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Natural history of the insects of China

Donovan, Edward

London, 1842

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Lepidoptera.

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Order. LEPIDOPTERA. *Linnæus.*

PAPILIO PARIS.

Plate 22.

Tribe.	Diurna, *Latreille.* (Papilio, *Linnæus.*)
Family.	Papilionidæ, *Leach.*
Genus.	Papilio, *Linnæus,* (Section, Equites.) *Latreille, Boisduval, &c.*
Ch. Sp.	P. alis nigris, aureo-viridi pulverulentis, posticis caudatis, maculâ (in utroque sexu) magna azureo-cæruleâ, ocello fulvo ad angulum ani, his subtus maculis septem marginalibus ocellatis. Expans. alar. 4 unc. P. with the wings black, powdered with golden-green atoms, the posterior with a broad tail and a large shining blue spot in both sexes, and a reddish eye at the anal angle ; beneath with seven marginal eye-like spots. Expanse of the wings about 4 inches.
Syn.	Papilio Paris, *Linn. Syst. Nat.* 2. *p.* 745. *No.* 3. *Fabr. Ent. Syst.* 3. 1. *p.* 1. *No.* 1. *Drury Exotic Ins. V. I. t.* 12. *f.* 1. 2. *Cramer Pap.* 2. *pl.* 103. *f.* A. B. *Esper. Ausl. Schmett. t.* 2. *f.* 1. *Encycl. Méth.* IX. *p.* 69. *Boisduval Hist. Nat. Lep.* 1. *p.* 208.

The simile proposed by Linnæus, both for the arrangement and specific nomenclature of butterflies, is gleaned from ancient and fabulous history. The species are divided into sections of Trojan and Greek princes, heroes, deities, nymphs, and plebeians: and the species have received names in accordance with this fanciful theory, which, at least, in the writings of Linnæus is well conducted, and seems liable to less objection than the characters assigned to each section: for many species placed among the Equites, and a more considerable number with the Plebeii, are inconsistent with the essential criterion Linnæus has given. This arrangement has necessarily undergone material alterations in the *Entomologia Systematica* of Fabricius and other still more recent works; alterations certainly justified by the more comprehensive views now taken of this pleasing branch of Entomology. The Equites of Fabricius, with many additions, and a few exceptions, are the same as those in the two Linnæan sections: Papilio Priamus is, however, removed from the head of the *Equites Trojani*, and the precedence given to Papilio Paris.

Papilio Paris is an insect of considerable beauty. The general colour on the upper surface is obscure brown, nearly approaching black, but finely contrasted with brilliant green atoms, profusely sprinkled over it. The posterior wings are adorned with a large blue spot, which derives additional lustre from the dusky colour surrounding it. Another species, very similar to Papilio Paris, but without this spot, is also found in China. It has been supposed to be the female of our species, which opinion is adopted in the Encyclopédie Méthodique. Fabricius names it Bianor, after *Cramer, pl.* 103. *fig.* 6. Dr. Horsfield has described and figured another species, from Java, in his Lepidoptera Javanica, under the name of Papilio Arjuna, but which is so closely allied to Paris, that it may eventually prove to be only a geographical variety. Its larva is cylindrical, with a coriaceous shield-like plate, extending over the three anterior segments of the body; the chrysalis is greatly angulated, with the head notched. Another species, or at least strong variety, has been lately received from the Himalayan mountains.

PAPILIO CRINO.

Plate 23.

Ch. Sp. P. alis nigris atomis viridi-aureis, fasciâ communi cæruleo-viridi; posticis caudatis, ocello anali rufo, his subtus lunulis viridibus cæruleis cinereisque. Expans. alar. 3½ unc.

P. with the wings black and sprinkled with golden-green atoms, with a greenish-blue bar running across all the wings, the posterior pair tailed, with a red eyelet at the anal angle; beneath with green, blue, and ashy lunules. Expanse of the wings 3½ inches.

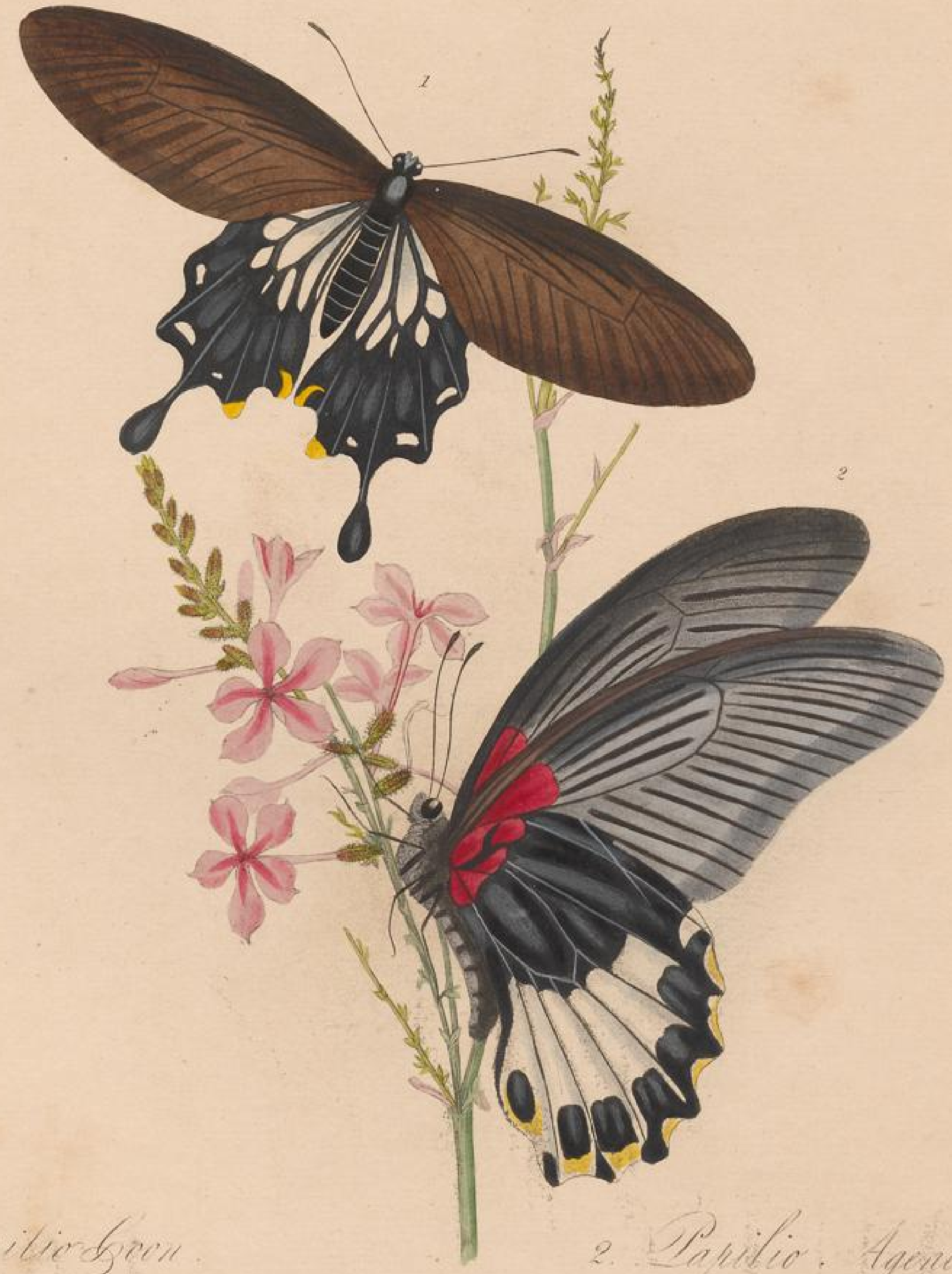
Syn. Papilio Crino, *Jones. Fabricius Ent. Syst.* 3. 1. *p.* 5. *Enc. Méth.* IX. *p.* 66. *Boisduval Hist. Nat. Lepid.* 1. *p.* 207.

Papilio Regulus, *Stoll Suppl. Cramer.* 5. *pl.* 41. *f.* 1.

This splendid butterfly is extremely rare, and its precise country is doubtful. Fabricius says, "Habitat in *Africa.* Mus. Dom. Drury." Donovan, however, who had access to Drury's collections, says, "We have found an unique specimen of this species in the collection of Mr. Drury, and on that authority we include it as a native of China. Fabricius erroneously gives Africa as its locality." In the Encyclopédie Méthodique, Africa is given. Boisduval gives "Indes orientales;" his unique specimen having been sent to him by M. Drege as from Cochin China, but which Boisduval thinks may possibly be erroneous. The manuscripts of Drury, now in my possession, throw no light upon the subject further than that there are several *unnamed* species indicated as inhabitants of China as well as of Sierra Leone. But from the strong affinity between Crino, Palinurus, Paris, &c. it is scarcely to be doubted that China or India is the real locality of Crino.

Renealmia exaltata, a majestic plant, near seven feet in height, bearing a fine pendant group of flowers at the summit, is figured in the plate.

Papilio Crino.



1. Papilio Coon. 2. Papilio. Agenor.

PAPILIO COON.

Plate [illegible], fig. 1.

Ch. Sp. P. alis [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Expans. alarum [illegible] unc.

P. with narrow wings, the anterior [illegible] [illegible] brown on both sides; the posterior, with a spatulate tail, black, with [illegible] [illegible] spots and marginal lunules of a white colour, and two yellow spots at the anal angle. Expanse of the wings [illegible] inches.

Syn. Papilio Coon, *Fabr.* [illegible] [illegible] [illegible] [illegible] p. [illegible]. *Enc. Méth.* IX. p. [illegible]. *Boisduval Hist. Nat.* [illegible] p. [illegible].
Papilio Hypsenor, *Enc. Méth.* IX. p. [illegible].

The original Fabrician description was derived from a specimen in the collection of Mr. Drury, and Donovan's figure is copied from the drawings of Mr. Jones, referred to by Fabricius. The translation of the Fabrician description of the lower wings is incorrectly rendered in the Encyclopédie Méthodique, and in consequence another description is given of a Javanese specimen of this species under the name of P. Hypsenor. It has recently been received in considerable numbers from Java, from whence I possess a specimen with the wings much larger and narrower than they are here represented.

PAPILIO [illegible].

Plate [illegible].

Ch. Sp. P. alis [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Expans. [illegible] unc.

P. with the wings black, [illegible] [illegible] [illegible] [illegible], the anterior with longitudinal pale markings, the posterior [illegible] [illegible] [illegible] [illegible] and black marginal spots. Expanse of the wings [illegible] inches.

Syn. Papilio [illegible], *Linn. Syst. Nat.* [illegible] p. [illegible]. *Fabr. Ent. Syst.* [illegible] p. [illegible]. *Enc. Méth.* IX. p. [illegible]. *Clerck Ic.* t. [illegible]. *Cramer*, pl. [illegible]. A. B. [illegible] [illegible]
Papilio [illegible], *Boisduval Hist. Nat. Lepid.* p. [illegible].

This is one of the largest Chinese Papilionidæ we are acquainted with. The upper and under surfaces so nearly agree, that Donovan considered a figure of the [illegible] unnecessary. M. Boisduval has [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

PAPILIO COON.

Plate 24. fig. 1.

Ch. Sp. P. alis angustatis, anticis elongato-ovatis fuscis; posticis caudâ spatuliformi, atris, maculis baseos palmatis, lunulis submarginalibus albis maculâque duplici ad angulum ani flavâ. Expans. alarum 4½—5¼ unc.

P. with narrow wings, the anterior elongate ovate, brown on both sides; the posterior, with a spatulate tail, black, with palmated basal spots and submarginal lunules of a white colour; and two yellow spots at the anal angle. Expans. of the wings 4½—5¼ inches.

Syn. Papilio Coon, *Jones. Fabricius Ent. Syst.* 3. 1. *p.* 10. *Enc. Méth.* IX. *p.* 65. *Boisduval Hist. Nat. Lep. p.* 201.

Papilio Hypenor, *Enc. Méth.* IX. *p.* 65.

The original Fabrician description was derived from a specimen in the collection of Mr. Drury, and Donovan's figure is copied from the drawings of Mr. Jones, referred to by Fabricius. The translation of the Fabrician description of the lower wings is incorrectly rendered in the Encyclopédie Méthodique, and in consequence another description is given of a Javanese specimen of this species, under the name of P. Hypenor. It has recently been received in considerable numbers from Java, from whence I possess a specimen with the wings much longer and narrower than they are here represented.

PAPILIO AGENOR.

Plate 24. fig. 2.

Ch. Sp. P. alis nigris, basi sanguineis, anticis striatis, posticis dentatis, disco albo maculisque marginalibus atris. Expans. alar. 6 unc.

P. with the wings black, bloody at the base, the anterior with longitudinal paler markings, the posterior dentate with a white disc and black marginal spots. Expansion of the wings 6 inches.

Syn. Papilio Agenor, *Linn. Syst. Nat.* 2. *p.* 747. *Fabr. Ent. Syst.* 3. 1. *p.* 13. *Enc. Méth.* IX. *p.* 28. *Clerk Ic. t.* 15. *Cramer, pl.* 32. A. B. *Herbst. Pap. t.* 8. *f.* 3.

Papilio Memnon, ♀ *Boisduval Hist. Nat. Lepid. p.* 193.

This is one of the largest Chinese Papiliones we are acquainted with. The upper and under surfaces so nearly agree, that Donovan considered a figure of the first unnecessary. M. Boisduval has advanced several forcible reasons for regarding this and several other allied insects (P. Laomedon, of Cramer, Anceus, Achates) as females of the very variable Asiatic species, Papilio Memnon; the caterpillar of which, according to Dr. Horsfield, is green, with the anterior segments narrowed and retractile, the third being elevated at the top and marked with an eye-like spot on each side. It feeds upon the species of Citrus.

The plant figured is *Plumbago Rosea. Rose-coloured Lead-wort.*

PAPILIO PERANTHUS.

Plate 25.

CH. SP. P. alis nigris, supra basi cærulescenti-viridibus, subtus apice pallidis, posticis obtuse dentatis, caudatis, subtus lunulis rufescentibus serie digestis. Expans. alar. 4 unc.

P. with the wings black, greenish blue at the base; beneath paler at the external margins, posterior pair dentate and tailed, with red lunules on the under side arranged in a transverse series. Expansion 4 inches.

SYN. Papilio Peranthus, *Fabricius Ent. Syst.* 3. 1. *p.* 15. *Enc. Méth.* IX. *p.* 66. *Boisduval Hist. Nat. Lepid.* 1. *p.* 203.

The original Fabrician description was made from a specimen from Cochin China in the Banksian collection. Donovan mentions another which came from Canton, and M. Boisduval gives Borneo, Java, and Celebes, as its localities.

The insect is represented on a small twig of *Arundo Bambos* (*Bamboo* or *Cane*), a well-known plant, mentioned by Sir G. Staunton as being one of the most useful productions of China.

PAPILIO TELAMON.

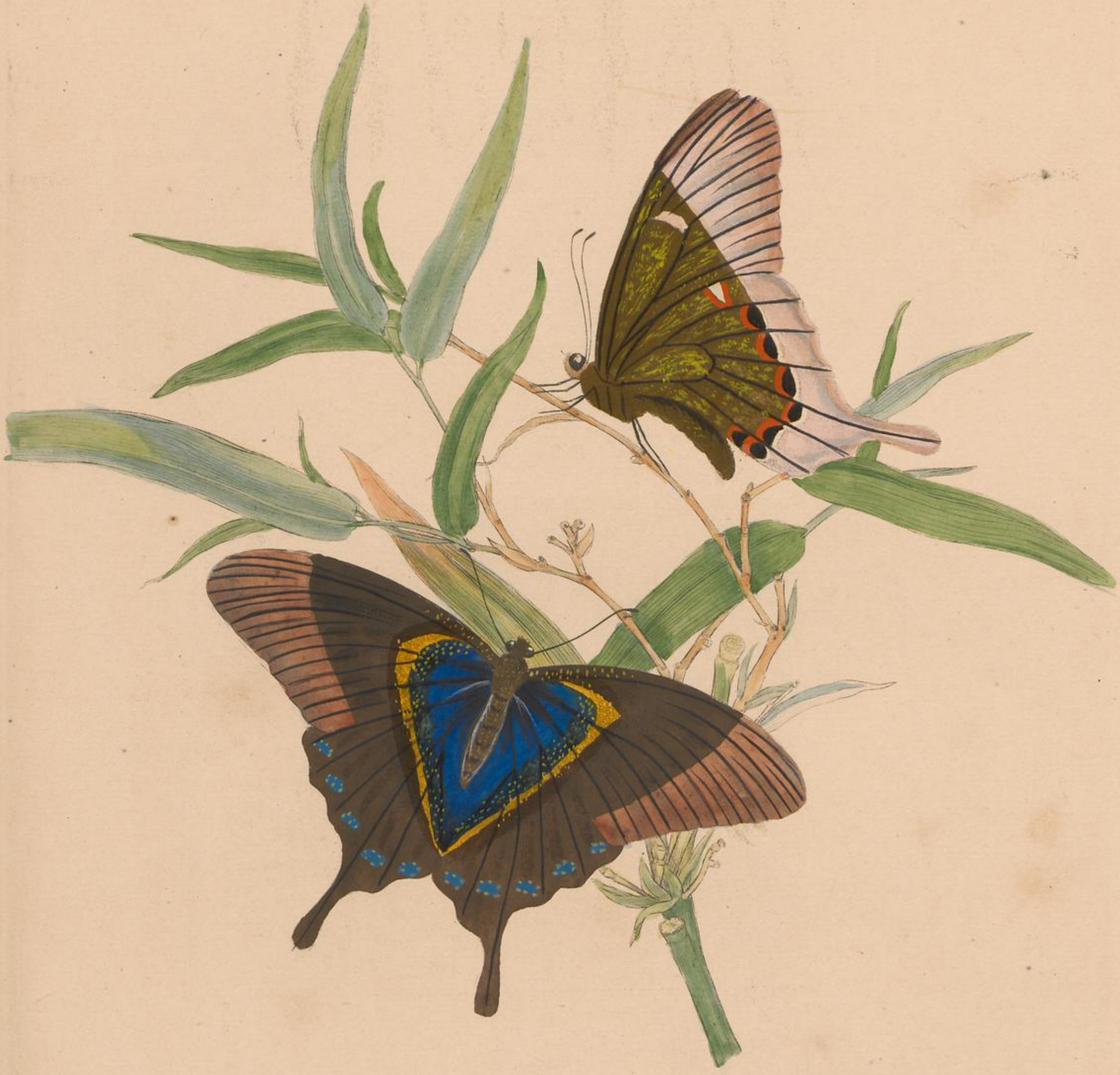
Plate 26. fig. 1.

CH. SP. P. alis caudatis, concoloribus, flavescentibus, maculis fasciisque nigris, posticis utrinque strigâ sanguineâ nigromarginatâ. Expans. alar. 3 unc.

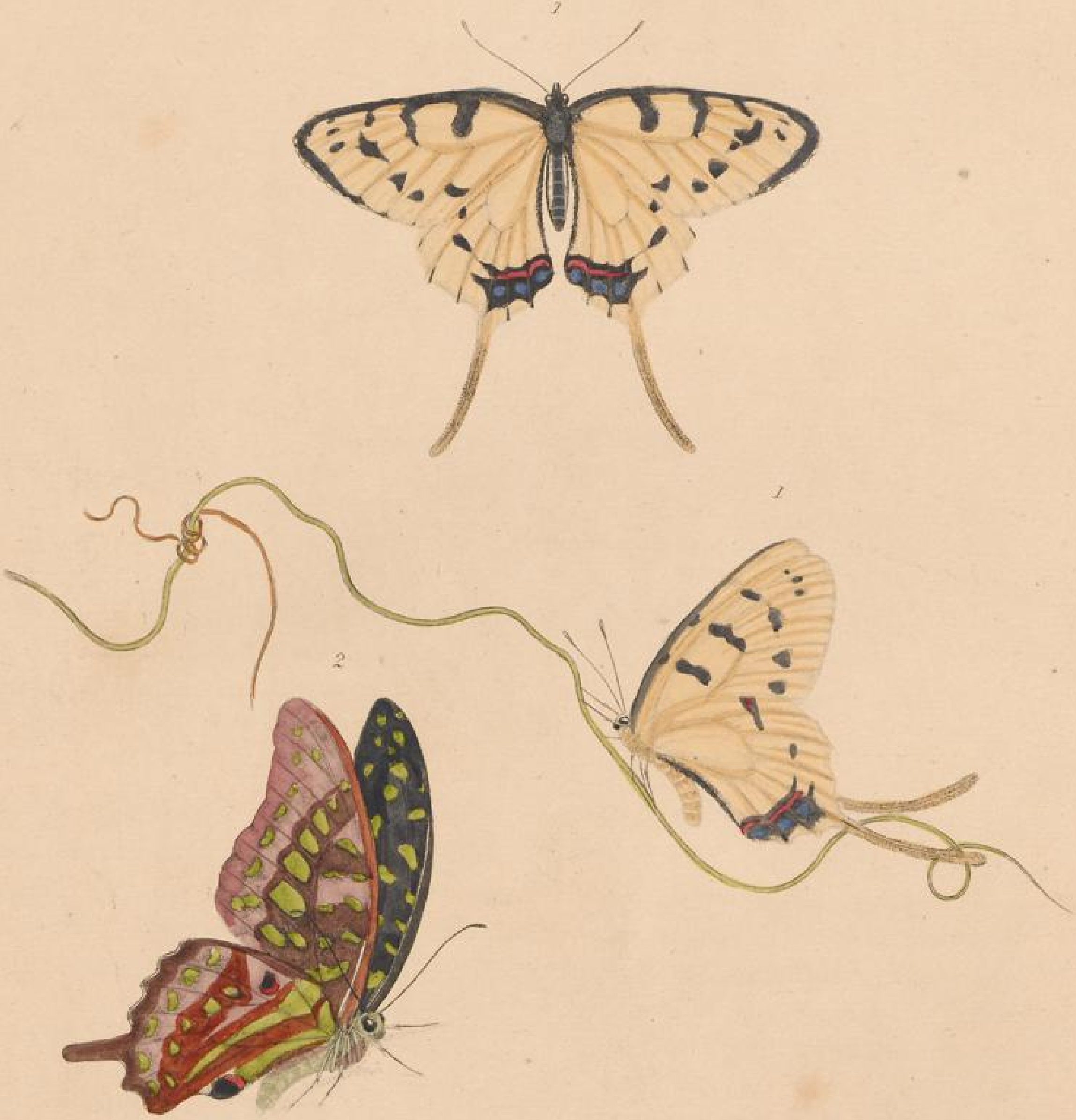
P. with the wings coloured alike pale yellowish, with black spots and bands, the posterior with very long narrow tails, and a red streak bordered with black at the anal angle. Expansion of the wings 3 inches.

SYN. Papilio Telamon, *Donovan. Boisduval Hist. Nat. Lep.* 1. *p.* 250.

The singular delicacy and beauty of this Papilio is not the only claim it has to the particular attention of Entomologists: it is clearly an undescribed species;



Papilio Peranthus.



1. Papilio Telamon.

2. Papilio Agamemnon.

and perhaps the only specimen of it yet brought to Europe is that from which our figure is copied. It was taken near Pekin, by a gentleman in the suite of Earl Macartney, in the embassy to China; and was originally in the possession of Mr. Francillon, of London, who kindly permitted drawings and descriptions to be made of this and every other insect in his magnificent collection that could enhance the value of this publication. It is still so rare that M. Boisduval states that he had never seen a specimen of it.

Papilio Telamon bears a distant resemblance to P. Protesilaus, but a much stronger to P. Ajax: pursuing then the metaphorical method of arranging the butterflies in the Linnæan manner, the name of the father of Ajax, who was one of the distinguished Grecian Princes at the siege of Troy, has been given to this species.

PAPILIO AGAMEMNON.

Plate 26. fig. 2.

Ch. Sp. P. alis nigris viridi-maculatis, posticis breviter caudatis, his subtus ocello lunato maculisque rubris. Expans. alar. 3½ unc.

P. with the wings black and spotted with pale green, the posterior pair with short tails and ornamented beneath with a lunate eyelet and red spots. Expansion of the wings 3½ inches.

Syn. Papilio Agamemnon, *Linn. Syst. Nat.* 2. *p.* 748. *Fabr. Ent. Syst.* 3. 1. *p.* 33. *Enc. Méth.* IX. *p.* 46. *Boisduval Lep.* 1. *p.* 230.

Papilio Ægistus, *Cramer*, 106. C. D. (*corrected*, *p.* 151.)

Papilio Agamemnon is found in several parts of Asia (China, Bengal, Java, the Moluccas and Philippine Islands, Manilla, Timor). The under side is beautifully adorned with a number of bright green spots of various sizes. The general colour is pale pink, diversified with shades of chestnut brown. The upper side is much plainer; the general colour is black, except the spots, which are green, and precisely agree in shape with those on the under side. Dr. Horsfield has figured the transformations of this insect (Lepid. Javan. pl. 4. f. 12), the larva is short and thick, with a forked tail; the chrysalis has the head very obtuse. This species is the type of Dr. Horsfield's second section of the genus, having the club of the antenna oval and compressed.

PAPILIO PROTENOR. ♀

Plate 27.

Ch. Sp. P. alis anticis fuscis nigro-striatis; posticis dentatis, nigris, atomis pallidis, maculâ duplici rufâ anguli ani. Expans. alar. 5½ unc.

P. with the anterior wings brown with black longitudinal stripes, the posterior dentate, black with pale atoms, and a double red spot at the anal angle. Expans. of the wings 5½ inches.

Syn. Papilio Protenor, *Fabricius Ent. Syst.* 3. 1. 13. *Cramer, pl.* 49. A. B. *Enc. Méthod.* IX. *p.* 30. *Boisduval Hist. Nat. Lepid. p.* 198.

♀ Papilio Laomedon, *Jones. Fabricius Ent. Syst.* 3. 1. 12. *Donovan,* 1*st edition,* (*nec Cramer, pl.* 50. *f.* A. B.)

The collection of the late Mr. Latham contained the original specimen from which Mr. Jones' drawing (referred to by Fabricius) was made. The present figure was copied, by Mr. Jones' permission, from that drawing.

PAPILIO EPIUS.

Plate 28. fig. 1.

Ch. Sp. P. alis nigris, flavo maculatis; posticis dentatis fasciâ irregulari, maculis adjectis flavis, maculâque anguli analis rufâ. Expans. alar. fere 3½ unc.

P. with the wings black, spotted with yellow; the posterior pair dentate with an irregular yellow bar, accompanied externally with additional spots and a large red spot at the anal angle. Expanse of the wings nearly 3½ inches.

Syn. Papilio Epius, *Jones. Fabricius Ent. Syst.* 3. 1. *p.* 35. *Enc. Méth.* IX. *p.* 43. *Boisduval Hist. Nat. Lepid. p.* 238.

Papilio Erithonius, *Cramer, pl.* 232. A. B.

Papilio Demoleus, *Esper. Ausl. Schmett, tab.* 50. *f.* 1—4.

Papilio Epius and Papilio Demoleus are so similar in their marks and colours, that many authors have confounded one species with the other. Papilio Epius is chiefly distinguished by the red spot in the interior margin of the lower wings, having no blue eye-shaped mark above it.

PAPILIO PROTENOR. ♀

Plate [illegible].

[illegible]

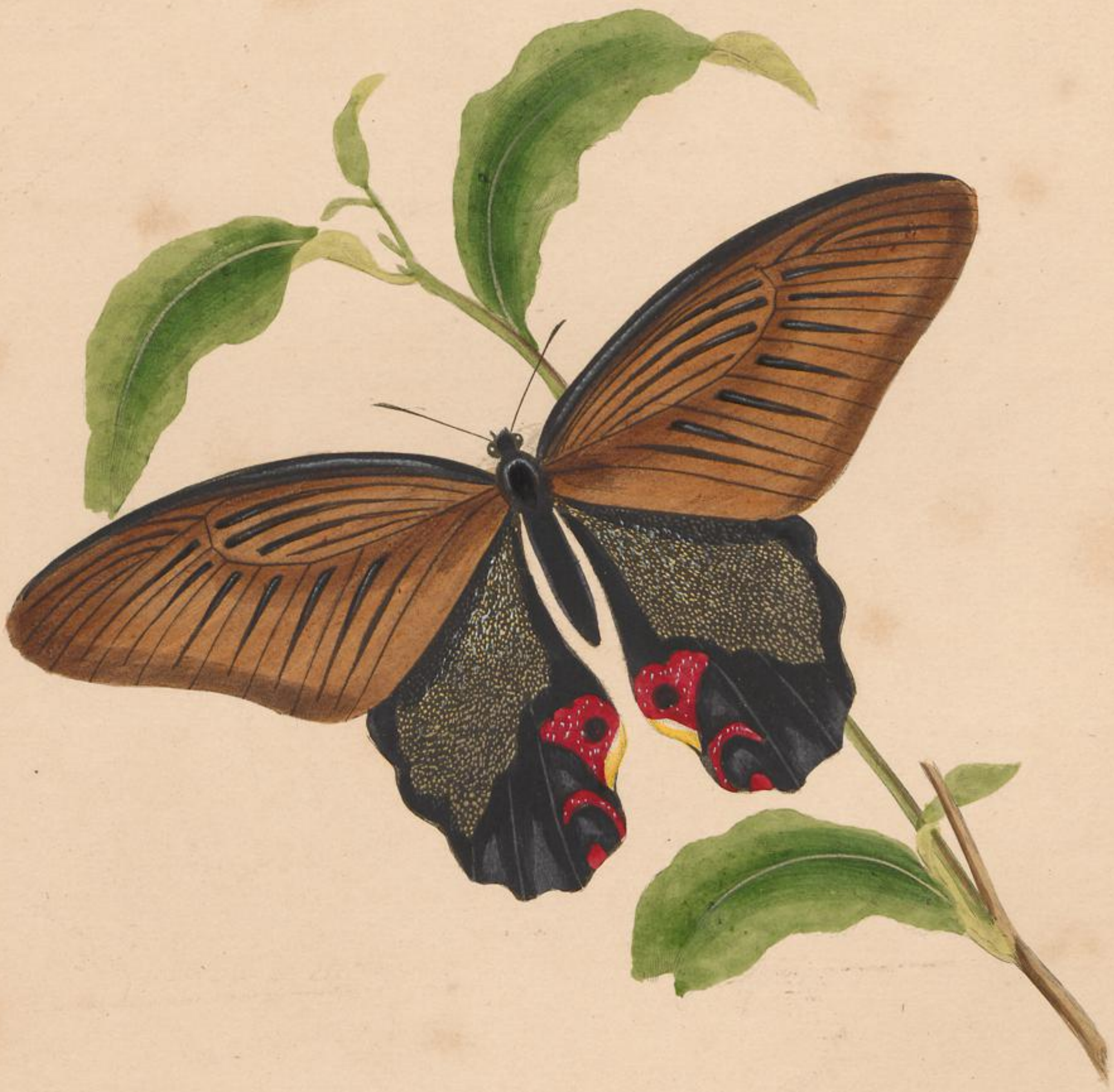
The collection of the late Mr. Latham contained the original specimen from which Mr. Jones' drawing (referred to by Fabricius) was made. The present figure was copied, by Mr. Jones' permission, from that drawing.

PAPILIO EPIUS.

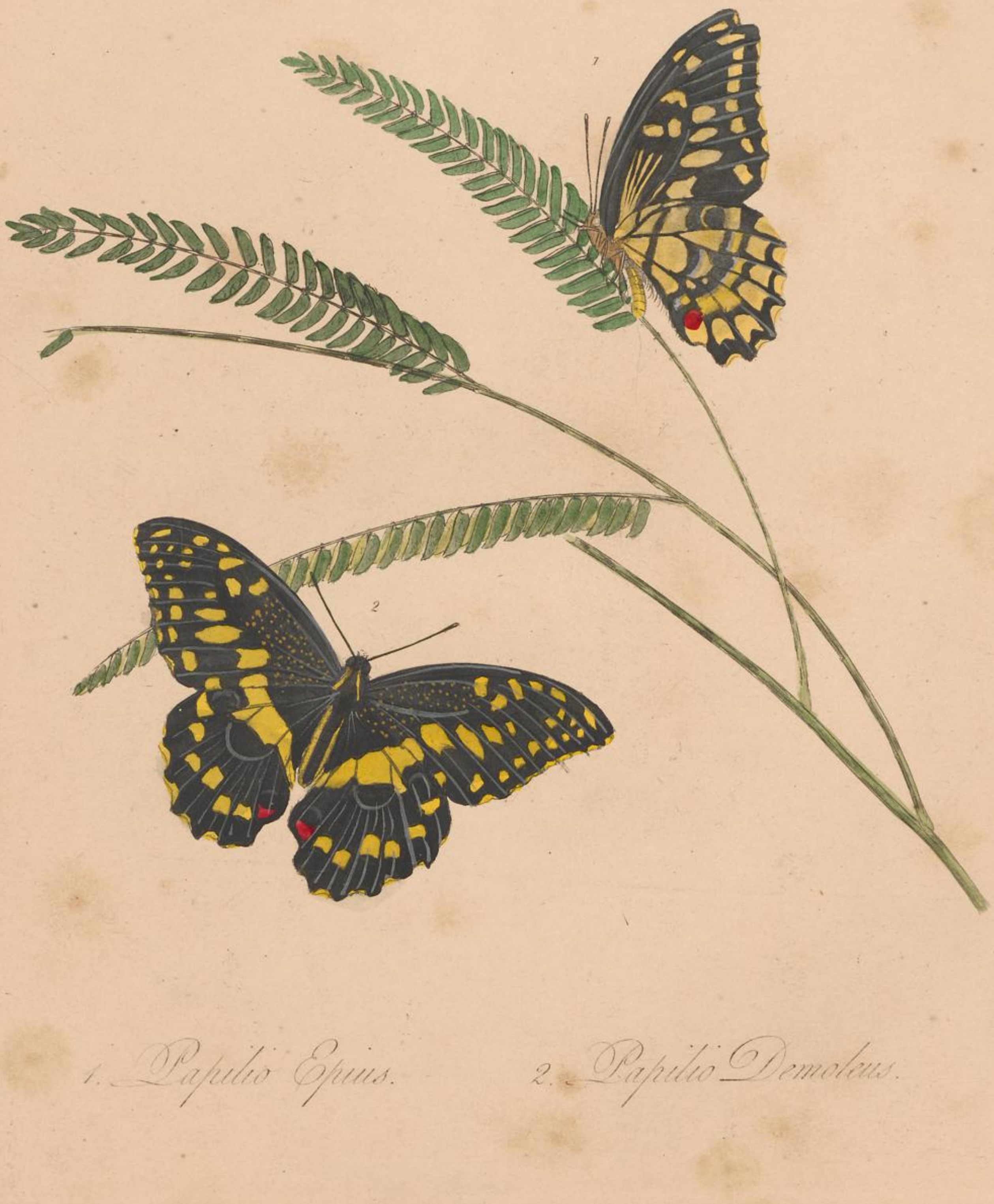
Plate [illegible].

[illegible]

Papilio Epius and Papilio Demoleus are so similar in their colours and pattern, that many authors have confounded one species with the other. Papilio Epius is chiefly distinguished by the red spot in the internal margin of the lower wing having no blue eye-shaped mark above it.

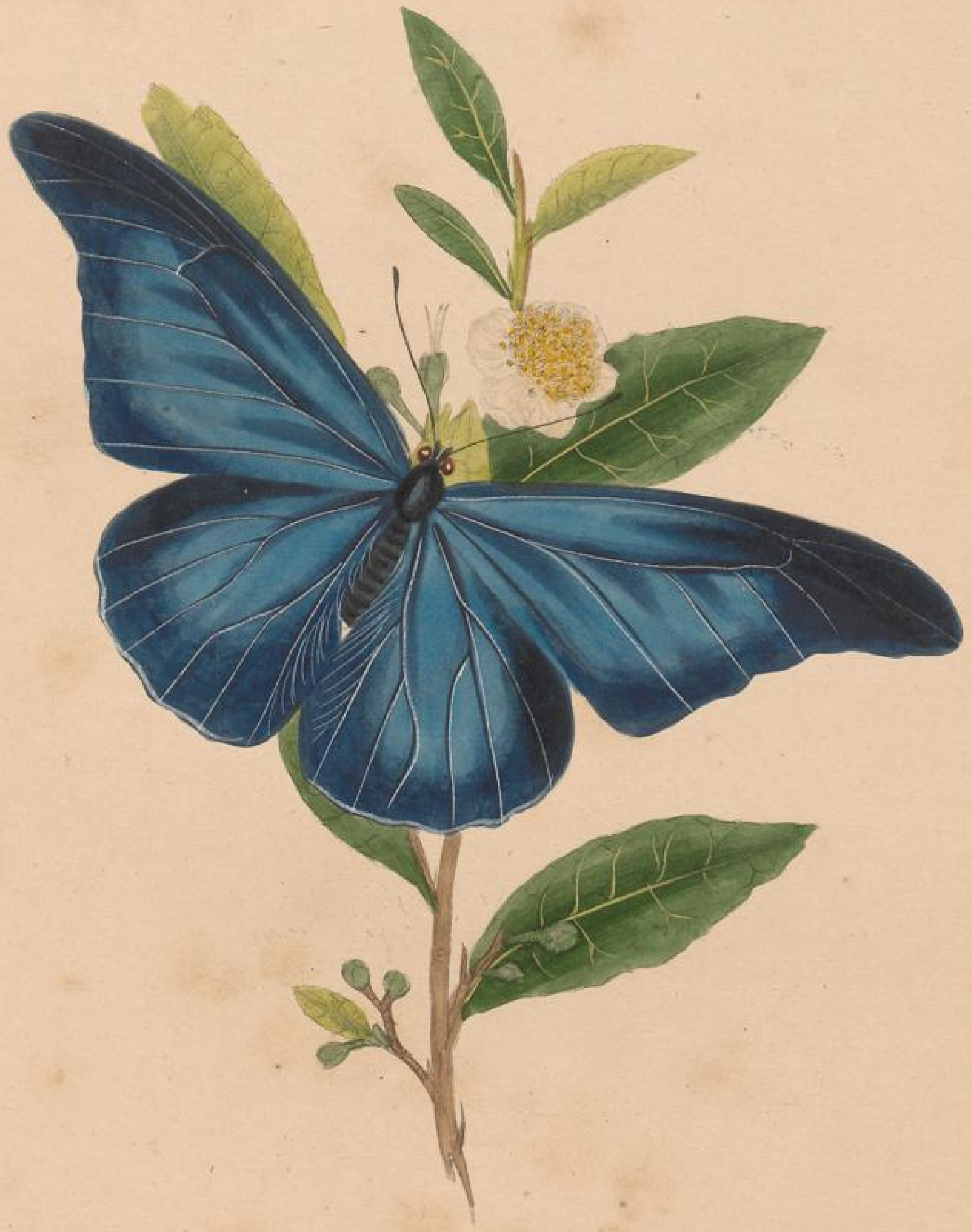


Papilio Protenor.



1. Papilio Epius. 2. Papilio Demoleus.

Pl. 28.



Morpho Rhetenor

PAPILIO DEMOLEUS.

Plate 28. fig. 2.

Ch. Sp. P. alis nigris, flavo-maculatis, posticis dentatis fasciâ flavâ subrectâ ocelloque anali dimidiatim cæruleo rufoque. Expans. alar. 3½ unc.

P. with black wings spotted with yellow, the posterior dentate with a nearly straight and regular yellow fascia, and an ocellus at the anal angle blue above and red beneath. Expanse of the wings 3½ inches.

Syn. Papilio Demoleus, *Linn. Syst. Nat.* 2. 753. *Fabr. Ent. Syst.* 3. 1. 34. *Kleeman* (*Rosel, add.*) *t.* 1. *f.* 2. 3. *Cramer Ins. t.* 231. *f.* A. B. *Boisduval Hist. Nat. Lep.* 1. *p.* 237. *Encycl. Méth.* IX. *p.* 43.

Papilio Demodocus, *Esper. Ausl. Schmett. t.* 51. *f.* 1.

Linnæus gives the Cape of Good Hope as the habitat of this species; and Boisduval also mentions the coast of Guinea, Senegal, and Madagascar. Fabricius, however, particularly says, "Habitat in Indiæ orientalis Citro, Dr. Koenig," describing the larva as solitary, smooth, of a yellowish green colour, with a reddish head, two tentacles on the neck, and a bifid tail. Boisduval has, however, applied this observation to P. Epius, stating that P. Demoleus had been reared at Senegal by M. Dumolin, and that its larva feeds on the citron trees.

MORPHO RHETENOR.

Plate 29.

Family. Nymphalidæ, *Swainson.*

Genus. Morpho, *Fabricius* (*Syst. Gloss. in Illig. Mag.*)

Ch. Sp. M. alis suprà nitidissimè cyaneis; subtùs umbrino griseoque variis, ocellis cæcis. Expans. alar. 5½ unc.

M. with the wings on the upper side dazzling cyaneous blue, beneath varied with umber and grey, with blind eyelets. Expanse of the wings about 5½ inches.

Syn. Papilio Rhetenor, *Cramer, pl.* 15. A. B. *Herbst. Pap. t.* 27. *f.* 1. 2. *Esper. Pap. Exot. t.* 42. *f.* 1. *Sulzer Ins. t.* 13. *f.* 1. *Enc. Méth.* IX. *p.* 444.

Whatever effect the artist can produce by a combination of the most brilliant colours employed in painting, must be far surpassed by comparison with the dazzling appearance of this splendid creature. It is impossible to find in any part of the animal creation colours more beautiful or changeable. Pale blue is the principal colour, but new tints meet the eye in every direction, varying from a silvery green to the deepest purple; and the whole surface glittering with the resplendence of highly polished metal.

This splendid species was long confused with Papilio Menelaus of Linnæus, the authors of the Encyclopédie Méthodique, however, cleared up the confusion, proving them to be quite distinct. The species, and indeed the entire group to which it belongs, are, however, natives of South America. Sulzer, indeed, states that his specimen came from China, and evidently on this authority Donovan introduced the species into this work.

Thea Laxa (*Bohea, or broad-leaved Tea*), is figured in the plate. Sir G. Staunton says, the bohea tea is supplied in China from the province of Fochen: the green tea from Kiang-nan. The leaves of these teas vary in some degree in form according to the age of the plant; those of the bohea are the broadest; Thea stricta has much longer leaves, they are lanceolated, and more deeply serrated than those of the bohea. Many authors have considered them varieties of the same species. It flowers in England in August and September.

ACRÆA VESTA.

Plate 30. fig. 1.

FAMILY. HELICONIIDÆ, *Swainson.*

GENUS. ACRÆA, *Fabricius.* (Heliconia p. *Fabricius olim.*)

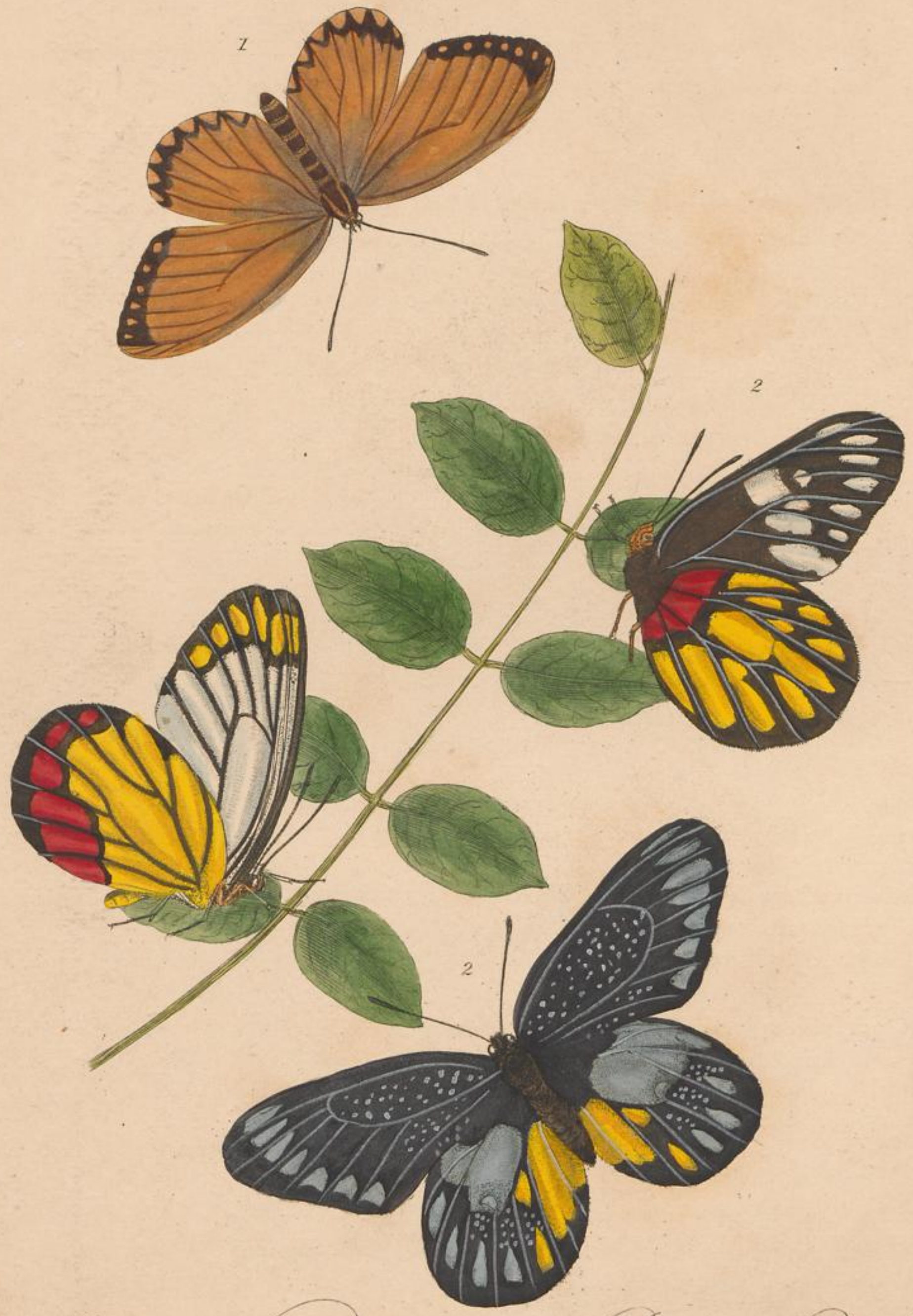
CH. SP. A. alis oblongis integerrimis, utrinque corticinis; omnium supra limbo posteriori fusco serieque punctorum interrupto. Expans. alar. 2½ unc.

A. with the wings oblong and entire, of a pale yellow brown; with a dark brown border in which are white spots. Expanse of the wings 2½ inches.

SYN. Papilio (Helic.) Vesta, *Jones. Fabr. Ent. Syst.* 3. 1. *p.* 163. *Enc. Méth.* IX. *p.* 233.

Papilio Terpsichore, *Cramer Pap. pl.* 298. *f.* A. B. C.

Papilio Vesta is the only insect of the *Heliconii* division of Butterflies described by Fabricius as peculiar to China, in his *Ent. Syst.*, the majority being inhabitants of Africa. It is a rare species. The *Papilio Vesta* of Cramer is a very different insect, being the *P. Erato* of Fabricius.



1. Acræa Vesta. 2. Pieris Pasithoe.
3. Pieris Hyparete.

PIERIS PASITHOE.

Plate 30. fig. 2.

FAMILY. PAPILIONIDÆ, *Leach.*

GENUS. PIERIS, *Fabricius*, *Boisduval* (Papilio, Heliconia, *Linn.*)

CH. SP. P. alis suboblongis, nigris, supra cærulescenti-albo-maculatis; posticis subtus disco flavo, nigro venoso, fasciâque basali ferruginea. Expans. alar. 3½ unc.

P. with oblong wings of a black colour spotted on the upper side with bluish white, the posterior pair with the disc beneath yellow, with black veins and a broad red basal fascia. Expanse of the wings 3½ inches.

SYN. Papilio (Helicon.) Pasithoe, *Linn. Syst. Nat.* 2. 755. *Fab. Ent. Syst.* 3. 1. 179.
Pieris P. *Encycl. Méth.* IX. *p.* 148. *Boisduval Hist. Nat. Lep.* 1. *p.* 451. *Drury Illust. Exot. Ent.* 2*nd edit. v.* 2. *p.* 16.
Papilio (Dan. Cand.) Dione, *Drury*, 1*st edit.*
Papilio Porsenna, *Cramer*, *pl.* 43. *fig.* D. E. *and pl.* 352. *fig.* A. B.

PIERIS HYPARETE.

Plate 30. fig. 3.

CH. SP. P. alis suboblongis, integerrimis, albis, utrinque apice, subtus venis nigris, posticis subtus, plus minusve flavis, maculis sangnineis limbo nigro apicali digestis. Expans. alar. 3 unc.

P. with the wings rather oblong, entire, white with a black margin on both sides and with black veins beneath; the posterior on the under side more or less stained with yellow, with a row of six red spots in the black border. Expanse of the wings about 3 inches.

SYN. Papilio (Helicon.) Hyparete, *Linn. Syst. Nat.* 2. *p.* 763. (nec. *Fabr. Ent. Syst.* 3. 1. *p.* 176). *Enc. Méth.* IX. *p.* 153. *Boisduval Hist. Nat. Lep.* 1. *p.* 455.
Papilio Autonoe, *Cramer*, 187. C. D. et 320. A. B.

Several distinct, but nearly allied, species have been confounded together under the name of Hyparete; Donovan observed, "We have two sorts of this species; one with the marginal row of red spots on the posterior wings disposed in a deep border of black; the other has the red spots on a whitish ground. They are certainly the two sexes of Papilio Hyparete. Found near Canton, in China." The sexes do not, however, vary in this respect, the latter individuals mentioned in this passage are therefore most probably the P. Eucharis of Drury (Epicharis, Enc. Méth. and Boisduval; Hyparete, Fabricius), or the P. Autonoe of Cramer and Boisduval.

The leaf represented in the plate is that of *Sophora Japonica* (*Shining-leaved Sophora*), an elegant and valuable timber tree, of which Sir G. Staunton speaks as very frequent in China.

PIERIS (IPHIAS) GLAUCIPPE.

Plate 31. fig. 1.

SUB-GEN. IPHIAS, *Boisduval.*

CH. SP. P. alis supra albis, anticis maculâ magnâ apicali (medio fulvo) nigrâ, subtus (nisi dimidio basali anticarum) cinereis, strigis minutis fuscis irroratis. Expans. alar. 4 unc.

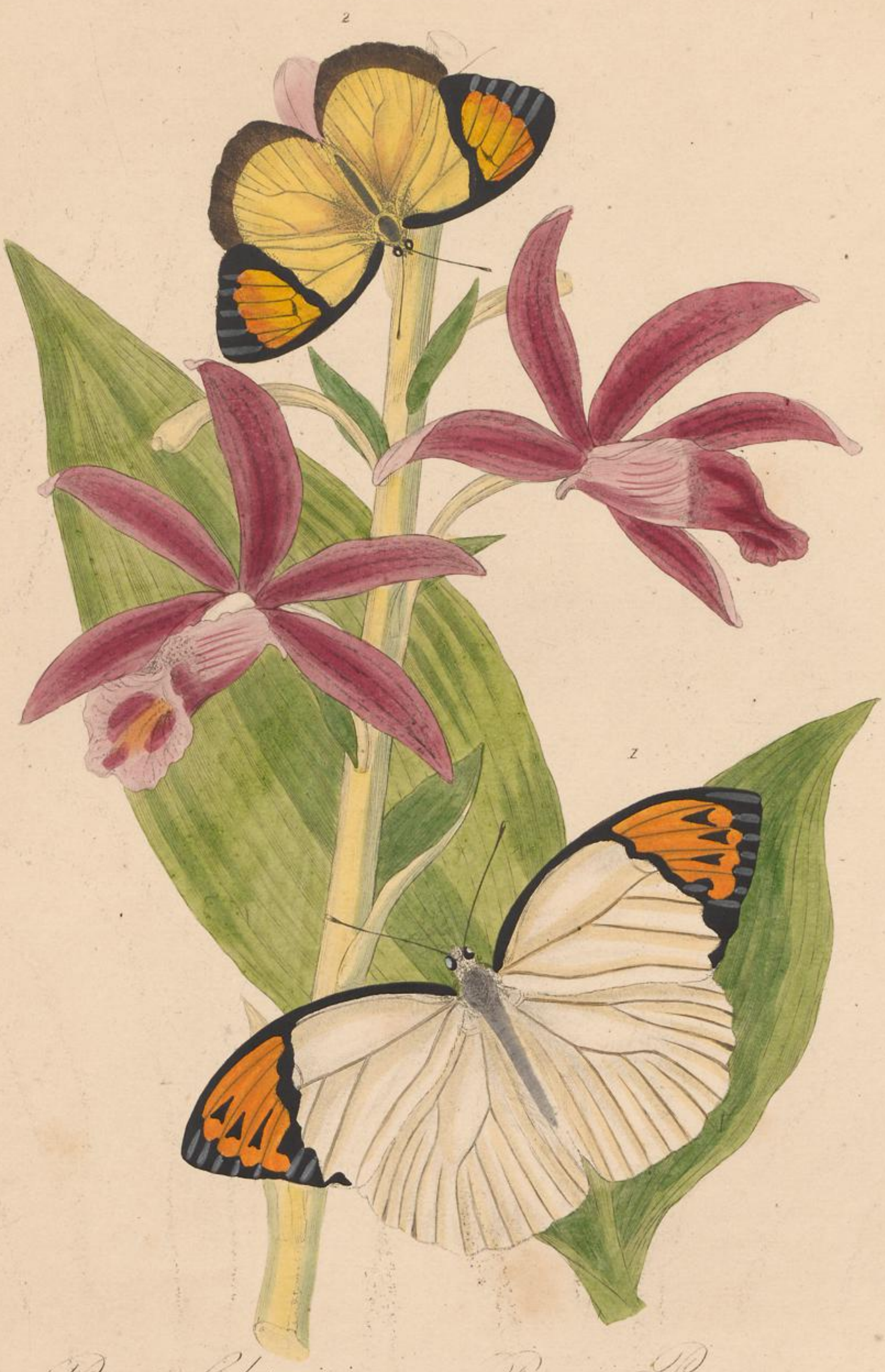
P. with the upper sides of the wings white, the anterior having a large black spot at tip, the middle of which is rich orange; beneath, except the basal half of the anterior wings, greyish with brown waves. Expanse of the wings 4 inches.

SYN. Papilio (Dan. Cand.) Glaucippe, *Linn. Syst. Nat.* 2. 762. *Fabr. Ent. Syst.* 3. 1. *p.* 198. *No.* 618. *Herbst. Pap. Fab.* 96. *f.* 1—3. *Enc. Méth.* IX. *p.* 119. *Drury Exot. Lepid.* 1. *pl.* 10. *f.* 3. 4. *2nd edit. p.* 20. *Horsfield Lep. Jav. p.* 130. (Colias Gl.)

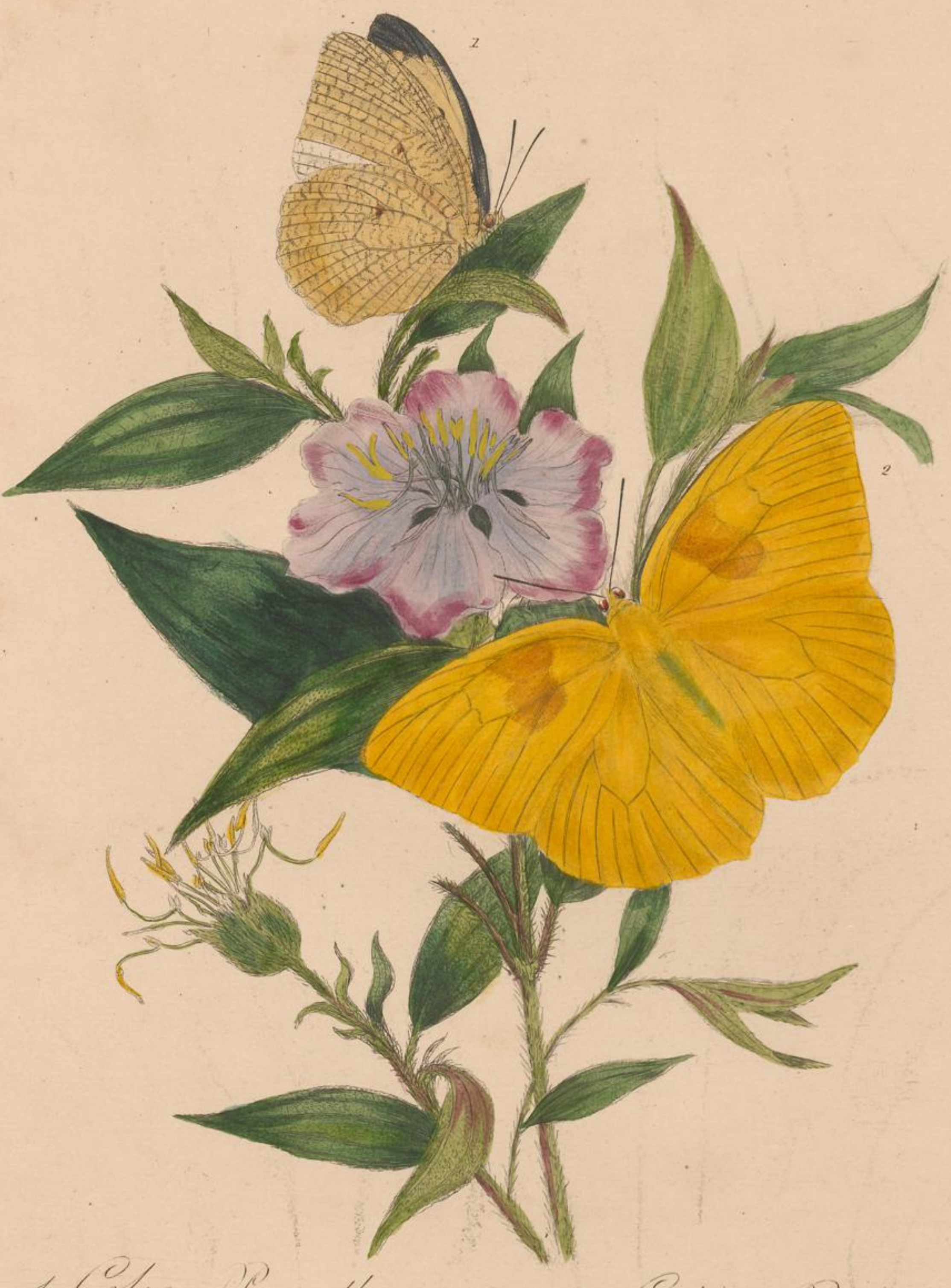
♀ Pap. Callirhoe, *Fab. Mant. Ins.* 2. 20. 215.

Iphias Glaucippe, *Boisduval Hist. Nat. Lep.* 1. *p.* 596.

P. Glaucippe is an elegant insect: very common in China, and it is said, in some adjacent parts of Asia, also Bengal, Java, &c. The Papilio Callirrhoe of Linnæus is considered as the female of this species: few authors deem it more than a variety (β). Dr. Horsfield has described and figured the caterpillar and chrysalis of this species in his work upon the Lepidoptera of Java above referred to.



1. Pieris Glaucippe. 2. Pieris Pyrene



1. Colias Pyranthe. 2. Colias Philea.

PIERIS (THESTIAS) PYRENE?

Plate 31. fig. 2.

SUB-GEN. THESTIAS, *Boisduval.*

CH. SP. P. "alis integerrimis, rotundatis, flavis; primoribus apice (medio fulvo) nigris; subtus nebuloso-maculatis." *Linn. loc. cit. infra.* Expans. alar. fere 2½ unc.

P. with the wings entire, rounded, yellow; the anterior with a large black spot, the centre of which is bright orange; beneath with cloud-like marks. Expanse of the wings about 2½ inches.

SYN. Papilio (Dan. Cand.) Pyrene, *Linn. Syst. Nat.* 2. 762. 86? *Enc. Méth.* IX. *p.* 120. *Boisduval Hist. Nat. Lep.* 1. 593. (Thestias P.) *Drury Exot. Ent. 2nd edit.* 1. *p.* 11. *pl.* 5. *f.* 2.

Papilio Sesia, *Fabricius Ent. Syst.* 3. 1. *p.* 203. *Donovan, 1st edit.*

The insect here figured, judging at least from the upper side, agrees with the Linnæan description of P. Pyrene, the habitat of which is given by Linnæus as China. Fabricius, however, who refers to Linnæus, gives America as its locality. It is now satisfactorily ascertained that it inhabits China and various parts of the East Indies.

The plant figured is *Limodorum Tankervillæ*, an elegant and much admired production of China.

COLIAS (CALLIDRYAS) PYRANTHE.

Plate 32. fig. 1.

GENUS. COLIAS, *Fabricius.* Papilio (Danai Candidi), *Linnæus.*

SUB-GEN. CALLIDRYAS, *Boisduval.*

CH. SP. C. alis integerrimis, rotundatis, albis, puncto apiceque nigris; subtus cinereo undulatis puncto fulvo. Expans. alar. fere 3 unc.

C. with the wings entire, rounded, and white, having a discoidal spot and the margin black; beneath with ashy waves and a fulvous spot. Expanse of the wings nearly 3 inches.

SYN. Papilio Pyranthe, *Linn. Syst. Nat.* 2. *p.* 763. *Enc. Méth.* IX. *p.* 97. *Boisduval Hist. Nat. Lep.* 1. *p.* 611.

Papilio Gnoma of Fabricius; P. Alcyone, Cramer; P. Nepthe, Fabricius; and P. Chryseis, Drury (1st edition); are in all probability varieties of this insect.

COLIAS (CALLIDRYAS) PHILEA.

Plate 32. fig. 2.

Ch. Sp. C. alis integerrimis, subangulatis, flavis; anticis macula, posticis limbo, luteis. Expans. alar. 3¾ unc.

C. with the wings entire, somewhat angulated, bright yellow, with a large discoidal spot in the anterior and a broad margin of the posterior pair orange. Expanse of the wings 3¾ inches.

Syn. Papilio (Dan. Cand.) Philea, *Linn. Syst. Nat.* 2. 764. *Fabricius Ent. Syst.* 3. 1. *p.* 212. *Cramer Pap. pl.* 173. E. F. *Roesel Ins. Bel. t.* 3. *f.* 5. *Boisduval Hist. Nat. Lep.* 1. *p.* 619. (Callidryas P.)

Linnæus says of this species, "Habitat in Indiis," which may be either taken for the East or West Indies; Roesel calls it "die *indianische* goldborte;" and Donovan states that his specimen was received from China. The real locality, however, not only of this butterfly, but of all the species of the section to which it belongs, is South America and the West Indies. M. Boisduval gives the Argante of Hubner, Lolia of Godart, Aricia of Cramer, Melanippe Cramer, and Larra of Fabricius, as varieties of the female of this species.

The plant represented in the plate is *Melastoma Chinensis.*

MORPHO (DRUSILLA) JAIRUS.

Plate 33.

Family. Nymphalidæ, *Swainson.*

Genus. Morpho, *Fabricius.* (Papilio, *Dan. Festiv. Fabr. olim.*)

Sub-Gen. Drusilla, *Swainson Zool. Illust.* 1. *pl.* 11. (Hyades, *Boisduval Hist. Nat. Lep.* 1. *pl.* 13. *f.* 1.)

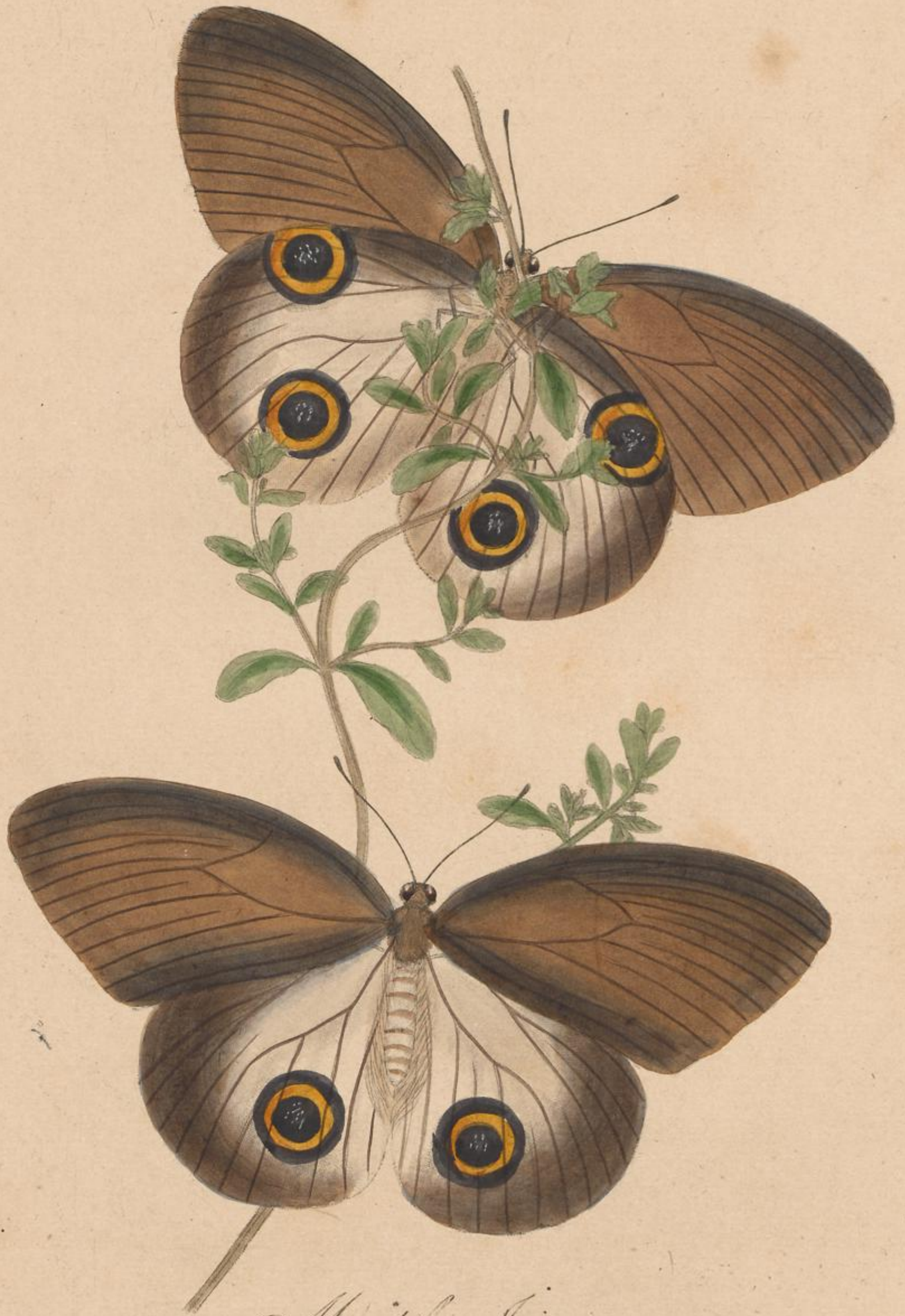
Ch. Sp. M. alis integris, fuscis; posticis disco baseos albo, supra oculo maximo, subtus duobus dissitis. Expans. alar. 4½ unc.

M. with the wings entire, brown; the posterior, with the basal disc white, with a single large eye on the upper and two on the lower side. Expanse of the wings 4½ inches.

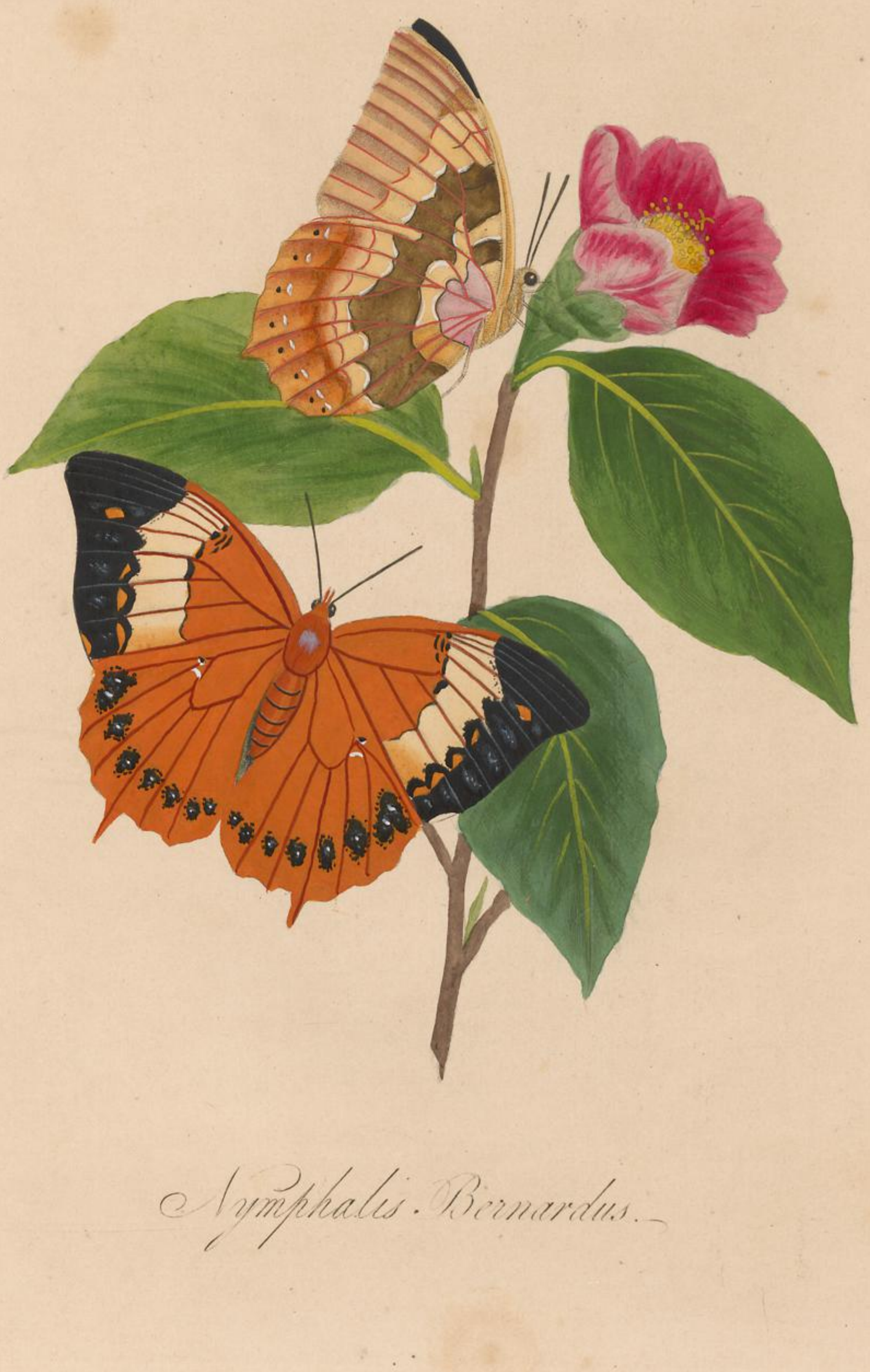
Syn. Papilio F. Jairus, *Fabr. Ent. Syst.* 3. 1. *p.* 54. *Cramer Pap. pl.* 6. A. B. and *pl.* 185. A. B. C. *Enc. Méth.* IX. *p.* 445.

Papilio Cassiæ, *Clerk Icon. tab.* 29. *fig.* 3.

A specimen of this extremely rare Butterfly was contained in the collection of Dr. Hunter, now the property of the University of Glasgow; a fragment in the British



Morpho Jairus.



Nymphalis Bernardus.

[illegible]

Museum; and one in fine preservation in the collection of Mr. Francillon. Except those and the specimens from which the figures in the annexed plate are [illegible], Donovan has never seen it in any private [illegible]. It had been figured [illegible] two authors, Clerk in his Icones Insectorum rariorum, and Cramer in his Papillons exotiques. The figures of Clerk and Cramer do not strictly agree; [illegible] those of the first much lighter coloured, and the white space on the upper wings considerably larger than in any of the figures in Cramer's plates.

Fabricius says it is a native of the East Indies. One specimen figured by Cramer was brought from the isle of Amboyna. It seems therefore, not peculiar, like some insects, to China.

NYMPHALIS (CHARAXES) BERNARDUS.

[illegible]

Genus.	Nymphalis, Latreille. (Papilio, Linnæus, Fabricius.)
Species.	Bernardus, [illegible]. ([illegible], Fabricius.)
[illegible]	[illegible]
	[illegible]
[illegible]	[illegible]

This uncommonly rare Chinese butterfly has not been figured in any other work. Fabricius described it only from the drawings of Mr. Jones. I possess a specimen in which the central fascia is deeply white, and is continued half way across the posterior wings, and the black spots in the latter are very broad and confluent, without white in the centre.

The plant represented is the Camellia Japonica (Japan Rose), a native of Japan and China, which blossoms from January to May. It is a lofty and magnificent plant, rising to the height of several feet: there is a variety of it with double flowers, perfectly white; and another in which the flowers are variegated with white and red.

Museum; and one in fine preservation in the collection of Mr. Francillon. Except these, and the specimens from which the figures in the annexed plate are copied, Donovan had never seen it in any cabinet whatever. It had been figured only by two authors, Clerk in his *Incones insectorum rariorum* and Cramer in his *Papillons exotiques*. The figures of Clerk and Cramer do not strictly agree: we observe those of the first much lighter coloured, and the white space on the upper wings considerably larger than in any of the figures in Cramer's plates.

Fabricius says it is a native of the East Indies. One specimen figured by Cramer was brought from the isle of Amboyna. It seems therefore not peculiar, like some insects, to China.

NYMPHALIS (CHARAXES) BERNARDUS.

Plate 34.

GENUS.	NYMPHALIS, *Latreille.* (Papilio Nymphalis, *Fabricius.*)
SUB-GEN.	CHARAXES, *Boisduval.* (Jasia, *Swainson.*)
CH. SP.	M. alis fulvis, anticis apice atris, fasciâ mediâ flavâ, posticis caudatis strigâ punctorum ocellatorum. Expans. alar. 3½ unc. N. with fulvous wings, the anterior black at the tips with a broad pale yellow band, the posterior tailed, with a row of black ocellated spots. Expanse of the wings 3½ inches.
SYN.	Papilio (Nymph.) Bernardus, *Jones. Fabricius Ent. Syst.* 3. 1. *p.* 71.

This uncommonly rare Chinese butterfly has not been figured in any other work. Fabricius described it only from the drawings of Mr. Jones. I possess a specimen in which the central fascia is nearly white, and is continued half way across the posterior wings, and the black spots in the latter are very broad and confluent, without white in the centre.

The plant represented is the *Camellia Japonica* (*Japan Rose*), a native of Japan and China, which blossoms from January to May. It is a lofty and magnificent plant, rising to the height of several feet: there is a variety of it with double flowers, perfectly white; and another in which the flowers are variegated with white and red.

ARGYNNIS ERYMANTHIS.

Plate 35. fig. 1.

Genus. Argynnis, *Fabricius.*

Ch. Sp. A. alis subrotundatis, subdentatis, fulvis, anticis fasciâ flavescenti transversâ mediâ nigro-maculatâ, apice nigris; posticis serie punctorum duabusque lunularum nigrarum. Exp. alar. 2—3 unc.

A. with the wings rather rounded and indented, fulvous, the anterior with a transverse pale yellow fascia, spotted with black, the tips black; the posterior wings with a row of black spots and two rows of narrow spots. Expanse of the wings from 2 to 3 inches.

Syn. Papilio (Dan. Fest.) Erymanthis, *Drury Exot. Ent. vol.* 1. *pl.* 15. *f.* 3. 4. *Cramer, pl.* 238. *f.* 9. *Fabr. Ent. Syst.* 3. 1. *p.* 139. *Enc. Méth.* IX. *p.* 257.
Papilio Lampetia, *Cramer Pap. pl.* 148. *fig.* E.

It is the rarity, and not the beauty of this butterfly, which induced Donovan to add it to this selection. It is probably far from common in China, being very seldom sent to Europe among the insects of that country.

CYNTHIA ORITHYA.

Plate 35. fig. 2.

Genus. Cynthia, *Fabricius.* (Papilio Nymphales gemmati, *Linn.*)

Ch. Sp. C. alis denticulatis, supra nigris aut fuscis, singularum ocellis duobus iride fulvâ; anticis costâ strigisque apicalibus albis, his subfalcatis; posticis rotundatis. Expans. alar. 2 unc.

C. with the wings dentate, the anterior subfalcate, the posterior rounded; above blacker brown shaded with blue, each having two eyelets with a fulvous circle; the anterior margin and several apical fasciæ white. Expanse of the wings 2 inches.

Syn. Papilio N. Orithya, *Linn. Syst. Nat.* 2. *p.* 770. (nec *Abbot* and *Smith Lep. Georg. v.* 1. *t.* 8.) *Roesel Ins.* 4. *t.* 6. *f.* 2. *Cramer Pap. pl.* 19. C. D. 32. E. F. 281. E. F. 290. A. B. C. D.
Papilio N. Orythia, *Fabr. Ent. Syst.* 3. 1. *p.* 91. *Donovan,* 1*st edit.*

Donovan observes, that " the varieties of Papilio Orythia are numerous, and seem to differ according to climate of the countries of which they are natives. It is common in North America, Jamaica, India, &c. The variety from North America is almost wholly brown, and those from Jamaica have less blue in the disk of the lower

LEPIDOPTERA.

ARGYNNIS ERYMANTHUS.

Plate 35, fig. 1.

Genus. Argynnis, Fabricius.

Sp. Ch. A. alis subdentatis [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Expans. alar. [illegible]

A. with the wings tawny [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], spotted with black, [illegible] [illegible] [illegible] [illegible] within [illegible] of black spots and two [illegible] [illegible]. Expanse of the wings from 3 to 3 inches.

Syn. Papilio (Hel. Heror.) Erymanthis, *Drury Exot. Ent.* vol. 2, pl. 15, f. 3, 4. *Cramer*, pl. 275, f. 5. *Fabr. Ent. Syst.* 3. 1. p. 135. *Enc. Méth.* IX. p. 259.

Papilio [illegible], *Cramer Pap.* pl. 118, fig. [illegible]

It is for rarity, and not the beauty of this butterfly, which induced Donovan to add it to this selection. It is probably far from common in China, being very seldom sent to Europe among the insects of that country.

JUNONIA ORITHYA.

Plate 35, fig. 2.

Genus. Junonia, Hübner. (Papilio N. aphales gemmati, Linn.)

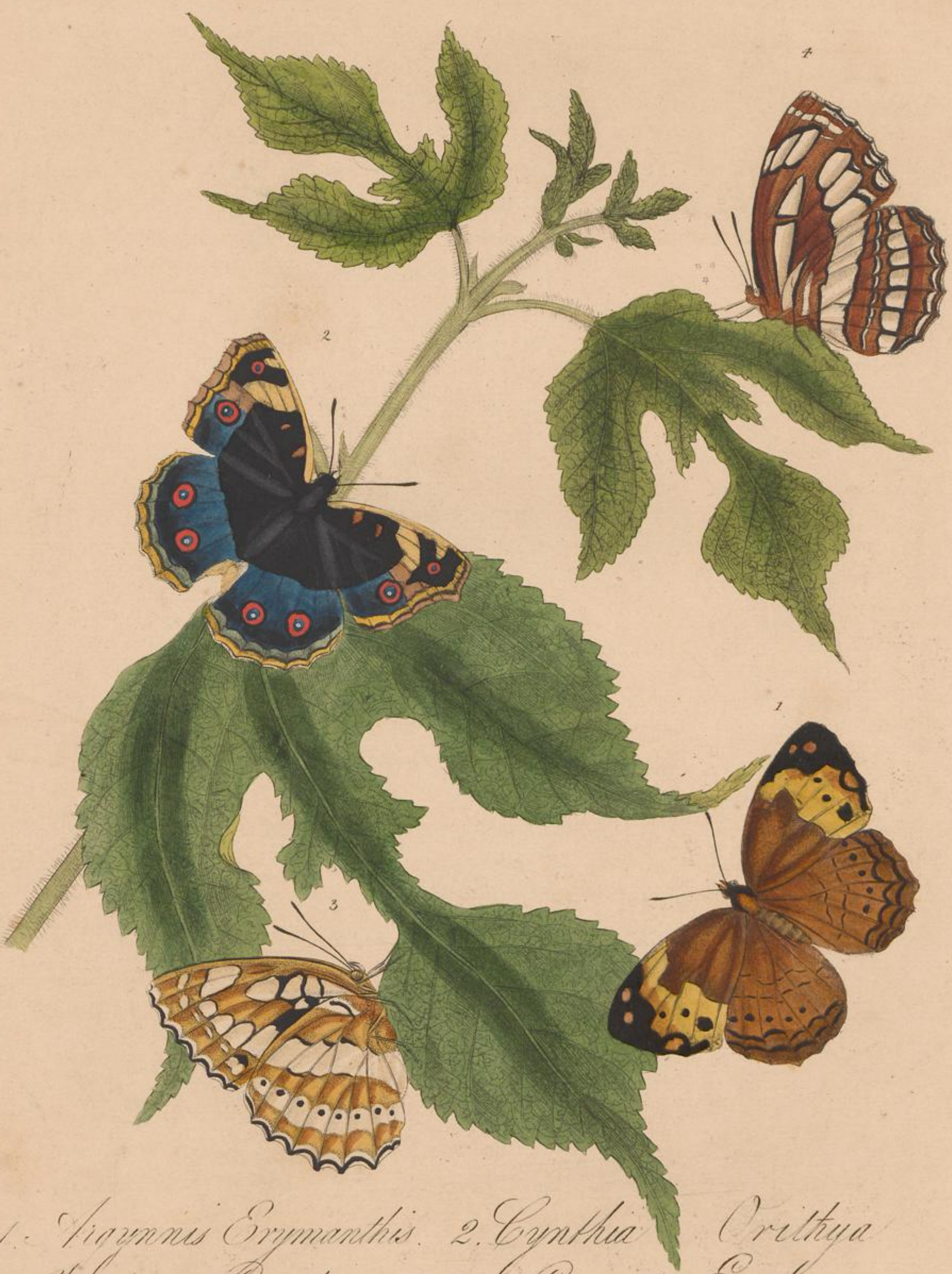
Sp. Ch. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Exp. alar. [illegible]

J. with the wings [illegible], the [illegible] [illegible] the [illegible] [illegible]; [illegible] [illegible] [illegible] with blue, each having two [illegible] with a [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible]. Expanse of the wings [illegible]

Syn. Papilio N. Orithya, *Linn. Syst. Nat.* [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] *Drury* [illegible] [illegible] [illegible] *Cramer Pap.* pl. 19, [illegible] [illegible] [illegible]

Papilio N. Orithya, *Fabr. Ent. Syst.* 3. 1. p. [illegible] *Donovan, Insect.*

Donovan observes, that "the varieties of Papilio Orithya are numerous, and seem to differ according to climate of the countries of which they are natives. It is common in North America, Jamaica, India, &c. The variety from North America is almost wholly brown, and those from Jamaica have less blue in the disk of the lower



1. Argynnis Erymanthis. 2. Cynthia Orithya
3. Limenitis Leucothoe 4. Limenitis Eurynome.

wings than those from China." Donovan, however, clearly here mistook distinct species for varieties. The American species thus named by Abbot and Smith is the P. Larinia of Fabricius, and in my copy of the Entomologia Systematica, which belonged to Professor Weber, the companion of Fabricius, the words "India orientali" are introduced in lieu of Jamaica.

Papilio Clelia of Cramer, which is found on the coast of Guinea, has been supposed a variety of Papilio Orythia. Fabricius, in the *Entomologia Systematica*, has made it a distinct species. It greatly resembles P. Orythia, but has no more blue colour on the posterior wings than is concentrated in a large spot near the base.

LIMENITIS LEUCOTHOE.

Plate 35. fig. 3.

GENUS. LIMENITIS, *Fabricius.* (Papilio Nymphales Phalerati, *Linn.*)

CH. SP. L. alis dentatis, supra fusco-nigris, subtus fulvis; utrinque fasciis tribus macularibus albis; posticarum fasciâ intermediâ punctis nigris antrorsum fœtis. Expans. alar. 2½ unc.

L. with the wings dentate, above brownish black, beneath clay-coloured; with three rows of white spots on both sides, the intermediate fascia of the posterior wings with black spots towards the base. Expanse of the wings 2½ inches.

SYN. Papilio Leucothoe, *Linn. Syst. Nat.* 2. *p.* 780. *Fabr. Ent. Syst.* 3. 1. *p.* 129. *Enc. Méth.* IX. *p.* 430. *Herbst. Pap. tab.* 240. *f.* 5. 6.
Papilio Polyxina, *Donov.* 1*st edit.*

Donovan regarded this as a new species, giving the following as the true Leucothoe of Linnæus. The description given by that author, and especially his notice of the third row of spots in the posterior pair of wings being composed "ex maculis 7 albis puncto nigro fœtis," clearly applies to this and not to the following insect.

LIMENITIS EURYNOME.

Plate 35. fig. 4.

Ch. Sp. L. alis dentatis supra fusco-nigris, subtus fulvis; fasciis interruptis macularibus albis, subtus fusco cinctis, anticis fasciâ longitudinali baseos è maculis duabus triangularibus compositâ. Expans. alar. 2½ unc.

L. with the wings dentate, above brownish black, beneath fulvous, with interrupted white maculated bands, which on the under side are edged with brown, the anterior have also a longitudinal basal fascia, composed of two triangular white spots, the bases of which are opposed to each other. Expanse of the wings 2½ inches.

Syn. Limenitis Eurynome, *Westw.*
Papilio Leucothoe, *Donov. 1st edit.*
Papilio Aceris major ex India, *Esper. Pap. tab.* 82. *f.* 1.

CYNTHIA ŒNONE.

Plate 36. fig. 1.

Ch. Sp. C. alis denticulatis supra luteis margine omni nigro; posticis basi late nigris, maculâ cyaneâ. Expans. alar. 2½ unc.

C. with the wings denticulated, above pale clay-coloured, with all the margins black, the base of the posterior black with a large cyaneous blue spot. Expanse of the wings 2½ inches.

Syn. Papilio (Nymph. Gemm.) Œnone, *Linn. Syst. Nat.* 2. 770. "alis denticulatis, primoribus albido maculatis subbiocellatis, posticis basi cyaneis ocellis duobus." *Fabr. Ent. Syst.* 3. 1. 90. *Kleman Ins.* 1. *t.* 3. *f.* 1. 2.
Vanessa Œnone, *Enc. Méth.* IX. p. 318.

Donovan says, that this insect is found throughout Asia (which is the locality assigned to it by Linnæus and Fabricius), and is very common in China. In the Encyclopédie Méthodique, the Cape of Good Hope is given as its habitat. The Linnæan specific character is applicable to the female; the male (according to M. Godart), which is here figured, having no eyes on the upper side of the wings.

LIMENITIS EURYNOME.

Plate 33, fig. 4.

[illegible]

Limenitis Eurynome, [illegible]

Papilio Leucothoe, [illegible]

Papilio [illegible] [illegible], [illegible]

CYNTHIA ŒNONE.

Plate 33, fig. [illegible]

[illegible]

Papilio [illegible] Œnone [illegible]

Vanessa Œnone, [illegible]

Linnæus says that this insect is found throughout Asia (which is the locality assigned to it by Linnæus and Fabricius), and is very common in China. In the [illegible] the Cape of Good Hope is given as its locality. The Linnæan specific character is applicable to the female; the male (according to M. Godart), which is here figured, having no spot on the upper side of the wings.

1. *Cynthia Oenone.* 2. *Cynthia Almana.*
3. *Nymphalis Lubentina.*

CYNTHIA ALMANA.

Plate 36. fig. 2.

Ch. Sp. C. alis anticis falcatis, posticis intus subcaudatis, omnibus supra fulvis, ocellis sesquialtero, subtus fuscescentibus, posticis lineâ flavidâ transversâ mediâ. Expans. alar. 2¾ unc.

C. with the anterior wings falcate, the posterior subcaudate at the inner angle, all fulvous above, with an ocellus on each; beneath brownish, the posterior with a yellowish transverse line in the centre. Expanse of the wings 2¾ inches.

Syn. Papilio (N. G.) Almana, *Linn. Syst. Nat.* 2. 769. *Fabr. Ent. Syst.* 3. 1. *p.* 89. *Cramer Pap. pl.* 58. F. G. *Herbst. Pap. t.* 172. 1. 2.

The angulated form of the wings of this butterfly gives it a remarkable appearance. The eyes on the wings somewhat resemble those of the Peacock butterfly, to which, in some other respects, it bears no distant similitude. It is common in China; Fabricius gives its *habitat* Asia.

NYMPHALIS (ACONTHEA) LUBENTINA.

Plate 36. fig. 3.

Ch. Sp. N. alis subdentatis, fusco-virescentibus; anticis utrinque fasciâ albâ, maculari; posticis apice punctis chermisinis, serie duplici digestis. Expans. alar. 2½ unc.

N. with the wings subdentate, brownish-green, the anterior on each side with a row of white spots, the posterior with scarlet spots arranged in a double series towards the extremity. Expanse of the wings 2½ inches.

Syn. Papilio (Nymph.) Lubentina, *Fabricius Ent. Syst.* 3. 1. *p.* 121. *Enc. Méth.* IX. 400. *Cramer Pap. pl.* 155. C. D. *Herbst. Pap. t.* 146. 1. 2.
Aconthea Lubentina, *Horsfield Lep. Jav. pl.* 5. *f.* 5.

Papilio Lubentina is figured only in the works of Cramer: his specimen is not precisely like ours, but agrees in all the essential peculiarities, and is unquestionably the same species. The semitransparent spots on the anterior wings are much larger in Cramer's figure than in the insect before us.

NYMPHALIS JACINTHA.

Plate 37. fig. 1.

Ch. Sp. N. alis repando-dentatis, fuscis; anticis striga punctorum alborum, posticis apice albis margine fusco lunulis albis. Expans. alar. 4—4½ unc.

N. with the wings scalloped, brown; the anterior with a row of spots on the anterior pair at the tips, posterior externally white, the margin being brown with white lunules. Expanse of the wings from 4 to 4½ inches.

Syn. Papilio (Nymph. Phal.) Jacintha, *Drury, app. vol.* 2. *pl.* 21. *f.* 1. 2. *Fabricius Ent. Syst.* 3. 1. *p.* 60. ♀

Papilio (Nymph.) Liria, *Fab. Ent. Syst.* 3. 1. *p.* 126. ♂ ?

Papilio Perimale, *Cramer, pl.* 65. C. D. 67. B.

This curious butterfly was found in the province of Pe-tche-lee, in China. It is in all probability the female of Pap. (N.) Liria, Fabr.

It is represented, with P. Antiochus, on a leaf of the *Urtica Nivea* (*White Nettle*).*

NYMPHALIS ANTIOCHUS.

Plate 37. fig. 2.

Ch. Sp. N. alis supra holosericeo-nigris, fasciâ communi nitide aurantiâ; anticarum abbreviatâ. Expans. alar. 2¾ unc.

N. with the wings above holosericeous black, with a broad shining orange bar common to all the wings, but abbreviated in the anterior pair. Expanse of the wings 2¾ inches.

Syn. Papilio (Dan. Fest.) Antiochus, *Linn. Mant.* 1. 537. *Drury, app. vol.* 3. *pl.* 7. *f.* 3. 4. *Fabricius Ent. Syst.* 3. 1. *p.* 44. *Enc. Méth.* IX. *p.* 409.

Papilio Eupalemon, *Cramer, tab.* 143. *f.* B. C. Le Velouté. *Daubenton, pl. enl.* 68. *f.* 3. 4

This insect is very rare in European cabinets of insects. The specimen figured by Drury came from the Brazils, and Cramer's from Surinam. Fabricius, however,

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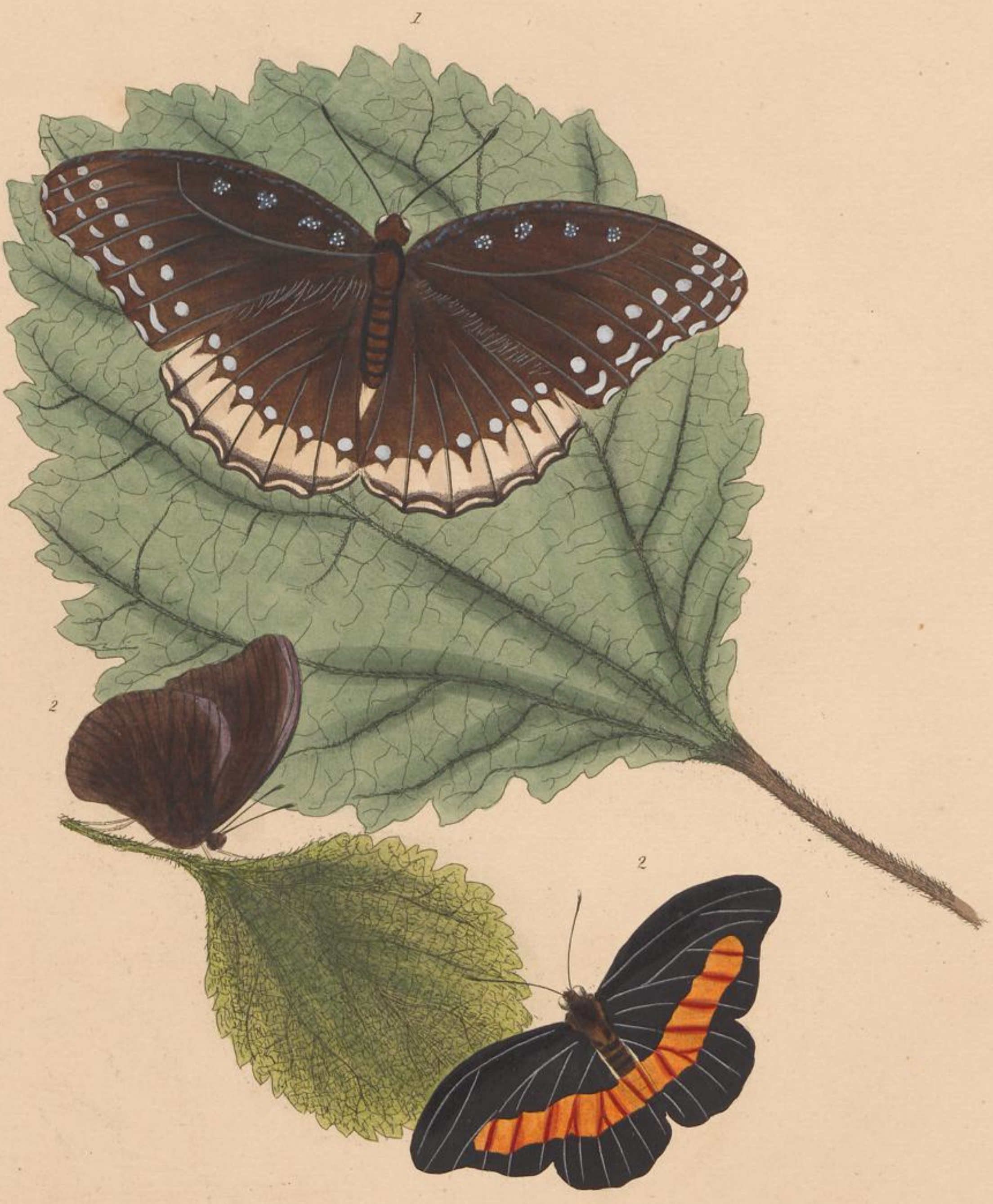
* Sir G. Staunton speaks of a cloth that the Chinese manufacture from the fibres of a dead nettle. Query, Is this the species employed for that purpose? no other is noticed by that author in the lists of plants collected in China. The nettle is of general use in Russian Tartary also; the *Kuriles*, and other Siberian tribes, make cloth, cordage, thread, &c. of it. *Gordon*, &c.



1. Nymphalis Jacintha. 2. Nymphalis Antiochus.

Nymphalis Sylla.

describes it as a native of China; and Donovan states that the insect figured in the collection of drawings of Mr. Jones, of Chelsea, was a native of China, as well as the specimen in his own collection. There must, however, have been some mistake in respect to these specimens, for not only are all the immediately allied species natives of South America, but Stoll observed its transformations in that country, and says, that the caterpillar feeds on the tamarind: it is green, with two long spines on the head, and numerous other shorter spines on the body.

NYMPHALIS SYLLA.

Plate 38.

CH. SP. N. alis dentatis, supra nigris viridi-maculatis striatisque; anticis fasciâ maculari niveâ. Expans. alar. $3\frac{3}{4}$ unc.

N. with the wings dentate, black on the upper side, with green spots and lines, the anterior with a row of white spots, the central fascia of the posterior wings externally radiated. Expanse of the wings $3\frac{3}{4}$ inches.

SYN. Papilio Sylla, *Cramer Pap. t.* 43. *f.* F. G.
Papilio Sylvia, *Herbst. Pap. t.* 247. *f.* 2. 3.
Papilio (N.) Gambrisius, *Fabr. Ent. Syst.* 3. 1. *p.* 85. *Donov.* 1*st edit.*
Nymphalis Sylvina, *Enc. Méth.* IX. *p.* 381.

A specimen of this very rare Papilio was taken in one of the small islands on the eastern coast of China, and was in the possession of Mr. Francillon. Sir J. Banks, Bart., had a specimen of it from another part of the East Indies. It also occurs in Java and Amboyna (Enc. Méth.).

MYRINA (LOXURA) ATYMNUS.

Plate 39. fig. 1.

FAMILY.	LYCÆNIDÆ, *Swainson.*
GENUS.	MYRINA, *Fabr. Enc. Méth.*
SUB-GEN.	LOXURA, *Horsfield Lep. Jav. p.* 119.
CH. SP.	M. alis supra fulvo-testaceis, apice nigro, posticis longè caudatis. Expans. alar. $1\frac{1}{2}$—$1\frac{3}{4}$ unc. M. with the wings above orange-red, with the tips black, the posterior with very long tails white at the tips. Expanse of the wings $1\frac{1}{2}$—$1\frac{3}{4}$ inches.
SYN.	Papilio (Pleb. Rural.) Atymnus, *Fabr. Ent. Syst.* 3. 1. *p.* 283. *Cramer, pl.* 331. *fig.* D. E. (palpis deteritis). Loxura Atymnus, *Horsfield Lep. Jav. p.* 119. *pl.* 2. *f.* 6. *Boisduval Hist. Nat. Lep.* 1. *pl.* 7. *fig.* 3.

This is also a scarce species. Donovan's specimen was from the collection of the late Duchess Dowager of Portland, who procured it from China. Another specimen in the cabinet of Sir J. Banks, Bart., is from Siam. Dr. Horsfield found it in Java.

The plant represented in the plate is *Hemerocallis Japonica,* brought from China by Mr. Slater.

THECLA MÆCENAS.

Plate 39. fig. 2.

GENUS.	THECLA, *Fabricius.* (Papilio Hesperia Pleb. rural., *Fabricius olim.*)
CH. SP.	Th. alis bicaudatis atris disco cæruleo, subtus brunneo nebulosis. Expans. alar. $1\frac{3}{4}$ unc. Th. with the wings black and furnished with two tails, the disc being blue; beneath clouded with brown. Expanse of the wings $1\frac{3}{4}$ inches.
SYN.	Hesperia (R.) Mæcenas, *Jones. Fabr. Ent. Syst.* 3. 1. *p.* 271. 45. *Enc. Méth.* IX. *p.* 639.

[illegible] ([illegible]) [illegible]

Plate [illegible] fig. [illegible]

Family. [illegible]

Genus. [illegible]

Species. [illegible]

Ch. Sp. [illegible]

[illegible]

Syn. [illegible]

[illegible]

This is also a scarce species. Donovan's specimen was from the collection of the late Duchess Dowager of Portland, who procured it from China. Another specimen in the cabinet of Sir J. Banks, Bart., is from Siam. Dr. Horsfield found it in Java.

The insect represented on the plate is [illegible] specimen, brought from China by Mr. Reeves.

[illegible]

Plate [illegible] fig. [illegible]

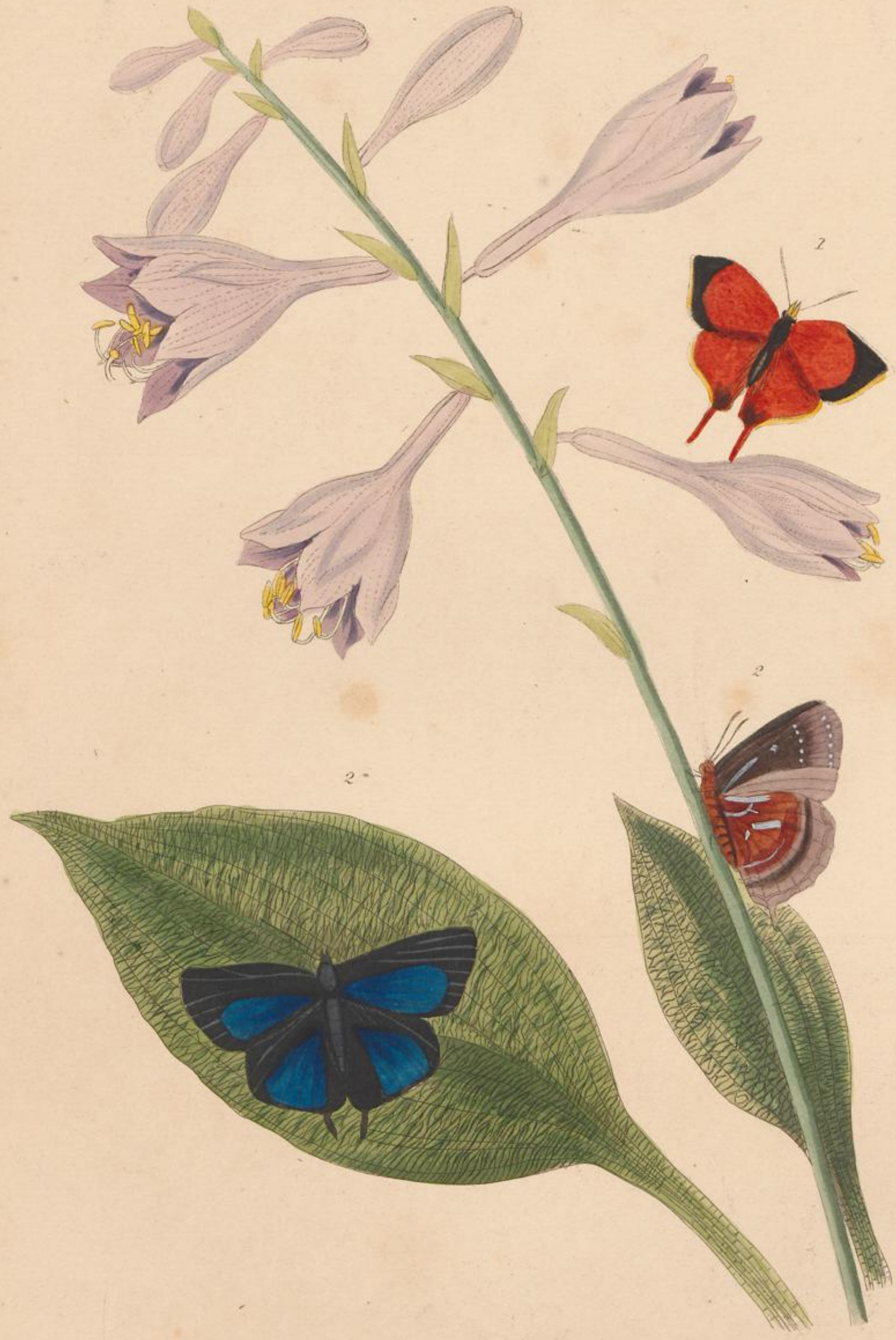
Genus. [illegible]

Ch. Sp. [illegible]

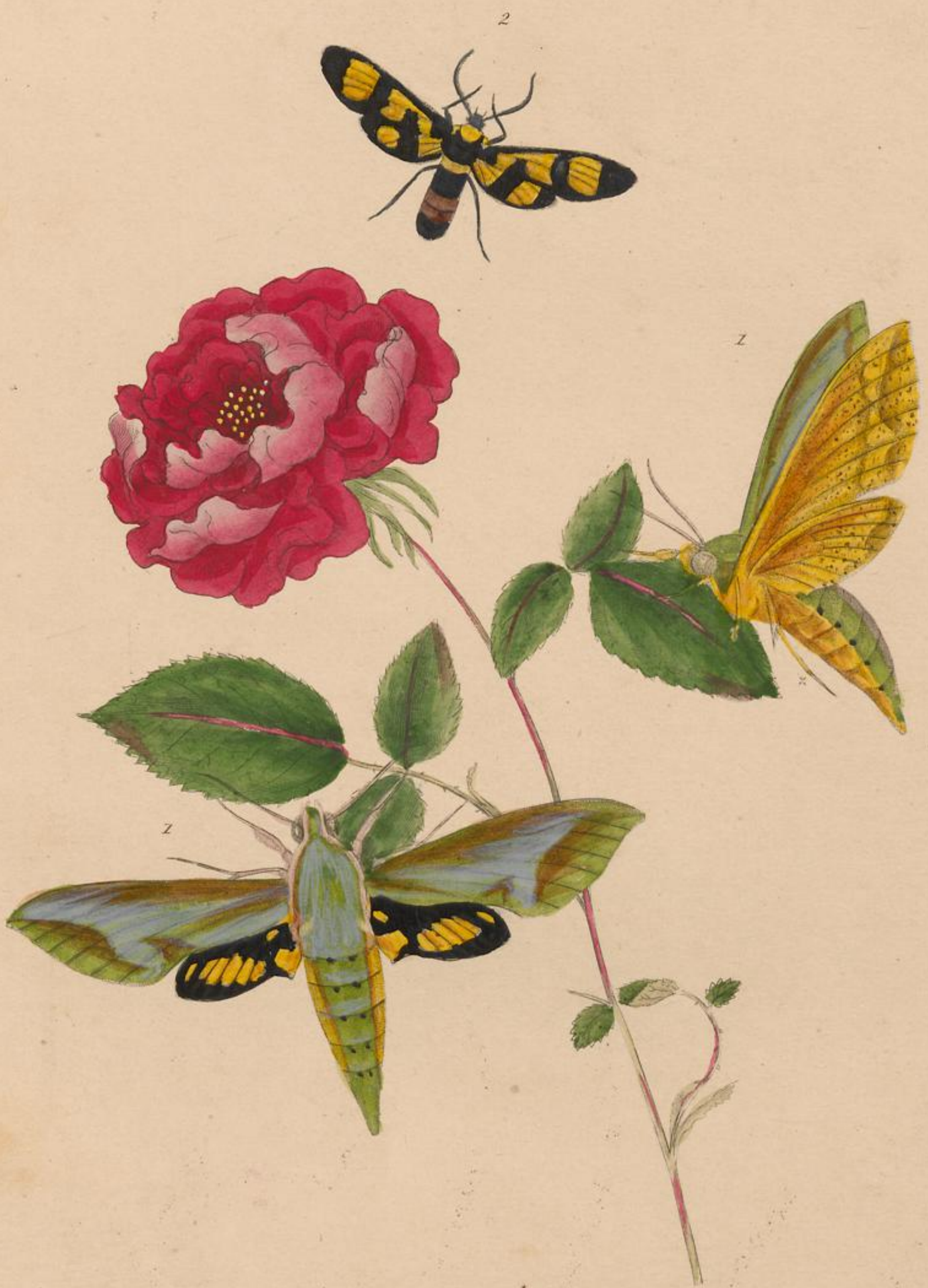
[illegible]

Syn. [illegible]

Pl 39



1. Myrina Atymnus. 2. Thecla Mæcenas.



1. Deilephila Nechus. 2. Glaucopis Polymena.

DEILEPHILA NECHUS?

Plate 40. fig. 1.

SECTION.	CREPUSCULARIA, *Latreille.*
FAMILY.	SPHINGIDÆ, *Leach.*
GENUS.	DEILEPHILA, *Ochsenh.* Sphinx p. *Linn. &c.*
CH. SP.	D. "alis integris; anticis viridibus; strigâ testaceâ; posticis nigris; maculis baseos fasciaque flavis." *Fabric. loc. cit. subtus.* Expans. alar. 3½ unc. D. with the wings entire, the anterior green with a testaceous streak, ("with testaceous marks," *Donov.*) the posterior black with spots at the base, and a row of spots near the extremity. Expanse of the wings 3½ inches.
SYN.	Sphinx Nechus? *Fabricius Ent. Syst.* 3. 1. *p.* 377. *Cramer Ins. t.* 178. *f.* B.

The number of Chinese species of this genus, already described, is very limited: the insect represented in the accompanying figures is the largest of them; but as this is inferior in size to several kinds found in Europe, we conceive there must remain many larger species of the genus unknown to collectors of foreign insects, and yet very common in China. In the latter part of Sir G. Staunton's work, that author mentions the larvæ of a *Sphinx Moth* which furnish an article for the table of the Chinese. We regret that the indefinite expression cannot assist us to determine the species, and scarcely the genus, of the insect alluded to.*

The specimen figured in the annexed plate was in the collection of Mr. Francillon, who received it from China. The habitat of D. Nechus, given by Fabricius, is America; and Cramer has represented a small variety of the same species from North

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* European naturalists are entirely ignorant of the Chinese insects in the state of larva and pupa, if we except a few species of the Cimices, Cicada, and some altogether uninteresting insects, that have been accidentally brought among others from that country. Hence it must remain undetermined whether they correspond in form with those of other parts of the world. It is, however, highly probable, from their great affinity to those in the perfect state, that in the state of larva they may also agree. The extensive collection of the larvæ of sphinges made by Mr. Abbot in North America affords no singularly constructed animal distinct from those found in Europe; they vary indeed in their colours, but preserve uniformly the characters found on the same genus in other countries. We noticed among the drawings of the late Mr. Bradshaw the figure of a Chinese sphinx, apparently *S. Hylas,* together with a larva similar to that of the S. Stellatarum: it was green, and, like all the known larvæ of the family (except the *Adscitæ* division), was perfectly free from hairs: it was also furnished with a horn at the posterior part of the body.

America. Moreover Donovan's figure and description do not precisely correspond with the Fabrician description, so that on both these grounds I have considered it advisable to give the specific name with a mark of doubt. Sphinx Batus and Sphinx Gnoma are nearly allied to this insect, particularly the former; both are found in different parts of the East Indies.

GLAUCOPIS POLYMENA.

Plate 40. fig. 2.

FAMILY. ZYGÆNIDÆ, *Leach.*

GENUS. GLAUCOPIS, *Fabr.* Sphinx, *Linn. Donov.*

CH. SP. G. nigra alis maculis luteis, anticis tribus, posticis duabus; abdomine cingulis duobus coccineis. Expans. alar. fere 2 unc.

G. black, wings spotted with deep yellow, the anterior having three and the posterior two spots, abdomen with two scarlet bands. Expanse of the wings nearly 2 inches.

SYN. Sphinx Polymena, *Linn. Syst. Nat.* 2. 806. *no.* 40. *Cram. Ins. t.* 13. *f.* D. *Fabr. Ent. Syst.* 3. 1. *p.* 396. *Drury Exot. Ent.* 1. *t.* 26. *f.* 1.

This beautiful creature is probably scarce in China; at least it is very rarely found among the insects brought from that country.

It is figured on the plate with the *Rosa semperflorens* (*Ever-blowing China Rose*).

SESIA HYLAS.

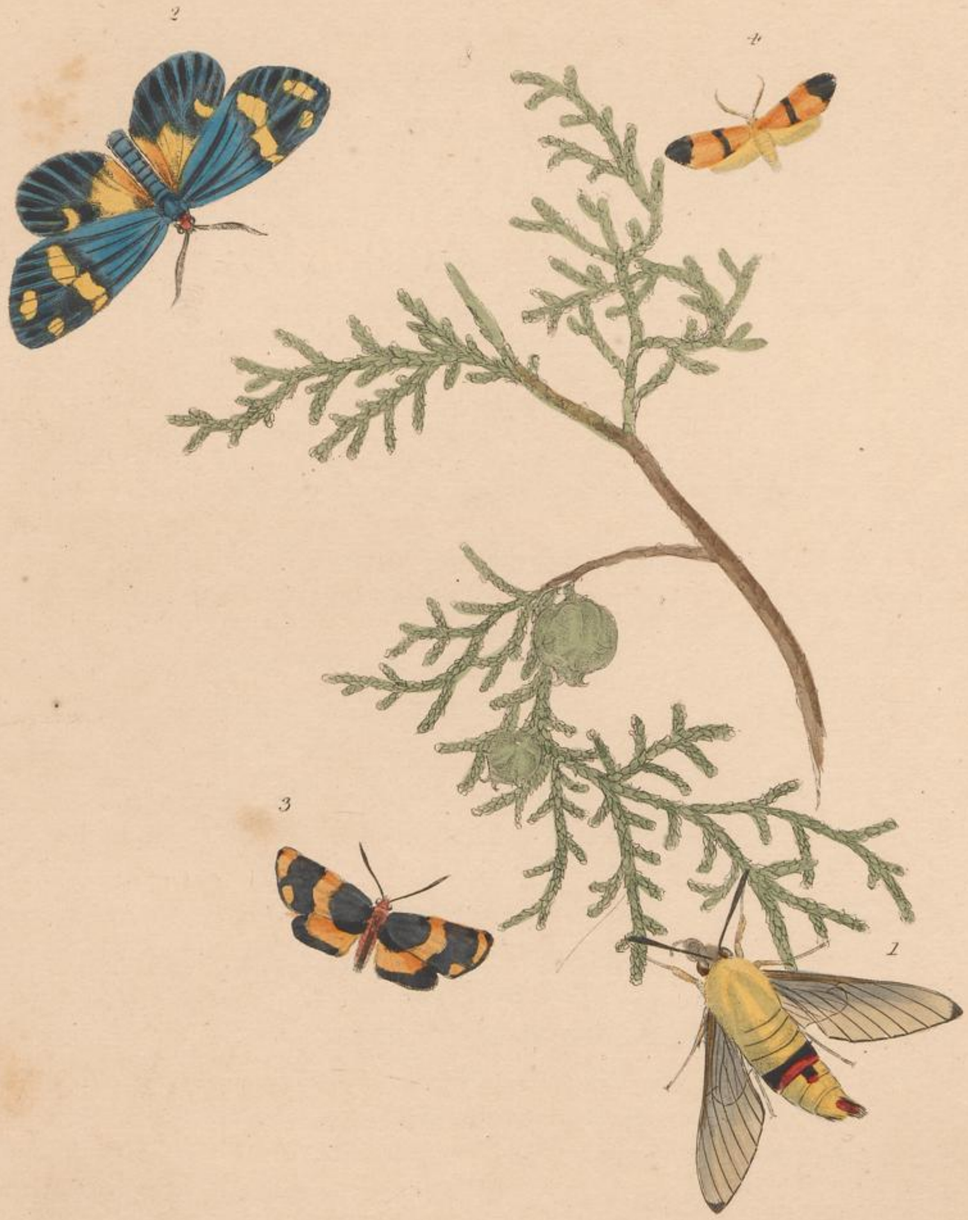
Plate 41. fig. 1.

GENUS. SESIA, *Fabricius.* Sphinx, *Linn. Donov.*

CH. SP. S. alis fenestratis, abdomine barbato viridi, cingulo purpureo. Expans. alar. 2½ unc.

S. with transparent wings, body pale yellow green, abdomen with a brush at the tip and a purple belt round the middle. Expanse of the wings 2½ inches.

SYN. Sphinx Hylas, *Linn. Mant.* 1. 539. *Fabr. Ent. Syst.* 3. 1. *p.* 379.
Sphinx Picus, *Cramer Ins. t.* 148. *f.* B.



1. Sesia Hylas. 2. Callimorpha? Thallo.
3. Callimorpha? ruficollis. 4. Callimorpha? bifasciata.

CALLIMORPHA? THALLO.

Plate 41. fig. 2.

SECTION.	NOCTURNA?
FAMILY.	ARCTIIDÆ, *Stephens ?*
GENUS.	CALLIMORPHA? *Latreille.* Sphinx, *Linn.*
CH. SP.	C. alis oblongis integerrimis nigris anticis fasciis duabus, posticis unica flavis; capite rubro. Expans. alar. 2 unc. C. with oblong entire black wings, anterior pair shaded with blue at the base, and with two pale yellow fasciæ; posterior wings with a pale yellowish space, head red. Expanse of the wings 2 inches.
SYN.	Papilio Thallo, *Linn. Syst. Nat.* 2. 756. *Fabr. Ent. Syst.* 3. 1. *p.* 173. Sphinx pectinicornis, *Linn. Syst. Nat.* 2. 807. *Fab. Ent. Syst.* 3. 1. *p.* 399. *Edwards Aves*, 36. *t.* 226. Phalæna tiberina, *Cramer, t.* 32. *f.* C. D. Sphinx Thallo, *Donov.* 1*st edit.*

Donovan entered into a lengthened observation, shewing that Fabricius had given a Papilio Thallo in all his works when no such Papilio was in existence, and that Edwards' figure of the insect in question was derived from a mutilated or mended specimen. The former error is, however, rather to be attributed to Linnæus, who introduced all the confusion by describing Edwards' figure both as a Papilio and Sphinx.

The figures of Cramer and Edwards do not precisely agree; in the former, the disk of the posterior wings is yellowish, with a deep border of black: in the other, the yellow occupies only a space near the base, and forms a semi-lunar mark near the anterior margin of those wings. Donovan suspected, with Cramer, that they are but the two sexes of one species. Cramer says both his specimens came from China, from whence Donovan's insects were also received. The real affinities of this and some other allied species are very perplexing, they seem, however, to connect the Zygænidæ with the Arctiidæ.

CALLIMORPHA? RUFICOLLIS.

Plate 41. fig. 3.

Ch. Sp. C. "alis integerrimis nigro-purpurascentibus, fasciâ communi maculisque duabus flavis, thorace antice brunneo." Expans. alar. 1¼ unc.

C. with the wings entire, black purple, a semicircular yellowish band communicating across all the wings, and two spots of the same colour near the apex, collar reddish. Expanse of the wings 1¼ inch.

Syn. Sphinx ruficollis, *Donov. 1st edit.*

This and the following species were considered by Donovan to be undoubted nondescripts: both species were in the collection of Mr. Francillon, who received them from China.

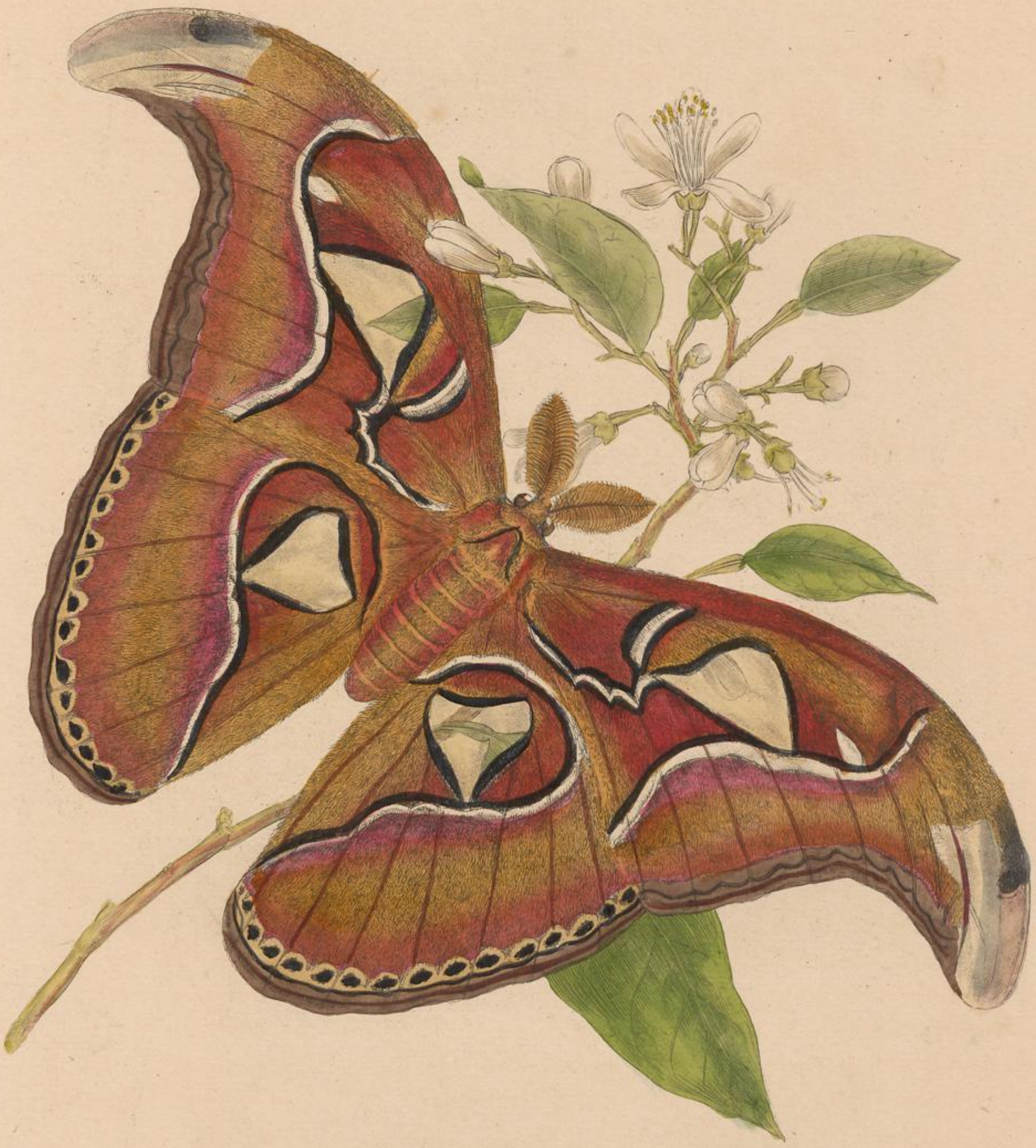
CALLIMORPHA? BIFASCIATA.

Plate 41. fig. 4.

Ch. Sp. C. alis fulvis; anticarum fasciâ apiceque nigris. Expans. alar. 1 unc.

C. with orange or fulvous wings, anterior pair with a black bar across the middle, and the tips black. Expanse of the wings 1 inch.

The plant represented is *Thuja Orientalis* (*China Arbor-vitæ Tree*), an ornamental evergreen, much esteemed by the Chinese, and very frequently represented in their landscapes. Sir G. Staunton remarks, in the account of the journey from Pekin to Canton, that great quantities of this plant grew to a prodigious height in the valley in which stands the city of Yen-choo-foo.



Saturnia Atlas.

SATURNIA ATLAS.

Plate 42.

FAMILY.	BOMBYCIDÆ.
GENUS.	SATURNIA, *Schranck.* (Phalæna Attacus, *Linn.*)
CH. SP.	S. alis anticis falcatis, luteo variis, macula fenestrata anticis sesquialtera. Expans. alar. 8 unc. S. with the anterior wings falcate; yellow brown, varied with paler markings, each wing with a triangular talc-like spot in the middle, the anterior having also a smaller one near the tips. Expanse of the wings 8 inches.
SYN.	Phalæna Attacus Atlas, *Linn. Syst. Nat.* 2. *p.* 808. *Petiv. Gaz. t.* 8. *f.* 7. *Fab. Ent. Syst.* III. 1. *p.* 407. *Cram. Ins.* 381. C. 382. A.

The nocturnal Lepidoptera are remarkable for the neatness and simplicity of their colours. Their elegancies consist in the infinite variety and delicacy of intermingled tints: the contrast of spots, specklings, and lineations, which constitute the minutiæ of insect beauty. Some species are to be excepted in this remark; the larger kinds are often gaudy, and the smallest exhibit a display of the richest colours, fancifully disposed, and most elegantly diversified.

The European species are numerous, and pretty well ascertained: those of remote countries remained, at the period of the publication of the first edition of this work, and still remain in great obscurity. The species inhabiting China are almost unknown;* for Fabricius describes not more than twenty species in all the cabinets in Europe. From this scanty number a few are selected to illustrate the genus, and if these appear deficient in point of interest or variety, it may stimulate others to collect new species whenever an opportunity occurs. The moths, not only of China, but of every country except Europe, have received but little attention. In Europe, the number of this tribe exceeds that of any other: on the contrary, the extra European species are comparatively the most inconsiderable of our acquisitions. The Papiliones, or butterflies, are a showy and lively race: they sport in the open fields by day, and attract the traveller's curiosity; hence our cabinets abound with them. But the moths, infinitely more numerous, and not less pleasing, are seldom seen; in the gloominess of their dispositions, they seek the obscurity of the forest in the day, and

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* *Fab. Ent. Syst.* These are chiefly described from insects in the collection of "*Monson Londini,*" of which no figures are extant, and the collection unknown.

only venture on the wing when the sun is down. In Europe we visit their nocturnal haunts without difficulty or dread; but in hotter climates these are oftentimes impenetrable, or the lurking places of ferocious animals; and few will expose themselves to their attacks to increase the catalogue of exotic moths.*

Phalæna Atlas is the first species we have to notice. It is one of the largest of the moth tribe,†and is, indeed, a gigantic creature. The species is common, but not peculiar to China, being found in other parts of Asia, and in America. The influence of climate is easily traced in the individuals from different countries; that from Surinam is the largest, and of the deepest colours. The Chinese kind is the next in size; the colours incline to orange, and the anterior wings are more falcated, or

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* The far greater number of moths can only be taken in the woods at night. This is termed *mothing* by collectors. The moths begin to stir about twilight, and when almost dark, commence their flight. The collector is furnished with a large gauze folding-net, in which the insects are caught indiscriminately, for it is impossible to distinguish one species from another, and often is so dark, that the object itself can barely be discerned. Different species have their favourite haunts, some the lanes and skirts of woods, but many of them prefer the open breaks in the most retired places. As it would be unsafe, or impossible, to penetrate the woods in many countries, it is better to collect the larvæ, or caterpillars, for these may be found on the trees in the day-time, and if kept in little gauze cages, and carefully fed, will change into chrysalides, and produce the moths. This is certainly tedious, and few travellers will divert their attention from more important observations; but were they to appropriate their leisure to this branch of science they would materially improve entomology. Mr. Abbot investigated a small district of Georgia, in North America, in this manner, and our cabinets are indebted to his labours for several hundred species, altogether new in Europe. The reader may estimate the importance of these discoveries, by referring to the two expensive volumes of North American Lepidopterous Insects; and reflecting, that the originals of all the species included in that work are but a small selection from those he has furnished us with. Viewing these as the result of one man's research, in an inconsiderable portion of North America, what a variety of new and splendid kinds would be the reward of those, who should explore the more genial regions of Asia, Africa, and South America, with equal diligence and information!

We have hazarded an assertion which may seem inadmissible, that the Phalænæ are infinitely more numerous than the Papiliones, or any other tribe of insects. Not that we possess more, but because, in every country that has been investigated, experience justifies such opinion. For instance, in Great Britain we have only sixty[a] Papiliones, and by mere accident two or three local species have lately been added; of the Phalænæ we have more than 900. The same comparative proportion is observed throughout the countries of the European continent; and it is singularly analogous, that our opinion is confirmed, by the recent discoveries of Mr. Abbot in America.

† When Linnæus described it, few of the very large species of Phalæna were known. There are two species from the interior of Africa, which are larger than the Chinese Atlas, and several others scarcely inferior in magnitude.

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[a] (There are now about eighty-five indigenous British butterflies, and between seventeen and eighteen hundred moths. J. O. W.)

hooked at the ends. We have two other Asiatic *varieties* still smaller, with the wings extremely falcated. These are to be regarded as distinct species.

The larva of Phalæna Atlas is figured by *M. Merian*, in the *Insecta Surinamensia*, plate 52: it is about four inches in length, green, with a yellow stripe disposed longitudinally. Upon each segment are four distinct round tubercles, of a coral-like orange colour, which are surrounded with very delicate hairs. The pupa is large, and inclosed in a web of an ochre colour. The silk of this web is of a strong texture, and it has been imagined, that if woven, it would be superior in durability to that of the common silk worm. *Seba* has also represented the larva at fig. 1. plate 57. vol. 4. *Thesaurus Naturæ*. It is nearly six inches in length, and bulky in proportion; the Phalæna is also larger than that figured by Merian, which is a small specimen of the Surinam species. According to Merian, there are three broods of this insect in a year; they are very common, and feed on the orange trees. Linnæus says, they adhere so tenaciously to the leaves that they can scarcely be taken off.*

The common silk worm, or Phalæna Mori, belongs to this family, and merits observation as a native of China. The art of weaving its threads into silk is of the earliest date. The discovery is attributed to the *Seres*, a people of the East Indies, supposed the Chinese.† In the days of Solomon, we are told, a woman named Pamphilia, of the Island of Co, was skilled in the art of making cloth of the silk brought from the country of the Seres. The most ancient of the Chinese writers ascribe the invention to one of the women of the emperor *Hoang ti*, named *Si ling*, and in honour *Yuen fei*.‡ When Rome degenerated into voluptuousness, Persia, its dependency, furnished this article of luxury; but it is supposed they were indebted to the Chinese for it, and being supplied only in small quantities it was consequently dear. In Rome it was so scarce as to be worn only by persons of the first distinction.

The Chinese historians affirm, that the discovery was considered at first of such importance, that all the women in the palace of the emperor were engaged in rearing the insect and weaving its silk. In after times, the silk of China was a principal article of commerce; but latterly, its value has been materially lessened by the culture and fabrication of silk in other countries. As the Chinese know little of the use of linen, the silk is a staple article of their own consumption. The jesuit missionaries

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* Larva verticillata verrucis pilosis nec folliculos grandes, tenaces, vix extricandos. *Linn. Syst. Nat.*

† Velleraque ut foliis depectant tenuia Seres. *Virg. Georg.* II. 122.

‡ Du Halde, *Des Soyeries*. Les plus anciens écrivans de cet empire en attribuent la découverte à une des femmes de l'Empereur *Hoang ti*, nommée *Si ling*, et surnommée par honneur *Yuen fei*.

mention several sorts of it in use among the Chinese; some admired for beauty, and others for durability. It is generally supposed these are not merely the effect of different manufacture, but are the produce of distinct insects.* Sir G. Staunton

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* M. Merian says, in the description of the Surinam variety of Phalæna Atlas: "Telam ducunt fortem, quare bonum fore sericum rata, istius aliquam collegi copiam et in Belgium transmisi, ubi eadem optima judicata est: ut itaque, si quis Erucas istas congregandi laborem non detrectaverit, et bonæ notæ bombycem, et maximum hinc lucrum sibi comparare posset." The thread of which this coccon's web is composed is so strong, that it has been imagined it would make good silk. I have brought some of it into Holland, which has been esteemed such; so that if any one would take the trouble to collect a number of these caterpillars, they would be found good silk worms, and produce great profit. *Merian.*—Abbot informs us, the Moths of the Emperor tribe in general are called silk worms by the people of Georgia; and in the description of Phalæna Cecropia is still more explicit: for he says, "the caterpillar spins on a twig; the outside web is coarse, the inner covered with silk, like a silk worm's coccon. It is said this silk has been carded, spun, and made into stockings, and that it will wash like linen." *Abbot's Ins. by Dr. J. E. Smith.*—These insects are all of the same natural order, P. Cecropia is rather smaller, but very similar to P. Atlas, and this information at least corroborates the assertion of Merian.

An opinion that the Chinese rear several kinds of insects for the sake of their silk has long been prevalent. Dr. Lettsom proposes a query on this subject, "Which species of moth or butterfly is it, the caterpillar of which, in China, affords that strong grey kind of silk, and how is it manufactured or wore? How are these silk worms or caterpillars preserved, fed, and managed? The introduction of such a new silk in England would be a useful acquisition, and redeem entomology from the censure it is now branded with, of being a mere curiosity void of any real utility."[a] If *Lesser* and *Lyonet* are to be relied on, the *Théologie des Insectes* answers this query. "At this day there are to be found in China, in the province of Canton, silk worms in a wild state, which, without any care being taken of them, make in the woods a kind of silk which the inhabitants afterwards gather from the trees. It is grey, without lustre, and is used to make a very thick and strong cloth, named there Kien Tcheon. It may be washed like linen cloth, and does not stain." A gentleman resident in the East Indies speaks of a large Phalæna producing silk in that country: "We have a beautiful silk worm north-east of Bengal, that feeds on the Ricinus, whence I call it Phalæna Ricini; it is sea-green, with soft spines, very large and voracious, and spins a coarse, but strong and useful silk. The moth is of great size, with elegant dark plumage. Is it known to European naturalists?" *In a collection of papers published by Dr. Anderson in Madras,* 1788, 1789.—M. Le Bon, Reaumur, Roesel, and several others, have attempted to weave the silk of spiders as a substitute for that of silk worms, but their experiments rather amuse and point out the ingenuity of the proposers than promise to be useful; for after many trials, it appears that the silk of spiders would be inferior in lustre and far more expensive than that of silk worms. Sir G. Staunton alludes to these experiments in his description of the Java forests. "In some open spots were found webs of spiders, woven with threads of so strong a texture, as not easily to be divided without a cutting instrument; they seemed to render feasible the idea of him who, in the southern provinces of Europe, proposed a manufacture from spiders' threads, which is so ridiculous to the eyes of those who have only viewed the flimsy webs such insects spin in England." Many other substances of a soft texture have also been wrought into a variety of trifling articles, as gloves, stockings, &c., of the fibres of Asbestos earth, or mountain flax, beard of the large *Pinna* shell, &c. &c.

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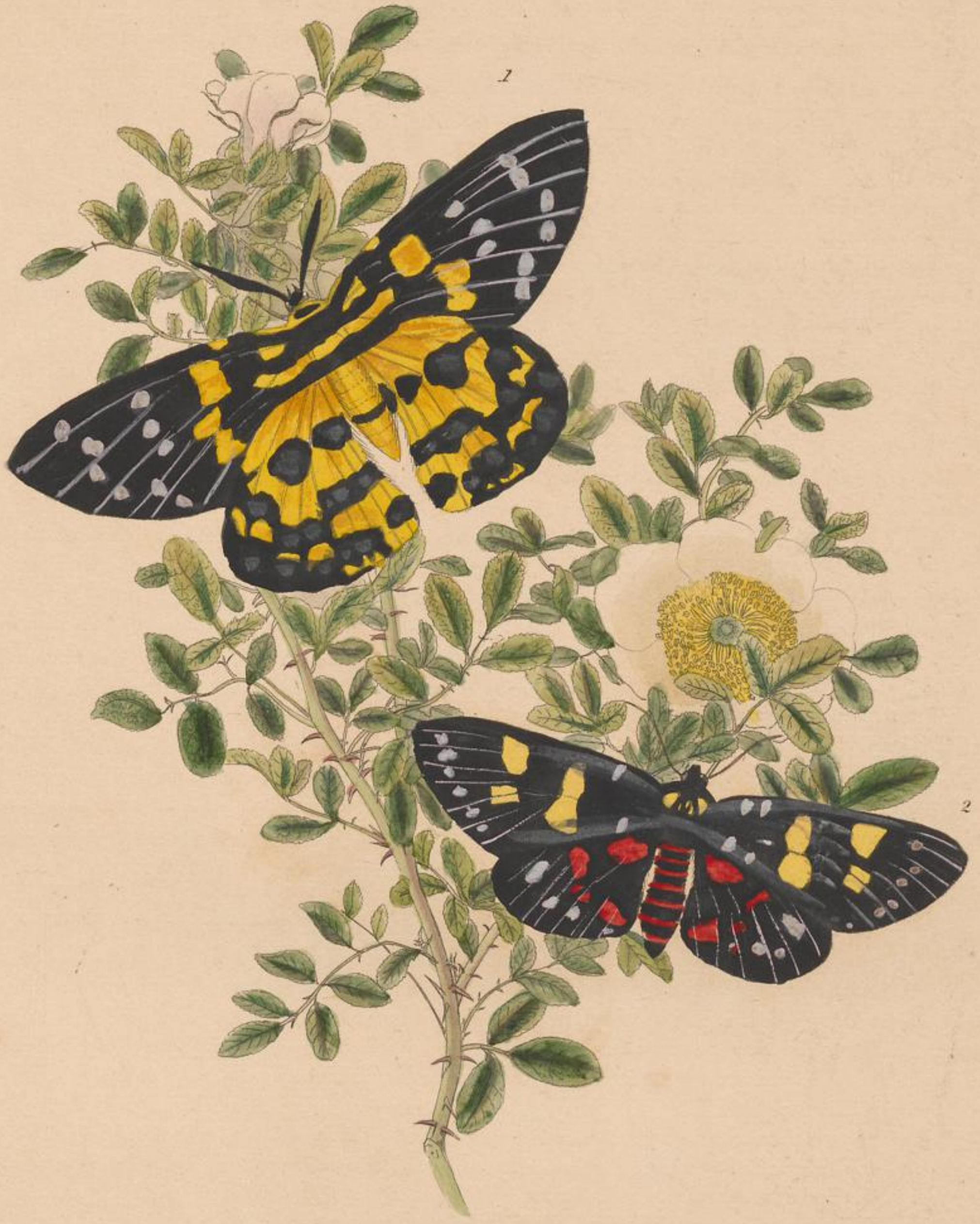
[a] Naturalist and Traveller's Companion, 1774.



1. Heleona milataris. 2. Eusemia lectrix

speaks of the culture of silk worms in China, but only of the common sort. It will gratify curiosity, if not prove advantageous, should future observers ascertain what kind of insects the Chinese appropriate to making silk, and whether P. Atlas is of the number, as has been conjectured. It is indeed to be observed, that in India several distinct species of Saturnia are known to be employed in the production of silk; the most important of which are the Tusseh (S. Paphia, Linn.), the Arrindi (S. Cynthia, Drury), and the Kolisurra silk worm of the Dukhun.*

HELEONA MILITARIS.

Plate 43. fig. 1.

FAMILY.	ARCTIIDÆ?
GENUS.	HELEONA, *Swains. Zool. Illustr. N. Ser.* 116.
CH. SP.	H. alis patulis concoloribus luteis apice maculisque violaceis, anticis extus albo-maculatis. Expans. alar. 3½ unc. H. with the wings extended at rest, the anterior and posterior pairs coloured alike, luteous yellow, with the extremity and spots at the base violet, the anterior with whitish spots at the tips. Expanse of the wings 3½ inches.
SYN.	Phalæna militaris, *Linn. Syst. Nat.* 2. 811. *Fabricius Ent. Syst.* 3. 2. *p.* 416. *Roesel. Ins.* 4. *t.* 6. *f.* 3. *Cramer. Ins. t.* 29. *f. B.*

The natural situation of this and some other allied insects is doubtful; it forms the type of Mr. Swainson's group Heleona, but is considered by that author to belong to the tribe of Sphingides, and family of Zygæidæ (Anthoceridæ, Swainson).

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* See the Memoirs of Dr. Roxburgh in the Linnæan Transactions, and of Lieut.-Col. W. H. Sykes in the Transactions of the Royal Asiatic Society.

EUSEMIA LECTRIX.

Plate 43. fig. 2.

GENUS.	EUSEMIA, *Dalman.* Phalæna, *Linn. &c.*
CH. SP.	E. alis incumbentibus nigris, maculis cæruleis flavis albisque, posticis rubro alboque maculatis. Expans. alar. 3 unc. E. with the wings incumbent, black, anterior with blue, yellow, and white spots, posterior with red and white spots. Expanse of the wings 3 inches.
SYN.	Phalæna (Noctua) lectrix, *Linn. Syst. Nat.* 2. *p.* 834. *Fabr. Ent. Syst.* 3. 1. *p.* 475. Eusemia lectrix, *Dalm. Monogr. Castn.*

This is so scarce an insect, that Mr. Drury informed Donovan he had only been able to procure a single specimen in the course of thirty years collecting insects.

EREBUS MACROPS.

Plate 44. fig. 1.

EAMILY.	NOCTUIDÆ.
GENUS.	EREBUS, *Latreille.* Thysania, *Dalman.*
CH. SP.	E. alis dentatis, fuscis, nigro-undulatis; anticis ocello magno luteo, annulo nigro cincto. Expans alar. 5¼ unc. E. with the wings dentated, brown with black waves, the anterior having a large luteous ocellus, surrounded by a black ring. Expanse of the wings 5¼ inch.
SYN.	Phalæna (Attacus) Macrops, *Linn. Syst. Nat.* 4. *p.* 225. Noctua Bubo, *Fabr. Mant. Ins.* 2. 209. *Ent. Syst.* III. 1. *p.* 9. *Donovan,* 1*st Edit.* (Phalæna B.) *Sulzer. Ins. t.* 22. *f.* 2. *Cramer. Pap. t.* 171. *f.* B.

This is the largest of the Chinese *Noctuæ;* some very similar species, but without the orange eye, and of a smaller size, are peculiar to China.

LEPIDOPTERA.

EUSEMIA LECTRIX.

Plate 43, fig. 3.

Genus. Eusemia, Dalman. Phalaena, Linnaeus.

Sp. ch. [illegible]

[illegible]

Syn. [illegible]

Eusemia lectrix, [illegible]

This is so scarce an insect, that Mr. Drury informed [illegible] he had only been able to procure a single specimen in the course of thirty years collecting insects.

[illegible] MACROPS.

Plate 11, fig. 1.

Family. [illegible]

Genus. [illegible]

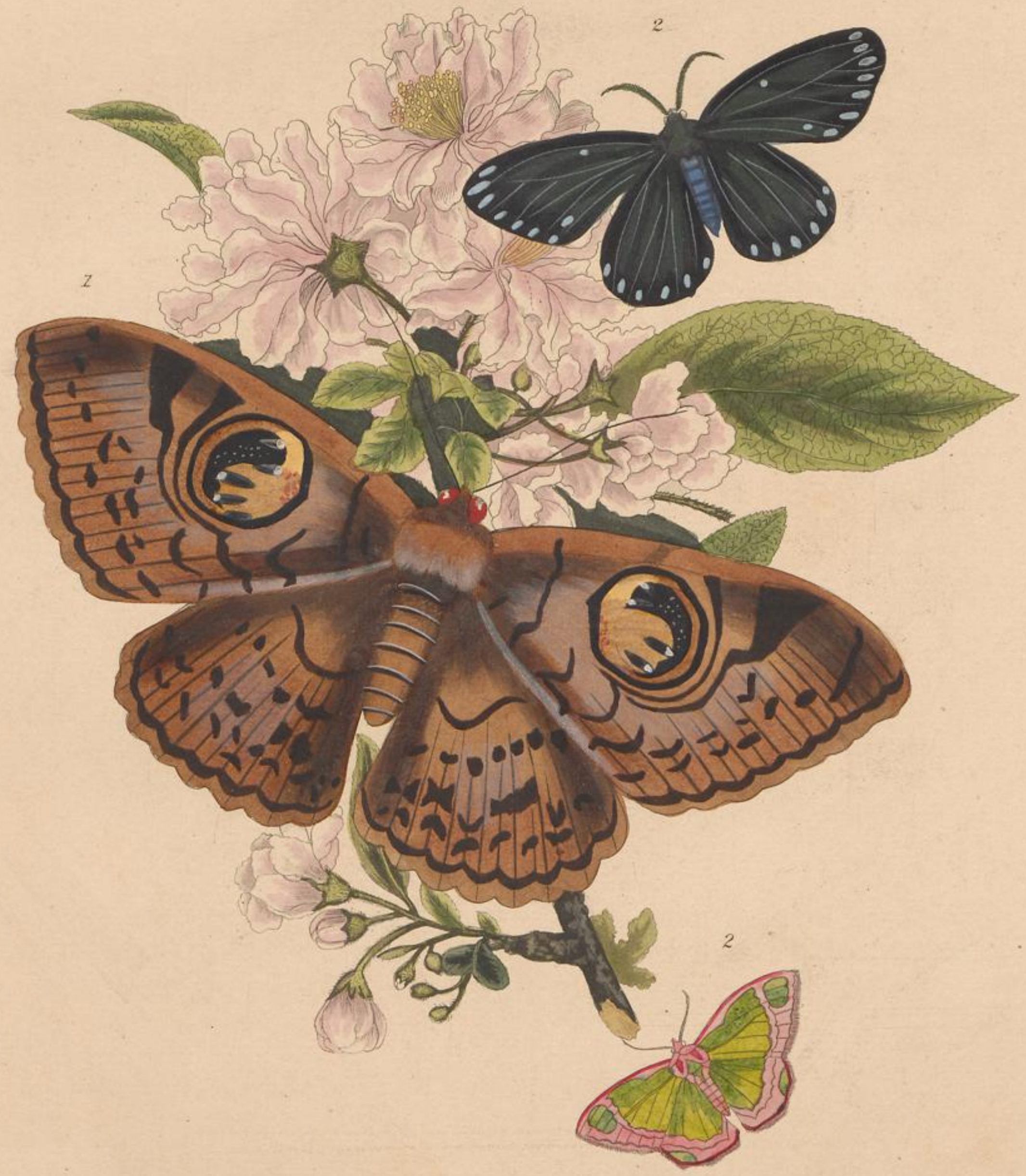
Sp. ch. [illegible]

[illegible]

Syn. [illegible]

[illegible]

This is the largest of the Chinese [illegible]; some very similar species, but without the [illegible] eye, and of a smaller size, are peculiar to China.



1. Erebus Macrops. 2. Hipparchus zonarius
3. Callimorpha? Panthorea.

HIPPARCHUS ZONARIUS.

Plate 44. fig. 2.

Family. Geometridæ, *Leach.*

Genus. Hipparchus, *Leach.*

Ch. Sp. H. alis viridibus, margine posteriore late rufescente, singulis maculâ marginali viridi. Expans. alar. $1\frac{1}{2}$ unc.

H. with the wings green, deeply bordered with pale red, with a green spot on the exterior margin of each wing. Expanse of the wings, $1\frac{1}{2}$ inch.

Syn. Phalæna Zonaria, *Donov.* 1*st edit.*

CALLIMORPHA ? PANTHOREA.

Plate 44. fig. 3.

Genus. Callimorpha ?

Ch. Sp. C. alis cæruleo-nigris, fasciâ maculari apicis albâ. Expans. alar. $2\frac{1}{2}$ unc.

C. with blue-black wings, having a row of white spots along the posterior margins. Expanse of the wings $2\frac{1}{2}$ inches.

Syn. Phalæna Panthorea, *Cram. Ins. t.* 322. *f.* C.

Phalæna pagaria, *Fab. Ent. Syst.* III. 2. *p.* 153. *Donov.* 1*st edit.* (Phalæna, Geometra, p.)

The insect here figured, and those represented in plate 41. fig. 2. and plate 43. fig. 1. are very intimately allied together; nevertheless, Donovan separated them, placing one in each of the three great divisions, Sphinx, Bombyx, and Geometra.