



# XLIX. An abstract of the characters of Ochsenheimer's genera of the lepidoptera of Europe; with a list of the species of each genus, and reference to one or more of their respective Icones

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frosts are less severe upon hills than upon the neighbouring plains: and it is consistent with my own observations, that the leaves of the vine, the walnut-tree, and the succulent shoots of Dahlias and potatoes, are often destroyed by frosts in the sheltered valleys, on nights when they are perfectly untouched upon the surrounding eminences." The diminution of temperature which is produced upon the surface of radiating bodies during the night is communicated by slow degrees to the surrounding atmosphere; and if the process goes on for any considerable period, moisture and probably other matters are not only deposited upon them, but are precipitated in the air itself, affecting more or less the feelings of every one within its range, but particularly the weak or unhealthy.

[To be continued.]

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XLIX. *An Abstract of the Characters of Ochsenheimer's Genera of the Lepidoptera of Europe; with a List of the Species of each Genus, and Reference to one or more of their respective Icones.* By J. G. CHILDREN, F.R.S. L. & E. F.L.S. &c.\*

IN Samouelle's Entomologist's Useful Companion, as well as in several other works of deserved reputation, the names of the Genera established by Ochsenheimer, in his *Schmetterlinge von Europa*, are frequently quoted, but the characters on which they are founded wholly omitted, so that they can only be inferred from a laborious comparison of those of their respective types,—a task few persons will be disposed to submit to, in order to clear up an occasional doubt, as to what genus such or such an insect is to be referred. This inconvenience is attributable to the want of an English edition of Ochsenheimer's work; and in some measure to lessen it, the following translation of his Family and Generic Characters is offered to the British student.

Ochsenheimer died in 1822, leaving his work incomplete, only four volumes having been published in his life-time, the last of which appeared in 1816, and consists chiefly of an improved sketch of his arrangement of the Europæan Lepidoptera from the first genus to the eighty-seventh. Before his death, however, only the first forty-three genera were published in detail, with the characters and descriptions of their respective species; these occupy the first three volumes, the last of which terminates with the genus *Eyprepia*; for the fourth contains, besides the sketch of the arrangement, only notes concerning

\* Communicated by the Author.

some of the species published in the former volumes. The work is continued by M. Frederick Treitschke, and the specific descriptions are completed to the hundred-and-sixth genus inclusive; and M. Treitschke has also given a further sketch of the arrangement, including ten additional genera consisting of the *Phalænæ Pyralides* of Linnæus, the specific descriptions of which are not yet published\*. More therefore still remains to be done, and we wait anxiously for the completion of the work. In the mean time we lay the present abstract before the reader; and should he entertain any doubts of the value of M.M. Ochsenheimer's and Treitschke's labours, we refer him to the Introduction to Dr. Horsfield's Descriptive Catalogue of the Lepidopterous Insects contained in the Museum of the East India Company, where he will find such ample testimony to their merit as cannot fail (unless he disregard the maxim "*laudari à laudato*,") presently and effectually to remove them.

# 1st Division.—PAPILIONES.

*Wings* when at rest, erect.

*Antennæ* filiform, generally capitate, or terminated by a knob; sometimes only slightly incrassate at the end.

*Flight*, diurnal.

*Larva* with sixteen legs; *head* globular, perfectly distinct from the body; *motion* indolent, and sluggish.

*Pupa* angular.

*Metamorphosis* generally naked, or not concealed by a web.

## Genus 1. MELITÆA, *Fab.*

MELITÆA, *Fab.* Syst. Glossat.

BATTUS et GRAPHIUM, *Scopoli.* Introductio ad Hist. Nat.

NYMPHALIS, *Latr.* Gen. Crust. et Ins.

PAPILIO, *Schrank.* Faun. boïc.

LEMONIADES, *Hübner.*

*Legs*, first pair imperfect.

*Wings*, roundish; *upper surface* of the *anterior wings*, reddish-yellow with black maculæ and dots, or blackish, with reddish-yellow maculæ and dots; *under surface* of the *posterior wings* with alternate orange-yellow, and yellowish-white cross bands with black spots; not silvered.

*Antennæ*, knob oval, compressed, obtuse.

\* The last volume as yet published is the sixth, of which, Parts I. and II. appeared in the present year.

*Larva*

*Larva* with seven or nine conical, fleshy protuberances, covered with short hairs, on each of the middle segments of the body, and two larger on the side of the throat.

*Pupa*, anteriorly rather obtuse, hinder part usually with elevated points; not suspended in any constant manner.

| Species.                        | Icon.  |
|---------------------------------|--|
| 1. <i>M. Matura</i> , Linn...   | Ernst, I. Pl. XVII. f. 27. a. b.                     |
| 2. — <i>Cynthia</i> , Fab.....  | Ernst, I. Pl. XVII. f. 26. a—d.                      |
| 3. — <i>Artemis</i> , Fab.....  | Ernst, I. Pl. XVII. f. 28. a. b.                     |
| 4. — <i>Cinxia</i> , Linn.....  | Ernst, I. Pl. XIX. f. 32. a—f.                       |
| 5. — <i>Didyma</i> , Esp. ...   | Ernst, I. Pl. XVIII. f. 29. a—d.                     |
| 6. — <i>Trivia</i> , Hübn. ...  | Ernst, I. Pl. LXI. Suppl. VII.<br>f. 29. a—d. bis.   |
| 7. — <i>Phæbe</i> , Hübn. ...   | Ernst, I. Pl. LXI. Suppl. VII.<br>f. 28. a. b. bis.  |
| 8. — <i>Dictynna</i> , Esp....  | Ernst, I. Pl. LXII. Suppl. VIII.<br>f. 31. a—d. bis. |
| 9. — <i>Athalia</i> , Esp.....  | Ernst, I. Pl. XIX. f. 31. c. d.                      |
| 10. — <i>Parthenia</i> , Borkh. | Hübn. Pap. Tab. 4. f. 19. 20. (fœm.)                 |
| 11. — <i>Lucina</i> , Linn..... | Ernst, I. Pl. XVI. f. 25. a. b.                      |

## Genus 2. ARGYNNIS, *Fab.*

|                       |                   |
|-----------------------|-------------------|
| ARGYNNIS, <i>Fab.</i> | PAPILIO, Schrank. |
| ARGYREUS, Scop.       | DRYADES, Hübn.    |
| NYMPHALIS, Latr.      |                   |

*Legs*, four perfect, gressorial.

*Wings* subdentate, *upper surface* generally reddish-brown with black spots; *under surface* with silvery bands or spots.

*Antennæ* capitate, knob compressed.

*Larva* with six longitudinal rows of ramose spines, and two others, generally larger than the rest on the first segment; a broad, longitudinal, dorsal band, divided by a medial line.

*Pupa*, suspended variously; cavity of the neck, and the neck, with brilliant points.

| Species.                        | Icon.  |
|---------------------------------|--|
| 1. <i>A. Aphirape</i> , Hübn.   | Hübn. Pap. Tab. 5. f. 23. 24.<br>(mas.) 25. (fœm). |
| 2. — <i>Selene</i> , Fab.....   | Ernst, I. Pl. XVI. f. 23. a. b.                    |
| 3. — <i>Euphrosyne</i> , Linn.  | Ernst, I. Pl. XVI. f. 22. a. b.                    |
| 4. — <i>Dja</i> , Linn. . . . . | Ernst, I. Pl. XV. f. 21. a. b.                     |
|                                 | 5. <i>A. Pales</i> ,                               |

| Species.                          | Icon.   |
|-----------------------------------|---|
| 5. <i>A. Pales</i> , Hübn.....    | Ernst, I. Pl. LX. Suppl. VI. f. 21.<br>a. b. c. d. bis, a. b. c. d. tert. |
| 6. — <i>Hecate</i> , Fab.....     | Ernst, I. Pl. LIX. Suppl. V. f. 20.<br>a—d. tert.                         |
| 7. — <i>Ino</i> , Hübn. ....      | Ernst, I. Pl. XV. f. 20. c.   |
| 8. — <i>Daphne</i> , Fab. ....    | Ernst, I. Pl. XV. f. 20. a. b.  |
| 9. — <i>Frigga</i> , Hübn.        | Hübn. Pap. Tab. 9. f. 49. 50. (fœm.)                                      |
| 10. — <i>Thore</i> , Hübn. ...    | Hübn. Pap. Tab. 3. f. 571—<br>573.  |
| 11. — <i>Amathusia</i> , Fab.     | Ernst, I. Pl. LXXX. Suppl. II.<br>Pl. I. f. 21. a. b. quart.              |
| 12. — <i>Chariclea</i> , Schneid. | Herbst, Pap. Tab. 272. f. 5. 6.   |
| 13. — <i>Freija</i> , Schneid...  | Herbst, Pap. Tab. 272. f. 7—10.   |
| 14. — <i>Latonia</i> , Linn. ...  | Hübn. Pap. Tab. 11. f. 59. 60.<br>(fœm.) Pl. CXX. f. 613. var.            |
| 15. — <i>Niobe</i> , Linn. ....   | Ernst, I. Pl. XV. f. 19. a. b. c.   |
| 16. — <i>Adippe</i> , Fab.....    | Ernst, I. Pl. XIII. f. 16. c—i.   |
| 17. — <i>Aglaiä</i> , Linn.....   | Hübn. Pap. Tab. 13. f. 65. 66. (fœm.)                                     |
| 18. — <i>Laodice</i> , Fab. ....  | Hübn. Pap. Tab. 13. f. 67. 68. (fœm.)                                     |
| 19. — <i>Paphia</i> , Linn. ...   | Ernst, I. Pl. XII. f. 15. a—f.  |
| 20. — <i>Pandora</i> , Fab. ...   | Ernst, I. Pl. XII. f. 15. g. h.   |

### Genus 3. EUPLOEA, *Fab.*

BATTUS, Scop.

DANAIS, Latr.

LIMNADES, Hübn.

*Legs*, four perfect.

*Wings*, anterior with the external margin rather curved; colour reddish-yellow, margin black with white spots; a curved band of white spots towards the apex.

*Antennæ* oval, knob gradually incrassate. Head and breast black, with white spots.

*Larva*, with sixteen feet; feet sub-spinous, spines simple.

*Pupa* nearly cylindrical; suspended freely.

| Species.                           | Icon.                                       |
|------------------------------------|---|
| 1. <i>E. Chrysippus</i> , Linn.... | Hübn. Pap. Tab. 133. f. 678.<br>679. (mas.) |

† The only European species of the genus.

Genus 4. VANESSA, *Fab.*CYNTHIA, *Fab.*PAPILIO, *Schrank.*NYMPHALIS, *Latr.*HAMADRYADES, *Hübner.*BATTUS et GRAPHIUM, *Scop.**Legs*, four perfect, gressorial.*Wings*, exterior margin angular; upper surface spotted; under side with transverse bands; bands usually blackish-brown or variegated.*Antennæ* capitate.*Larva* sub-lanate, with several longitudinal rows of stiff, bristly hairs, or spines. (The first segment naked, second and third with four, and the rest with six spines.) Head blackish, bifid; in some species armed with ramose sub-obtuse spines.*Pupa* suspended vertically; often externally with a brilliant gold or silver hue: head and dorsal segments mucronate; dorsal ridge acuminate.

## Species.

## Icon.

A. *Wings* slightly dentate.1. *V. Cardui*, Linn..... Ernst, I. Pl. VII. f. 7. a—g.2. — *Atalanta*, Linn. ... Ernst, I. Pl. VI. f. 6. a—i.B. *Wings* furcate.3. *V. Io*, Linn..... Ernst, I. Pl. II. f. 2. a—f.4. — *Antiopa*, Linn.... Ernst, I. Pl. I. f. 1. a—h.5. — *V. album*, *Fab.* ... Ernst, I. Pl. LVI. Suppl. II. f. 5.  
a—d. bis.6. — *Polychloros*, Linn. Ernst, I. Pl. III. f. 3. a—i.7. — *Xanthomelas*, *Illig.* Ernst, I. Pl. LV. Suppl. I. f. 3. a.  
b. bis.8. — *Urticæ*, Linn..... Ernst, I. Pl. IV. f. 4. a—h.9. — *Triangulum*, *Fab.* Ernst, I. Pl. V. f. 5. g. h.10. — *C. album*, Linn.... Ernst, I. Pl. V. f. 5. a—f.— *F. album*, *Fab.* ... } Herbst, Schm. Tab. 163. f. 1. 2.  
(var. *C. album*) ... }

## C. Posterior wings slightly acuminate.

11. *V. Prorsa*, Linn..... Ernst, I. Pl. VIII. f. 8. a—e.12. — *Levana*, Linn.... Ernst, I. Pl. VIII. f. 9. a—f.Genus 5. LIMENITIS, *Fab.*NEPTIS, *Fab.*PAPILIO, *Schrank.*NYMPHALIS, *Latr.*NAIADES, *Hübner.*BATTUS et GRAPHIUM, *Scop.**Legs*, anterior pair very small; second and third perfect, gressorial.*Wings*,

*Wings*, dentated, the anterior somewhat repand\*; upper surface black, or blueish-green; under surface reddish-brown, or cinnamon colour; body griseous.

*Antennæ* clavate.

*Larva* variegated; head with two elevated points; body with two longitudinal rows of ramose spines.

*Pupa* variously suspended; head with two small elevations; the dorsal larger, securiform.

| Species.                         | Icon.  |
|----------------------------------|--|
| 1. <i>L. Aceris</i> , Fab. ....  | Ernst, I. Pl. II. Suppl. III. f. 12. a—d. bis. |
| 2. — <i>Lucilla</i> , Fab. ....  | Ernst, I. Pl. X. f. 12. a. b.                  |
| 3. — <i>Sibylla</i> , Linn. .... | Ernst, I. Pl. XI. f. 13. a—f.                  |
| 4. — <i>Camilla</i> , Fab. ....  | Ernst, I. Pl. XI. f. 14. a. b.                 |
| 5. — <i>Populi</i> , Linn. ....  | Ernst, I. Pl. IX. f. 10. a—d.                  |

#### Genus 6. CHARAXES, Ochs.

PAPHIA, Fab.

NYMPHALIS, Latr.

*Legs*, first pair imperfect.

*Wings*, anterior elongated, angular; posterior dentate, the external margin bicaudate near the apex.

*Antennæ* clavate.

*Larva* smooth; head with four horns; body bicuspidate at the anal extremity.

*Pupa*, nearly oval.

| Species.                         | Icon.   |
|----------------------------------|---|
| 1. <i>C. Jasius</i> , Linn. .... | Drury, Illustr. of Nat. Hist. I. Pl. I. f. 1. |
| † Only one European species.     |   |

#### Genus 7. APATURA, Fab.

NYMPHALIS, Latr.

MANIOLA, Schrank.

ARGUS, Scop.

POTAMIDES, Hübn.

*Legs*, first pair imperfect.

*Wings*, somewhat repand, and dentate; colour changeable according to the direction of the light, between brown and purple; posterior wings ocellated at the interior angle.

*Antennæ* clavate, knob sub-cylindrical, and rather slender.

*Larva* similar to that of *Charaxes*; but with faint yellow transverse bands: head smooth anteriorly, with two long, straight, obtuse, or bipartite horns.

\* *Ausgeschweift*, repandus, repand.: cut into very slight sinuations, so as to run in a serpentine direction.—Kirby and Spence, iv. 297.

*Pupa* green, compressed: head bicuspidate; suspended vertically by the posterior extremity.

| Species.                       | Icon.  |
|--------------------------------|--|
| 1. <i>A. Iris</i> , Linn. .... | Ernst, I. Pl. XXXI. f. 62. a. b.   |
| 2. — <i>Ilia</i> , Fab. ....   | Ernst, I. Pl. XXXI. f. 62. c. d.<br>(fœm.) Pl. XXXII. f. 64. e.<br>f. (mas.) |

### Genus 8. HIPPARCHIA, *Fab.*

|                  |                   |
|------------------|-------------------|
| NYMPHALIS, Latr. | MANIOLA, Schrank. |
| ARGUS, Scop.     | OREADES, Hübn.    |

*Legs*, first pair less than half the size of the second and third.

*Wings*, generally brownish; with the margin ocellated.

*Antennæ* clavate; knob flattened; (often slightly curved.)

*Larva*, anal extremity bicuspidate: head globular, anteriorly depressed; generally hairy, with dark-coloured longitudinal striæ; hairs whitish.

*Pupa* short, anteriorly bicuspidate, points erect, small; suspended by the anal extremity.

*Metamorphosis*, usually in the air, but some species change under ground.

| Species.                          | Icon.   |
|-----------------------------------|---|
| A. 1. <i>H. Proserpina</i> , Fab. | Ernst, I. Pl. XX. f. 33. a. b.                          |
| 2. — <i>Hermione</i> , Linn.      | Ernst, I. Pl. XX. f. 34. a. b. c.                       |
| 3. — <i>Alcyone</i> , Linn.       | Ernst, I. Pl. LXII. Suppl. VIII.<br>f. 35. a. b. c.     |
| 4. — <i>Anthe</i> , Hübn.         | Hübn. Pap. Tab. 115. f. 589. 590.<br>(fœm.)             |
| 5. — <i>Briseis</i> , Linn.       | Ernst, I. Pl. XXI. f. 36. a—d.                          |
| 6. — <i>Semele</i> , Linn.        | Ernst, I. Pl. XXII. f. 38. a. b. c.                     |
| 7. — <i>Hippolytus</i> , Fab.     | Ernst, I. Pl. VIII. Suppl. III.<br>f. 36. a. b. bis.    |
| 8. — <i>Arethusa</i> , Fab.       | Ernst, I. Pl. XXII. f. 39. a. b. c.                     |
| 9. — <i>Fidia</i> , Linn.         | Ernst, I. Pl. XXI. f. 37. c. d.                         |
| 10. — <i>Allionia</i> , Fab.      | Ernst, I. Pl. XXI. f. 37. a. b.                         |
| 11. — <i>Statilius</i> , Fab.     | Ernst, I. Pl. LXIII. Suppl. IX.<br>f. 37. a. b. c. bis. |
| 12. — <i>Phædra</i> , Linn.       | Ernst, I. Pl. XXIII. f. 40. a—e.                        |
| 13. — <i>Bryce</i> , Fab. ...     | Hübn. Pap. Tab. 33. f. 149. 150.<br>(fœm.)              |
| 14. — <i>Cordula</i> , Fab.       | Hübn. Pap. Tab. 29. f. 132. 133.<br>(fœm.)              |
| 15. — <i>Actæa</i> , Hübn.        | Ernst, I. Pl. LXIII. Suppl. IX.<br>f. 37. g. h.         |



|    | Species.  | Icon.   |
|----|---|---|
|    | 16. <i>H. Podarce</i> , Ochs.*                  | — — — —   |
|    | 17. — <i>Aëlo</i> , Hübn. .                     | Hübn. Pap. Tab. 102. f. 519. 520.<br>(mas.) Tab. 31. f. 141. 142.<br>(fœm.) |
|    | 18. — <i>Norna</i> , Thunb.                     | Hübn. Pap. Tab. 34. f. 152. 153.<br>(mas.) Tab. 30. f. 142. (fœm.)          |
|    | 19. — <i>Tarpeia</i> , Fab.                     | Cram. Pap. Exot. Pl. CCCLXXV.<br>E. F.                                      |
|    | 20. — <i>Bore</i> , Fab. ....                   | Hübn. Pap. Tab. 29. f. 134. (mas.)<br>135. 136. (fœm.)                      |
| B. | 21. — <i>Tithonus</i> , Linn.                   | Ernst, I. Pl. XXVII. f. 53. a—e.  |
|    | 22. — <i>Ida</i> , Fab. ....                    | Ernst, I. Pl. V. Suppl. III. f. 53. h.                                      |
|    | 23. — <i>Pasiphæa</i> , Fab.                    | Ernst, I. Pl. LXVI. Suppl. XII.<br>f. 53. a. b. bis.                        |
|    | 24. — <i>Clymene</i> , Fab.                     | Ernst, I. Pl. V. Suppl. III. f. 50.<br>a. b. tert.                          |
|    | 25. — <i>Roxelana</i> , Fab.                    | Cram. Pap. Exot. Pl. CLXI.<br>fig. C. D. E. F.                              |
|    | 26. — <i>Janira</i> , Linn. .                   | Ernst, I. Pl. XXVIII. f. 54. a—h.   |
|    | 27. — <i>Eudora</i> , Fab. .                    | Ernst, I. Pl. XXVIII. f. 55. a. b.  |
| C. | 28. — <i>Hyperanthus</i> ,<br>Linn. }           | Ernst, I. Pl. XXVII. f. 52. a—f.  |
|    | 29. — <i>Dejanira</i> , Linn.                   | Ernst, I. Pl. XXV. f. 48. a. b.   |
|    | 30. — <i>Hiera</i> , Hübn.                      | Hübn. Pap. Tab. 39. f. 176. (fœm.)  |
|    | 31. — <i>Mæra</i> , Linn. .                     | Ernst, I. Pl. XXVI. f. 51. a. b.  |
|    | 32. — <i>Adrasta</i> , Hoff-<br>mansegg. .... } | Ernst, I. Pl. LXXXII. Suppl. II.<br>Pl. 3. fig. 50. a. b. c. bis.           |
|    | 33. — <i>Megæra</i> , Linn.                     | Ernst, I. Pl. XXVI. f. 50. a. b. c.<br>d. (e. f. var.)                      |
|    | 34. — <i>Egeria</i> , Linn.                     | Ernst, I. Pl. XXV. f. 49. a—d.  |
|    | 35. — <i>Meone</i> , Hübn.                      | Cram. Pap. Exot. Pl. CCCXIV.<br>f. E. F.                                    |
| D. | 36. — <i>Galatea</i> , Linn.                    | Ernst, I. Pl. XXX. f. 60. a—d.  |
|    | 37. — <i>Lachesis</i> , Hübn.                   | Hübn. Pap. Tab. 41. f. 186. 187.<br>(mas.) Tab. 42. f. 188. 189.<br>(fœm.)  |
|    | 38. — <i>Clotho</i> , Fab....                   | Ernst, I. Pl. V. Suppl. III. f. 61.<br>a. b. bis.                           |
|    | 39. — <i>Ines</i> , Hoffm. . .                  | — — — —   |
|    | 40. — <i>Arge</i> , Sulzer. .                   | Ernst, I. Pl. XXX. f. 61. a. b.   |
|    | 41. — <i>Syllius</i> , Herbst.                  | Ernst, I. Pl. XXX. f. e. f.   |

\* Sp. n.—H. alis subdentatis fuscis: anticis utrinque ocello, punctisque subtus duobus albis: posticis supra immaculatis, subtus albo fuscoque mar-  
moratis, fasciâ crenatâ concolore albo marginatâ venisque albis.

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|        | Species.                   | Icon.   |
|--------|----------------------------|---|
| E. 42. | H. <i>Epiphron</i> , Fab.  | Hüb. Pap. Tab. 44. f. 202.  |
| 43.    | — <i>Pharte</i> , Hübn.    | Hüb. Pap. Tab. 97. f. 491. 492.<br>(mas.) 493. 494. (fœm.)                  |
| 44.    | — <i>Melampus</i> , Esp.   | Ernst, I. Pl. LXXXI. Suppl. II.<br>Pl. 2. f. 41. a. b. bis.                 |
| 45.    | — <i>Cassiope</i> , Fab.   | Ernst, I. Pl. XXIV. f. 45. a. b.  |
| 46.    | — <i>Arete</i> , Fab. ...  | Hüb. Pap. Tab. 50. f. 231. 232.<br>(fœm.)                                   |
| 47.    | — <i>Mnestra</i> , Hübn.   | Hüb. Pap. Tab. 106. f. 540. 541.<br>(mas.) 542. 543. (fœm.)                 |
| 48.    | — <i>Pyrrha</i> , Fab. .   | Ernst, I. Pl. XXIII. f. 41. a—d.  |
| 49.    | — <i>Oeme</i> , Hübn. .    | Hüb. Pap. Tab. 104. f. 530. 531.<br>(mas.) 532. 533. (fœm.)                 |
| 50.    | — <i>Psodea</i> , Hübn.    | Hüb. Pap. Tab. 98. f. 497.<br>(mas.) 498. 499. (fœm.)                       |
| 51.    | — <i>Afer</i> , Fab. . . . | Hüb. Pap. Tab. 98. f. 500. 501.<br>(mas.)                                   |
| 52.    | — <i>Ceto</i> , Hübn....   | Hüb. Pap. Tab. 112. f. 578. 579.<br>(mas.)                                  |
| 53.    | — <i>Medusa</i> , Fab.     | Ernst, I. Pl. XXIV. f. 44. a. b.  |
| F. 54. | — <i>Stygne</i> , Hübn.    | Hüb. Pap. Tab. 48. f. 223. 224.<br>(mas.)                                   |
| 55.    | — <i>Melas</i> , Herbst.   | Hüb. Pap. Tab. 45. f. 105. 106.<br>(mas.)                                   |
| 56.    | — <i>Alecto</i> , Hübn.    | Hüb. Pap. Tab. 104. f. 528.<br>529. (mas.) Tab. 101. f. 515.<br>516. (fœm.) |
| 57.    | — <i>Medea</i> , Fab. .    | Ernst, I. Pl. XXIV. f. 43. a. b. e.<br>f. g.                                |
| 58.    | — <i>Ligea</i> , Linn. .   | Ernst, I. Pl. XXIII. f. 42. a. b.   |
| 59.    | — <i>Euryale</i> , Esp.    | Esp. Schm. I. Th. Tab. 118.<br>Cont. 73. f. 2. (mas.) f. 3. (fœm.)          |
| 60.    | — <i>Embla</i> , Fab. . .  | Hüb. Pap. Tab. 109. f. 561.<br>562. (mas.) Tab. 49. f. 228. 229.<br>(fœm.)  |
| 61.    | — <i>Pronœ</i> , Fab. .    | Ernst, I. Pl. LXIV. Suppl. X.<br>f. 42. a—e. bis.                           |
| 62.    | — <i>Goante</i> , Esp. .   | Hüb. Pap. Tab. 50. f. 233. 234.<br>(fœm.)                                   |
| 63.    | — <i>Gorge</i> , Hübn.     | Hüb. Pap. Tab. 99. f. 502. 503.<br>(mas.) 504. 505. (fœm.)                  |
| 64.    | — <i>Manto</i> , Fab....   | Ernst, I. Pl. LXV. Suppl. XI.<br>f. 42. a. b. tert.                         |
| 65.    | — <i>Tyndarus</i> , Fab.   | Ernst, I. Pl. LXV. Suppl. XI.<br>f. 42. a. b. quart.                        |

| Species.                         | Icon.  |
|----------------------------------|--|
| G. 66. H. <i>Davus</i> , Linn. . | Ernst, I. Pl. XXIX. f. 58. a. b.                         |
| 67. — <i>Pamphilus</i> , Linn.   | Ernst, I. Pl. XXIX. f. 56. a. b.                         |
| 68. — <i>Lyllus</i> , Esp....    | Hübner. Pap. Tab. 109. f. 557. 558.<br>(fœm.)            |
| 69. — <i>Iphis</i> , Fab. ...    | Hübner. Pap. Tab. 53. f. 249.<br>(mas.) 250. 251. (fœm.) |
| 70. — <i>Hero</i> , Linn....     | Ernst, I. Pl. XXIX. f. 59. a. b.                         |
| 71. — <i>Cedipus</i> , Fab..     | Hübner. Pap. Tab. 52. f. 245. 246.<br>(mas.)             |
| 72. — <i>Arcania</i> , Linn.     | Ernst, I. Pl. XXIX. f. 57. a—d.                          |
| 73. — <i>Dorus</i> , Esp....     | Ernst, I. Pl. LXVIII. Suppl.<br>XIV. f. 57. a. b. bis.   |
| 74. — <i>Satyrion</i> , Esp.     | Hübner. Pap. Tab. 53. f. 254. 255.<br>(mas.)             |
| 75. — <i>Corinna</i> , Hübner.   | Hübner. Pap. Tab. 105. f. 534. 537.<br>(fœm.)            |
| 76. — <i>Leander</i> , Fab.      | Hübner. Pap. Tab. 103. f. 526. 527.<br>(fœm.)            |
| 77. — <i>Phryne</i> , Fab. .     | Ernst, I. Pl. VIII. Suppl. III.<br>f. 58. a. b. bis.     |

[To be continued.]

L. *On the Crystalline Forms and Composition of the Sulphates of Nickel.* By R. PHILLIPS, F.R.S. &c.

THE *Annales de Chimie et de Physique* for May last, contains a memoir by Mous. E. Mitscherlich, "On the crystalline forms and composition of some sulphates": his statements, with respect to sulphate of nickel, appear to require some notice.

In the present paper the author has given only one of the forms of sulphate of nickel, stating that in a memoir which will shortly appear he shall describe another. The primary form of the crystal now under examination, Mons. M. considers as an acute octahedron with a square base; but it may be regarded, as shown by Mr. Brooke in the *Annals of Philosophy*, vol. 6. N.S., p. 437, as a square prism, parallel to the planes of which it may be cleaved. The composition of sulphate of nickel M. Mitscherlich states to be:

|                           |       |
|---------------------------|-------|
| Sulphuric acid . . . . .  | 28.51 |
| Oxide of nickel . . . . . | 26.71 |
| Water . . . . .           | 44.78 |

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 100.00

M. Mitscherlich then makes the following statement: "In another