

Type, B.M.

10. *Sphinx anteros*

- "New Friburg (not far from Rio Janeiro)."

Allied to the preceding species and to *S. chersis*.

11. *Sphinx merops*

- Honduras and Mexico.

Closely allied to *S. justiciei*, from which it seems chiefly to differ in having three black bands on the under surface of secondaries.

12. *Sphinx lanceolata*

*Sphinx lanceolata*, Felder, Reise der Nov., Lép. iv. tab. lxxviii. fig. 3 (Nov. 1874).
- Guatemala and Mexico.

Seems allied to *S. chersis*, but may possibly belong to the genus *Pseudosphinx*; without seeing the insect it is impossible to decide.

13. *Sphinx capreolus*

*Ancyrxe capreolus*, Schaufuss, Nunquam Otiosus, i. p. 16 (1870).
- "Virmont" ¹ (Kaden); "Venezuela!" (Schaufuss).

This appears to me to be a very faulty description of a faded *S. kalmiae*, Sm. & Abb.; for although the description of the body ² and the under surface of the wings does not agree with *S. kalmiae*, the former may be rubbed or greasy, and the latter faded. The apparently arbitrary alteration of the locality makes me suspicious of there being an error somewhere: if the species was, as Dr. Schaufuss says, labelled "Mit der Bezeichnung 'Virmont' in der Sammlung," why alter it to Venezuela?

¹ State Vermont, United States.
² The body (apparently only the abdomen) is described as pitch-black at the sides, with a pale spot, with a slender longitudinal red line and two other black ones; whereas *S. kalmiae* is black at the sides, with about five white bars, interrupted by a longitudinal red-brown band with a central black line.

*Sphinx kalme*, Smith and Abbot, Lep. Ins. Georg. i. p. 73, pl. 37 (1797).

Canada West (*Bush*); New York (*Doubleday*); United States. 

15. Sphinx drupiferarum.


United States.


*Sphinx ligustri*, Lameau, Fauna Suecica, p. 287, no. 1087.
*Sphinx spireae*, Esper, Eur. Schmett. ii. p. 21, pl. 42, fig. 1 (1777).

England [*Brit. Coll.*]; Europe (*Becker*).


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Genus 18. LINTNERIA, n. gen.

1. LINTNERIA EREMITUS.

*Agrius eremites*, Hübner, Samml. exot. Schmett. ii. pl. 166, figs. 1, 2 (1806–24).

*Sphinx abadonna*, Fabricius, Ent. Syst. Suppl. p. 435, nos. 56, 57 (1793).

United States (*Doubleday, Milne*).

This species differs from all others (until recently) referred to *Sphinx*, in its shorter and broader primaries. It cannot be associated with *Sph. lugens*, as that species cannot be separated generically from *Sph. justicia*, being in fact nearly allied to *Sph. leucophora*. I cannot follow my friend Grote in adopting the name incorrectly applied by Hübner in his figure, the *Agrius* of the Verzeichniss being a mixture of *Philampinus* and *Protoparce*.

*Sphinx abadonna* is said to come from East India; but this locality may be wrong, as many of Fabricius’s localities undoubtedly are.
2. **Liintneria? perelegans.**


Gilroy, Santa Clara County, California (G. R. Crotch).

Mr. Henry Edwards says:—"This beautiful specimen closely resembles *Sph. eremitus*, Walk., of the Atlantic States, but is readily known by its more brilliant grey colouring, by the very sharply defined demi-bands, and by the strongly marked whitish submarginal band of the fore wings."

3. **Liintneria? eremitoides.**


Kansas.

Very briefly described, and, owing to Mr. Strecker's incomprehensible affection for unmanageably extensive genera, described as a *Sphinx*, without a hint as to its structural characters. In the same page he described a *Hemaris* as a *Macroglossa*, which at first fairly puzzled me, it not being a New-World genus; but, fortunately, he observed that it was allied to *M. diffinis* (one of the most typical species of *Hemaris*), which at once enlightened me.

Mr. Grote thinks it probable that *S. eremitoides* is *S. lugens* of Walker; but (judging from Mr. Grote's previous papers on the Sphinxidae) I am doubtful whether he knows the *S. lugens* of Walker. It is certain that Clemens did not; for he separated it by a wide interval from his *S. leucopholeta*.

**Genus 19. Ceratomia, Harris.**


1. **Ceratomia amyntor.**


United States (*Doubleday*); Massachusetts (*Sheppard*); Mexico (*Sallé*). B.M.

2. **Ceratomia hageni.**


Texas.
Genus 20. NEPHELE, Hübner (ZONILIA, Walker).


1. NEPHELE _equivalens._


Sierra Leone (Morgan). Type, B.M.

This species is certainly a Nephele. It differs from Pachylia in the form of the wings. The latter genus appears to be strictly confined to the New World.

2. NEPHELE _enopion._

Ornens _enopion_, Hübner, Samml. exot. Schmett. ii. pl. 159. figs. 1, 2 (1806).

Deilephila _enopion_, Boisduval, Faune Ent. de Madag. p. 75. no. 8 (1833).


Zonilia _enopion_, Walker, i. c. Suppl. i. p. 33 (1864).

Bourbon, Madagascar.

3. NEPHELE _densol._


Madagascar.

I have been unable to refer to this species.

4. NEPHELE _rose._ (Plate XCIV. fig. 3.)


Boma (Mrs. Monteiro). Type, B.M.

5. NEPHELE _kadeni._

Pachylia _kadeni_, Schaufuss, Nuuquam Otiosus, i. p. 16 (1870).

"S. America."

Said to be allied to _N. enopion_; but as the primaries are described as crossed by two purplish whitish bands, and the secondaries as spotted with white, with alternately broad and narrow bands, I think the affinity cannot be very great. _N. enopion_ is an African species. I doubt the locality of _N. kadeni._

6. NEPHELE _argentifera._


Port Natal.
7. *Nephele variegata.*

*Nephele variegata,* Butler, P. Z. S. 1875, p. 15, no. 31.

Congo (Richardson); Africa (Milne); Abyssinia. Type, B.M.

Possibly a variety, or more probably a local form, of *N. accentifera.*

8. *Nephele accentifera.*

*Sphinx accentifera,* Palisot de Beauvais, Ins. rec. en Afrique et en Amérique, p. 264, pl. xxiv. fig. 1 (1805).

*Sphinx (Deilephila) tridyma,* Van der Hoeven, Tijd. voor Natuurlijke Gesch. en Phys. vii. p. 278. no. 2, pl. 5, figs. 2 a, 2 b (1840).


*Sphinx (Deilephila) tridyma,* Van der Hoeven, Tijd. voor Natuurlijke Gesch. en Phys. vii. p. 278. no. 2, pi. 5, figs. 2 a, 2 b (1840).


*Sierra Leone (Morgan).* B.M.

This species was omitted by Mr. Walker; and I have to thank Mr. Kirby for calling my attention to it. Bertoloni's figure is very poor, the abdomen being represented as uniform.

9. *Nephele malgassica.* (*N. Densoi?*)

*Zonilia malgassica,* Felder, Reise der Nov., Lep. iv. tab. 76. fig. 2 (1874).

Madagascar.

10. *Nephele penneus.*

*Sphinx penneus,* Cramer, Pap. Exot. i. p. 139, pl. 88, fig. D (1779).


Var. *Nephele penneus,* Hopffer in Peters's Reise nach Mosambikke, Ins. p. 122, pi. 27. fig. 11 (1862).


Var. *Nephele penneus,* Hopffer in Peters's Reise nach Mosambikke, Ins. p. 122, pi. 27. fig. 11 (1862).


Port Natal (Gueinzius). B.M.

Our example is darker and not so green as Hopffer's figure.

11. *Nephele comma.*

*Nephele comma,* Hopffer in Peters's Reise nach Mosambikke, Ins. p. 424, pl. 27. fig. 12 (1862).


Port Natal (Gueinzius). B.M.

12. *Nephele viridescens.*


Port Natal (Gueinzius). Type. B.M.

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13. **Nephele fuxebria**.

*Sphinx fuxebria*, Fabricius, Ent. Syst. iii. p. 371. no. 47 (1793).


Congo (*Richardson*); Ambriz (*Monteiro*). B.M.

This species may at once be distinguished from the preceding by the much more regular submarginal line of primaries, the usually greener tint, and the less prominent lateral black bars on the abdomen, which at the base are obsolete; the dark border of secondaries is also broader. The variety described by Walker has a silver spot on the primaries somewhat like that of *N. comma*, but less oblique.

14. **Nephele hespera**. (Plate XCI. figs. 20, 21.)


*N. hespera* type: N. India (*Baker, Strachey*); Almorah (*Stevens*); Landoor (*Hearsay*); E. India, Canara (*Ward*); Ceylon (*Templeton*); Australia (*Hunter*). B.M.

*N. morpheus* type: N. India (*Baker*); Landoor (*Hearsay*); Canara (*Ward*); Ceylon (*Templeton*); Australia (*Hunter*). B.M.

“Larva dark green, unspotted, without eyes; front segments nonretractile, but attenuated in front, with small globose head. A longitudinal line from the front of sixth segment white, and rising abruptly near the tail, fading in front into yellowish green. The fourth, fifth, and upper part of sixth segments are striped diagonally, the lines being rather faintly defined except on the fifth segment, where (near the bottom of the side) they are pure white. Horn purplish grey; scaly legs ditto, with dark articulations and stripe down the middle. Spiracles purplish red, ill-defined.”

“Changes beneath fallen leaves and rubbish. Chrysalis state lasts about twenty days. End of April, May, and June. Feeds on the Kler Kci (*Mal.*). Kowlee Murrei (*Car.*)."

15. **Nephele subvaria**.


Australia (*Strange*). Type, B.M.
16. _Nephele metapyrrha_.


Moreton Bay (Gibbons).

It is possible that this may prove to be a variety of the preceding. I think, however, considering their differences, Mr. Walker would scarcely have been justified in uniting them, there being only one example of each in the collection.

17. _Nephele vau_.


(Kartoum) Abyssinia (Lucas); ———?

Type, B.M.

The figure by Lucas represents the species as much redder than our example, but does not otherwise differ.

_Zonilia antipoda, rhadama, and zebu_ of Boisduval appear to be MS. names (cf. p. 630).

18. _Nephele ? favillacea_.


Zambesi river.

_Sphingina incerta sedis_.


**CALYMNIA PANOPUS.**


_Amblypterus panopus_, Hübner, Verz. bek. Schmett. p. 133. no. 1430 (1816).


Java (Horsfield); Ceylon (Cuming); North India (James). B.M.

This genus, as shown by Horsfield and Moore’s figures of its earlier stages, clearly belongs to the _Sphinginae_; in general coloration, however, it is far more like _Amblyx_.

Genus 22. _Ellema_, Clemens.


1. _Ellemma coniferarum_.

Hyloicus coniferarum, Hübner, Verz. bek. Schmett. p. 139. no. 1484 (1816).
Sphinx cana, Martyn, Psyche, pl. 19. fig. 1 (1797).

Georgia (Abbot).
I am glad to see this species referred by Mr. Grote to Ellema, that being unquestionably
the true position for it; our example agrees far better with Abbot's figure than with
the description of E. harrisii; it is certainly S. cana of Martyn.

2. Ellema harrisii.
St. Cab. xxiii. pp. 170, 171, pl. 8. figs. 8–11 (1872).

"Atlantic District!" (Grote).
The larva of this species is described at p. 272 of Packard's 'Guide.'

3. Ellema pineum.
Canada.
The larva of this species is described by Lintner.

Genus 23. Lapara1, Walker.


Lapara bombycoides.
Canada.
But for Mr. Walker's description of the body of this species as "body rather slender"
and "abdomen linear" I should have been inclined to think the species a male Ellema;
as I have not seen males of that genus it may possibly be so.

Genus Himantoides, n. gen.

Himantoides undata.
Perigonia undata, Walker, Lep. Het. viii. p. 103. no. 6 (1856).
Jamaica.

The abdomen and secondaries of the type are wanting, so that is impossible to decide positively as to its position; the long whip-like antennæ at once distinguish it from Perigonia.

_Doubtful Sphingidæ._

**Genus Arctonotus**, Boisduval.


**Arctonotus lucidus.**


California.

**Genus Colax**, Hübner.


**Colax apulus.**

_Sphinx apulus_, Cramer, Pap. Exot. i. p. 8, pl. 88. fig. E (1779).

_Colax apulus_, Hübner, Verz. bek. Schmett. p. 141. no. 1513 (1816).


_Sphinx australasicæ_ of Donovan, so far as I can judge by Cramer's figure. Mr. Walker suggests its possible affinity to the genus Calliomena; but the structure of that genus seems quite distinct. It may perhaps be a Corymbia (Noctuidæ).

**Genus Clanis** (part.), Hübner.


**Clanis achemenides.**


Surinam.

As I have never seen the species figured by Cramer, and as it differs too much from

---

1 I would rather see this genus among the Bombycidæ than in the Sphingidæ; I believe it has about as much right to be in the latter family as the Geometrine genus Euchromia, which has even a more Sphingoid appearance; however, as I am not acquainted with the early stages of Arctonotus, I leave it provisionally at the end of the Sphingidæ.
Pachylia to be referred to that genus, I have preferred to retain Hübner’s generic name for it.

Hübner notes three species of Clanis. The first, C. nicobarensis (Schwarz, Beytr. i. 1), I cannot identify, as I have only been able to obtain the Coleopterous portion of the work in which it is described; and I can find no figure in Roesel that will at all do for the genus.

APPENDIX I.


Genus Metamimas, Butler.

Brachyglossa banksiae, Boisd. p. 11.
Smerinthus meander, Boisd. p. 22, pl. 4. fig. 1, will come next to M. amboinicus.

Genus Metagastes, Boisd. p. 11 = Basiana.

Genus Nycteryx, Boisd. p. 16: type Ambulyx hyposticta, Felder.

Genus Triptogon, Bremer.

Smerinthus echephon, Boisd. p. 21. no. 6, pl. 3. fig. 3, allied to T. sinensis. — indicus, Boisd. p. 45. no. 36 = S. indicus, Walker, Lep. Hét.


Smerinthus adansoniana, Boisd. p. 27. no. 15, seems allied to P. andosa.

Genus Daphnusa, Walker.

Smerinthus aitanti, Boisd. p. 28. no. 16, pl. 3. fig. 2, closely allied to D. ocellaris.

Genus Pagonias, Hübner.

Smerinthus oculata, Boisd. p. 29. no. 17, allied to P. myops. — saliceti, Boisd. p. 35. no. 24.


Smerinthus pseudambulyx, p. 29. no. 18.

Genus Basiana, Walker.

Smerinthus pudorinus, Boisd. p. 46. no. 37 = S. pudorinus, Walker.
MR. A. G. BUTLER ON THE SPHINGIDÆ.

Genus Leucophlebia, Westwood.

Genus Meganoton, Boisd. = *Pseudosphinx*.

Genus Amphonyx, Poey.
*Amphonyx beelzebuth*, Boisdr. p. 63. no. 2, allied to *A. duponchelii*.
— *godartii*, Boisdr. p. 65. no. 4, pl. 5. fig. 1, near *A. duponchelii*.
— *walkeri*, Boisdr. p. 67. no. 7, near *A. cluentius*.

Genus Protoparce, Burmeister.
*Sphinx lycopersici*, Boisdr. p. 71. no. 2, near *P. carolina*.
— *petunia*, Boisdr. p. 73. no. 5, pl. 5. fig. 2, close to *P. diffissa*.
— *nicotiana*, Boisdr. p. 75. no. 7, = *P. carolina*, var.
— *tabaci*, Boisdr. p. 78. no. 10, near *P. lucetius*.
— *astaroth*, Boisdr. p. 86. no. 20, near *P. solani*.

Genus Macrosila, Walker.
*Sphinx hamilcar*, Boisdr. p. 79. no. 12.

Genus Sphinx, Linnaeus.
*Sphinx capsici*, Boisdr. p. 80. no. 14, close to *S. pellenia*.
— *canadensis*, Boisdr. p. 93. no. 29, = *Sphinx leucophwata*.

Genus Hyloicus, Hübner.
*Sphinx strobi*, figured pl. 5. fig. 3.
— *cupressi*, Boisdr. p. 102. no. 41, pl. 2. figs. 3–5.

Genus Pseudosphinx, Burmeister.
*Sphinx catalpa*, Boisdr. p. 103. no. 42, pl. 2. figs. 1, 2.

Genus Diludia, Grote.

I think the above may be distinct from the pale and less-marked species of southern India.

Genus Isognathus, Felder.
*Anceryx cauchua*, Boisdr. p. 122. no. 4, = *I. metascyron*.
— *pedilanthi*, Boisdr. p. 124. no. 6, pl. 7, fig. 1, near the preceding.
— *papaya*, Boisdr. p. 126. no. 10, near *I. amazonica*. 
Anceryx pelops, Boisd. p. 126. no. 11, allied to the preceding.
— excelsior, Boisd. p. 127. no. 12, near I. fumosa.

Genus Dilophonota, Burmeister.
Anceryx lassauxii, Boisd. p. 129. no. 14, very distinct, secondaries black.
— janipha, Boisd. p. 131. no. 17, = D. omphaloe?.

Genus Nephele, Hübner.
— rhadana, Boisd. p. 146. no. 13, pl. 6. fig. 1, close to N. peucus.

Genus Madoryx, Boisd. p. 150, = Hemeroplanes.
— deborei, Boisd. p. 155. no. 6, near H. triptolemus.

Genus Calliomma, Walker (see Eucheryx).
Madoryx faunus, Boisd. p. 153. no. 4, near C. pluto.

Genus Deilephila. Ochsenheimer.
Deilephila celeno, Boisd. p. 170. no. 13, = D. spinifascia.
— lathyrus, Boisd. figured pl. 6. fig. 2.

Genus Elibia, Walker.
Elibia linigera, Boisd. p. 180. no. 4, near E. dolichoideus.

Genus Ambulyx, Walker.
Ambulyx palmeri, Boisd. p. 181. no. 1, pl. 4. fig. 3, near A. marginata.
— crethon, Boisd. p. 182. no. 2, A. gannascus group.
— astygous, Boisd. p. 188. no. 10, allied to A. eurycles.
— coquereli, Boisd. p. 191. no. 14, pl. 4. fig. 2, Indian group.
— tycidas, Boisd. p. 191. no. 15, A. strigilis group.

Genus Philampelus, Harris.
Philampelus capronniieri, Boisd. p. 194. no. 3, pl. 7. fig. 2, unites the P. satellitiae and P. megara groups.
— pistacia, Boisd. p. 199. no. 8, possibly a different genus.

Genus Aleuron, Boisduval.
Aleon pudens, Boisd. p. 207. no. 5, near A. smerinthoides.

Genus Gonenyio, Butler.
Aleon orophilus, Boisd. p. 205. no. 1, ? var. of G. carinata.
Genus Everyx, Boisd. p. 208, = Otus, Hübner,
Everyx astyeaon, Boisd. p. 211. no. 3, near O. myron.

Genus Euchloron, Boisd. p. 213, = Argeus, Hübner.

Genus Acosmeryx, Boisd. p. 214.
Acosmeryx anceoides, Boisd. p. 216. no. 2, = A. sericeus.
— shervilii, Boisd. p. 217. no. 4, = ! A. cinerea.
— daulis, Boisd. p. 218. no. 5, = P. miskini.
— socrates, Boisd. p. 219. no. 6.

Genus Eucheryx, Boisd., = Calliomma.

Eucheryx ficastus, figured pl. 6. fig. 3.
— nomius, Boisd. p. 221. no. 2, = Calliomma nomius, Walker.
— depuiiseti, Boisd. p. 222. no. 4, = C. thorates.

Genus Daphnis, Hübner.
Cheerocampa hesperus, Boisd. p. 228. no. 5, near C. pallescens.

Genus Cheerocampa, Duponchel.
Cheerocampa echechis, Boisd. p. 233. no. 10, = probably C. elegans.
— kotschyi, Kollar. p. 234. no. 11, = a faded C. alecto.
— geryon, Boisd. p. 241. no. 11, pl. 7. fig. 3, near C. celano.
— epicles, Boisd. p. 244. no. 23, = C. gordius.
— yorkii, Boisd. p. 248. no. 28, said to be described from a unique example (allied to C. oldenlandiae) in the British-Museum collection from Cape York; but as we have only one Australian species of that group (not registered Cape York), which has been unique in the collection since 1857, and as the only other Australian species, unique only between 1847 and 1848, is registered "Sidney," C. yorkii may be considered a fictitious species; its description agrees with nothing that I ever saw; and I am inclined to think that it is some half-described insect with a wrong locality.
— rheus, Boisd. p. 254. no. 36, = C. cyrene (olivaceous type).
— jungurtha, Boisd. p. 256. no. 39, C. clotho group.
— pollux, Boisd. p. 261. no. 47, near C. nessus.
— tydunlions, Boisd. p. 264. no. 51, pl. 4. fig. 5, C. anadis group.
— alicides, Boisd. p. 266. no. 54, = C. ambus (bright examples).
— epaphus, Boisd. p. 267. no. 56, near C. chiron.
— druryi, Boisd. p. 267. no. 57, = C. chiron, var.
— cmecdon, Boisd. p. 272. no. 64, C. crotonis group.
— isaan, Boisd. p. 272. no. 65, C. crotonis group.

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Charsocampa maculator, Boisd. p. 274. no. 67, close to C. amadis.

--- agloar, Boisd. p. 275. no. 70, close to C. falco.

Genus Panacra, Walker.

Panacra tiritates, Boisd. p. 286. no. 3, pl. 7. fig. 4, near P. truncauta.

Genus Temnora, Walker.

Temnora natalii, Boisd. p. 290. no. 2, = T. natalis, Walker.

--- rhadamistus, Fabr. figured pl. 9. fig. 1.

Genus Unzela, Walker.

Tylognathus emus, Boisd. p. 294. no. 2.

Genus Tylognathus, Felder.

Tylognathus ypanema, Boisd. p. 295. no. 4.

Genus Epistor, Boisd. p. 296, = Enyo.

Epistor lucretius, Boisd. p. 298. no. 2, = E. lugubris (slight variety).

Genus Tricholon, Boisd. p. 301, = Deidamia.

Genus Ocyton, Boisd. p. 303, = Diodosida.

Ocyton tyrherus, Boisd. p. 303. no. 1, = D. murina, Walker.

Genus Aspledon, Boisd. p. 305, = Lophura (part.).

Aspledon dorus, Boisd. p. 305. no. 1, = Lophura nana.

--- briscus, Boisd. p. 306. no. 3, = L. pylus of Cramer.

Genus Lophura, Walker.

Lophura pumilio, Boisd. p. 311. no. 2, close to L. pusilla.

Genus Pterogon, Boisd. p. 311, = Proserpinus and Lophura (part.).

Pterogon pumillum, Boisd. p. 312. no. 2, a species of Lophura.

--- nanum, Boisd. p. 314. no. 4, pl. 9. fig. 2, = Lophura nana, Walker.

Genus Pojocolon, Boisd. p. 314, = Proserpinus and Amphion.

Genus Angonyx, Boisd. p. 317, = Panacra (part.).

Angonyx emilia, Boisd. p. 318, pl. 8. fig. 1 (P. testacea group).

The P. testacea group of Panacra may perhaps be separated with advantage: they certainly have a somewhat different outline from the typical species; and the coloration is very dissimilar.
Genus Cautethia, Grote.

*Enosanda spuria*, Boisd. p. 319. no. 2.

Genus Pachygonia, Felder.

*Perigonia coffea*, Boisd. (nee Walker), pl. 8. fig. 4, being a new species, may be named *Pachygonia boisduvalii* (from New Freiburg).

— *nictitans*, Boisd. p. 322. no. 4, near to *P. coffea*, Walker. It is just possible that this may be *P. coffea*; the description, however, hardly agrees with it.

Genus Perigonia, Herrich-Schaffer.

*Perigonia nephus*, Boisd. p. 323. no. 5, near *P. lusca*.

— *iloides*, Boisd. p. 327. no. 11, = *P. lefebvrei*.

Genus Macroglossa, Ochsenheimer.

*Macroglossa bombylans*, Boisd. p. 334. no. 2, = *M. walker*, Butler, M.S.

— *avicula*, Boisd. p. 334. no. 3, = *M. obscuripennis*.

— *regulus*, Boisd. p. 335. no. 5, near *M. gyranus*.

— *zena*, Boisd. p. 337. no. 9, = *M. belis*, var.


— *sinica* (sic), Boisd. p. 340. no. 12.

— *aquila*, Boisd. p. 340. no. 13, near *M. proxima*.

— *bengalensis*, Boisd. p. 341. no. 14, near *M. divergens*.


— *troglohytus*, Boisd. p. 344. no. 19, = *M. belis*, dwarfed. We have one example of this form from North India; it may be distinct.

— *tinnunculus*, Boisd. p. 344. no. 20, ? near *M. imperator*.

— *opis*, Boisd. p. 345. no. 21, = *M. belis*.

— *pheyeton*, Boisd. p. 346. no. 22, close to *M. alcedo*.

— *hirundo*, Boisd. p. 346. no. 23, pl. 9. fig. 4, near *M. divergens*.


— *sturnus*, Boisd. p. 349. no. 28, = *M. passalus*.

— *sylvia*, Boisd. p. 350. no. 29, allied to *M. faro*.

— *cyniris*, Boisd. p. 350. no. 30, probably large race of *M. alcedo*.

— *mitchelli*, Boisd. p. 351. no. 31, pl. 8. fig. 5, near *M. imperator*.

— *fringilla*, Boisd. p. 352. no. 33, near *M. errans*.

— *heliophila*, Boisd. p. 354. no. 36, pl. 11. fig. 2, near *M. sitiens*.

1 I am obliged to mention this to explain a note in P. Z. S. 1875.
Genus Aellopus, Hübner.

*Macroglossa westermannii*, Boisd. p. 355. no. 38.

— *rodon*, Boisd. p. 357. no. 40, pl. 11. fig. 1.

Genus Hemaris, Dalman.

*Macroglossa etolus*, Boisd. p. 370. no. 59, near *H. thysbe*.

— *pyramus*, Boisd. p. 372. no. 62, near *H. ruficaudis*.


There is no *Hemaris* in the British Museum from Silhet; and the only species from North India is *H. saundersii*.

Section Cephonodes, Hübner.

*Macroglossa confinis*, Boisd. p. 376. no. 6, = *H. hylas*.

— *yunx*, Boisd. p. 376. no. 7, pl. 9. fig. 5, = *H. hylas*.

Genus Sataspes, Moore.

*Sataspes infernalis*, Boisd. (nee Westwood), pl. 10. figs. 1, 2, = *S. uniformis*, var.

— *tagalica*, Boisd. p. 378. no. 2, pl. 10. figs. 3, 4, = *S. centralis*.

Appendix of additions to the Family collated since the reading of this paper.

Subfamily MACROGLOSSIN.E.

Genus Lepisesia, Grote.

*Lepisesia flavofasciata*.

*Macroglossa flavofasciata*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 4 (1876).

*Lepisesia victoria*.

Said to be identical with *Pterogon clarkia* of Boisduval; see Bull. Buff. Soc. ii. p. 225.

Genus Hemaris, Dalman.

*Hemaris æthra*.

*Macroglossa æthra*, Strecker, Lep. Rhop. and Het. i. p. 107 (1875); pl. xiii. fig. 2 (1876).

— ?

*Hemaris fumosa*.

*Macroglossa fumosa*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 3 (1876).
Hemaris rubens.
Oregon.

Hemaris cynoglossum.
Napa and Calaveras counties, and Vancouver Island.

Section Hæmorrhagia, Grote.

Hemaris ruficaudis (synonym).
Macro glossa ruficaudis, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 1 (1870).

Genus Macroglossa, Ochsenheimer.

Macroglossa obscuriceps.
Macroglossa obscuriceps, Butler, P. Z. S. 1876, p. 309. no. 3, pl. xxii. fig. 5.
Ayerpanas, Malacca.
Coll. Capt. Roberts.

Macroglossa lepchia, n. sp.
Allied to M. obscuriceps, from which it differs in having the head and thorax olive-green; the black band across the abdomen feebly developed; the primaries narrower; the central greyish band (which is scarcely distinguishable in M. obscuriceps) quite obsolete, the subbasal lines bounding it internally, converted into a black band, which is broad on the inner margin, and tapers towards the costa; wings below with the transverse lines less distinctly marked; the internal orange area brighter. Expanse of wings 2 inches.
Calcutta (Atkinson). Coll. Dr. O. Staudinger.
This species is also allied (but less closely) to M. avicula and M. bombylans. Mr F. Moore has generously permitted me to describe the Sphingidae recently forwarded to him by Dr. Staudinger, and forming part of the late Mr. Atkinson's collection.

Genus Pachygonia, Felder.

Pachygonia hopfferi.
Chiriqui.
May not this be a form of P. caliginosa?
Genus Deidamia, Clemens.

**Deidamia inscripta.**

*Pterogon inscriptum*, Strecker, Lep. Rhop. and Het. pl. xiii. fig. 8 (1876).

This is not Cramer's *S. jepicr*, if Mr. Strecker's figure is correct (see p. 535).

Genus Proserpinus, Hübner.

**Proserpinus cenotheroides.**

*Proserpinus cenotheroides*, Butler, P.Z.S. 1875, p. 621.

**Brazil.**

*Proserpinus clarki.*

*Pterogon clarki*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 5 (1876).

**Proserpinus juanita.**

*Pterogon juanita*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 6 (1876).

**Proserpinus terlooi.**


**Mexico.**

Genus Euproserpinus, Grote.

*Euproserpinus phaeton* of Grote is said to be identical with *Macroglossa crato* of Boisduval; see H. Edwards in Proc. Cal. Acad. Sci. 1875, p. 3.

Genus Lophura, Walker.

**Lophura himachala.**

*Lophura himachala*, Butler, P.Z.S. 1875, p. 621.

**Coll. F. Moore.**

**North-east Himalayas (Farr).**

**Lophura sangaica.**

*Lophura sangaica*, Butler, P.Z.S. 1875, p. 621.

**Shanghai.**

**Lophura erebina.**


**Coll. F. Moore.**

**North-west India.**
Lophura minima.

Lophura minima, Butler, P. Z. S. 1876, p. 310. no. 4, pl. xxii. fig. 2.

Ayerpanas, Malacca.

Coll. Capt. Roberts.

Subfamily CHLEROOMPINÆ.

Genus Elibia, Walker.

Elibia versicolor.

Darapsa versicolor, Strecker, Lep. Rhop. and. Het. i. pl. xiii. fig. 9 (1876).

It is evident from Strecker’s figure, that this species has been erroneously referred to the allied genus Otus; see p. 516.

Genus Pergesa, Walker.

Pergesa mongoliana. (Plate XCI. figs. 14, 15.)


Nankow Pass (Swinhoe).

Type, B.M.

Genus Panacra, Walker.

Panacra perfecta.


Darjeeling (Sadler).

Type, B.M.

Genus Diodosida, Walker.

Diodosida peckoveri, n. sp.

Nearly allied to D. fumosa, altogether darker; the wings much more purple in tint; the bands of primaries more regular; body uniform greyish olive, abdomen not ochreous at the sides; antennæ ferruginous. Expanse of wings 2 inches 4 lines.

Madagascar (Kingdon).

Presented by Miss Algerina Peckover.

Type, B.M.

Genus Chileroampa, Duponchel.

Chileroampa prunosa.


Ceylon (Skinner).

Coll. F. Moore.
Clerocampa puellaris.


Clerocampa intersecta.

Charocampa intersecta, Butler, P. Z. S. 1875, p. 623. Type, B.M.

Clerocampa procne (synonym).

Charocampa procne, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 10 (1876).

South California (Strecker).

It is much more probable that this is an Asiatic species allied to C. lucasii.

Clerocampa deserta, n. sp.

Sandy brown: primaries with two ill-defined oblique brown lines, the first proceeding from the internal nervure just before the middle to the apical fourth of costal nervure, the second parallel to and about two lines in advance of the first, proceeding almost to apex, and dotted with darker brown upon the nervures; a very indistinct brownish nebula upon the median interspaces just beyond the middle; a small blackish spot on the lower discocellular; outer area sparsely irrorated with brown scales; fringe dark brown, excepting at external angle: secondaries smoky brown; costa, anal area, and fringe, excepting at the anal angle (where it is white), sandy brown; body sandy brown, becoming smoky in front, sides of abdomen and head paler; sides of collar, outer border of tegule, legs and antennae above, whitish. Primaries below with internodiscoidal area dusky; a large diffused smoky brown patch from the end of the cell to the inner margin; disk sparsely irrorated with dark brown, three decreasing spots of the same colour parallel to the outer margin upon the veins towards costa: secondaries below sandy; costal and external areas dotted with brown; a discal series of seven brown dots parallel to the outer margin: body below sandy whitish; antennae below reddish. Expanse of wings 3 inches 4 lines. Hunter River, Australia (W. Scott). Coll. O. Staudinger.

This species was in Mr. Atkinson's collection.

Genus Deilephila, Ochsenheimer.

Deilephila euphorbiarum = D. spinifascia.

Sphinx euphorbiarum, Boisduval, in Guérin and Percheron's Insects, 2° Liv. 8, pl. 3 (1835).

I have to thank Mr. Kirby for a reference to this species, which has not only been overlooked by all subsequent authors, but by Dr. Boisduval himself in his monograph of the family.
Subfamily AMBULICINÆ.

Genus Ambulyx, Walker.

Ambulyx floralis, n. sp.

Allied to A. superba, but smaller, and clouded with bronze and green.

d shining bronzy clay-colour: primaries with the apical half of costal area, the central and internodiscal areas washed with green; subbasal area dusky olivaceous, limited externally by an oblique olive line, a second parallel line crossing the wing over the base of the first median branch; three ill-defined oblique waved lines, the outermost, undulated, crossing the disk; between the second and third a very indistinct diffused sinuous line; inner margin and the lines as they approach it blackish; a white-pupilled rounded black spot on the lower discocellular; a tuft of rose-red hairs at the base of inner margin; secondaries with the basal two thirds rose-red; costal area whitish; external third washed with green, especially towards apex, brownish towards the anal border; fringe for the most part white: head and collar brown, tegulae and abdomen washed with green; antennæ testaceous, pectinations brown; anterior tibiae and tarsi above brown. Wings below much paler, testaceous, washed with pale green: primaries with the internodiscoidal area rose-red; costal area greenish; a transverse brown litura beyond the cell; a transverse oblique, nearly straight white-bordered olive discal line; a zigzag line nearer to the outer margin, becoming black towards inner margin; a submarginal series of spots, only distinct and blackish at the external angle: secondaries crossed by three parallel white-bordered olive lines; a squamose brown submarginal spot near anal angle: body below whitish brown; palpi, pectus, and legs slightly dusky.

Expanse of wings 3 inches 8 lines.

♀ much larger, altogether less lively in colour, the green colouring less perceptible. Expanse of wings 4 inches 11 lines.

Darjeeling (Atkinson).

Coll. O. Staudinger.

One of the handsomest species in the genus.

Subfamily SMERINTHINÆ.

Genus Leucophileia, Westwood.

Leucophileia damascena.


Sikkim (Whitely).

Type, B.M.

Vol. IX.—part X. No. 17.—November, 1876.
Genus Basiana, Walker.

Basiana phalaris.


The publication of a plate of Sphingidae, as also of a plate of Charideinae and Ctenuchinae in the above edition of Esper's work has hitherto been overlooked; as usual, we have to thank Mr. Kirby for calling attention to the fact.

Genus Daphnusa, Walker.

Daphnusa porphyria, n. sp.

Primaries reddish brown, the basal area transversely marked with an irregularly arched whitish line, external area rather darker, marked from near external angle to a little below apical angle by a diffused whitish curved streak; a subapical sephia-brown excavated quadrangular patch; apex grey, with a large semicircular sephia-brown spot bordered externally by a white lunule on the outer margin; a broad central red-brown band (bordered on each side by a whitish streak, its outer line angular), much broader in front than behind, transversely clouded with grey, its outer third beyond the discoidal cell darker; the base of second median interspace and the discocellulars blackish picceous; two dissimilar whitish-edged black spots on the veins near external angle; secondaries pale brown, with two very indistinct discal streaks, clearly discernible upon the abdominal area; outer border rather broadly smoky brown; costa whitish; anal angle marked with a greyish and ferruginous dash, upon which is a black spot; a nearly marginal grey line: body pale brown, varied with dark brown; a black spot on the crest of the head. Primaries below greyish brown; apical half of costa and internal area pale greyish; apical markings as above, but redder: secondaries pale rosy greyish, paler on the abdominal area; three angulated ferruginous diffused discal lines; outer border rather broadly pale ferruginous, fringe dark picceous: body below pale reddish brown; palpi chocolate-brown. Expanse of wings 2 inches 3 lines.

Darjeeling (coll. Atkinson).

Allied to D. colligata.

Genus Mimas, Hübner.

Mimas terranea.

Mimas terranea, Butler, P. Z. S. 1876, p. 310. no. 5, pl. xxii. fig. 3.

Ayerpanas, Malacca.

Coll. Capt. Roberts.

Subfamily SPHINGINÆ.

Genus Diludia, Grote.

Diludia jasminearum.

Sphinx jasminearum, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 11 (1876).
Judging by the figure, Boisduval’s species is referable to this genus.

**Diludia tranquillaris**, n. sp.

2. Nearly allied to *D. grandis*, slightly smaller, the markings much less strongly defined, the central transverse congregation of parallel bands broader; black band only visible on costal area; the apical patch more uniformly dark grey, much narrower and longer, oblique behind, more narrowly black-bordered; secondaries with only one abbreviated black zigzag band across the grey anal patch; body slightly browner in tint; head not varied with white; abdomen with lateral diffused brown longitudinal bands instead of the black spots; wings below more uniform in colour, the transverse bands less strongly marked, narrower, and nearer to the outer border, the central blackish band of primaries obsolete. Expanse of wings 5 inches 3 lines.

Darjeeling (Atkinson).

Coll. O. Staudinger.

At first I was inclined to think this might be the female of *D. grandis*; but a comparison of the sexes of allied species convinces me that the differences are too great to admit of this.

**Apocalypsis**, n. gen.

Allied to *Euryglottis*; similar in pattern, but at once to be distinguished by the much smoother thorax, shorter and more slender antennae, more prominent and less crested head. Type:—

**A. velox**, n. sp.

Primaries long and pointed, sepia-brown, with the veins, a chain-like discal excavated transverse band, and some oblique lines connecting its outer border with the apices of the radial veins pale brown; an oblique white streak from the apex to the upper radial: secondaries smoky brown, the costal and abdominal areas paler; a basal hairy patch, two diffused abbreviated bands (distinct towards abdominal area), and a broad outer border (darkest at anal angle) deep brown; margin blackish, the fringe and a diffused narrower streak at anal angle white: body smoky brown, head and collar darker; a central longitudinal streak, the borders of the thorax, and a series of lateral abdominal transverse bands black-brown; lateral margins of head, fringe of tegulae, back of thorax, and front margins of the abdominal segments white; antennae whitish, with testaceous serrations. Wings below smoky brown: primaries with the internal area whitish; base of discoidal cell testaceous; a white apical streak, less distinct than above; secondaries with the base and abdominal area whitish; two diffused ill-defined transverse bars; margin as above: body below smoky brown; palpi, sides and hinder part of pectus, and centre of venter white. Expanse of wings 6 inches 2 lines.

Darjeeling (Atkinson).

Coll. O. Staudinger.

The anterior wings of this species are coloured almost exactly as in *E. aper* from Bogota.
Genus Sphinx, Linnaeus.

**Sphinx lugens.**
*Sphinx lugens*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 12 (1876).

**Sphinx plota.**
*Sphinx plota*, Strecker, Lep. Rhop. and Het. i. p. 106 (1875); pl. xiii. fig. 13 (1876).
Canada, Cincinnati.

**Sphinx lusitiososa.**
*Sphinx lusitiososa*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 11 (1876).
There seems to be no doubt that this is a *Lethia*, as determined by Mr. Grote.

**Section Lethia, Hübner.**

**Hyloicus coniferarum.**
*Sphinx coniferarum*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 15 (1876).

**Hyloicus harrisii.**
*Sphinx harrisii*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 16 (1876).

**Hyloicus sequoiae.**
*Sphinx sequoiae*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 17 (1876).

**Hyloicus saniptri.**
*Sphinx saniptri*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 18 (1876).
Canada and Philadelphia.
I have to thank Mr. Kirby for lending me Mr. Strecker’s work, and the author of it for his excellent figures, which have enabled me to refer the above species to their correct genera.

**Genus Nephele, Hübner.**

**Nephele hespera.**
*Sphinx quaterna*, Charpentier, ed. Esper's Ausl. Schmett. Sphing. tab. i. fig. 2 (1830).

**Genus Arctonotus, Boisduval.**

**Arctonotus lucidus.**
*Arctonotus lucidus*, Strecker, Lep. Rhop. and Het. i. pl. xiii. fig. 7 (1876).

A. G. Butler, 25th September, 1876.
DESCRIPTION OF PLATES.

PLATE XC.

Figs. 4, 5. Larva and pupa of Hemaris hylas, Linn., p. 522.
Figs. 6, 7. Larva and pupa of Macroglossa belis, Cramer, p. 526.
Fig. 8. Larva (feeding on Paderia fatida) of Macroglossa pyrrhosticta, Butler, p. 527.
Figs. 9, 10. Larva and pupa of Macroglossa gilia, Herr.-Sch., p. 527.
Figs. 11, 12. Larva and pupa of Acomeryx anceus, Cramer, p. 544.
Fig. 16. Larva of Smerinthus tatarinovii, Ménétriés, p. 593.

PLATE XCI.

Fig. 1. Larva of Charocampa oldeolandia, Fabricius, p. 559.
Figs. 2, 3. Larva and pupa of Ambulyx liturata, Butler, p. 580.
Figs. 4, 5. Larva and pupa of Ampelophaga rubiginosa, Ménétriés, p. 546.
Fig. 6. Larva of Triptogon roseipennis, Butler, p. 588.
Figs. 7-9. Larvae and pupa of Charocampa japonica, Boisduval, p. 560.
Fig. 10. Larva of Polyptychus dentatus, Cramer, p. 583.
Figs. 11-13. Larva and pupa of Pseudosphinx cyrtolophia, Butler, p. 611.
Figs. 14, 15. Larva and pupa of Pergesa mongoliana, Butler, p. 637.
Figs. 16, 17. Larva and pupa of Protoarce orientalis, Butler, p. 609.
Figs. 18, 19. Larva and pupa of Diludia vates, Butler, p. 616.
Figs. 20, 21. Larva and pupa of Nephele hespera, Fabricius, p. 624.

PLATE XCII.

Fig. 1. Charocampa mirabilis, Butler, p. 554.
Fig. 2. Pergesa argota, Butler, p. 549.
Fig. 3. Pergesa gloriosa, Butler, p. 540.
Fig. 4. Panacra regularis, Butler, p. 551.
Fig. 5. Daphnis minima, Butler, p. 573.
Fig. 6. Pseudosphinx cyrtolophia, Butler, p. 611.
Fig. 7. Panacra bella, Butler, p. 550.
Fig. 8. Larva and pupa of Charocampa silhetensis, Walker, p. 560.
Fig. 9. Larva of Acherontia morta, Hübner, p. 598.
Fig. 10. Larva and pupa of Acherontia medusa, Butler, p. 597.
Fig. 11. Larva of Smerinthus planus, Walker, p. 593.
Fig. 1. *Triptogon spectabilis*, Butler, p. 588.
Fig. 2. *Triptogon fuscescens*, Butler, p. 587.
Fig. 3. *Triptogon oriens*, Butler, p. 587.
Fig. 4. *Basiana crusta*, Butler, p. 595.
Fig. 5. *Triptogon massarensis*, Butler, p. 587.
Fig. 6. *Triptogon albicans*, Butler, p. 586.
Fig. 7. *Ambulyx turbata*, Butler, p. 580.
Fig. 8. *Ambulyx rhodoptera*, Butler, p. 580.
Fig. 9. *Ambulyx tahora*, Butler, p. 580.

Fig. 1. *Charocampa docilis*, Butler, p. 564.
Fig. 2. *Charocampa virescens*, Butler, p. 563.
Fig. 3. *Nephele rosa*, Butler, p. 622.
Fig. 4. *Diludia melanomera*, Butler, p. 615.
Fig. 5. *Diludia natalensis*, Butler, p. 616.
Fig. 6. *Amphox rivularis*, Butler, p. 599.
Fig. 7. *Isognathus metascyron*, Butler, p. 602.
Fig. 8. *Isognathus amazonicus*, Butler, p. 601.
NEW SPECIES OF SPHINGIDÆ.