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LEPIDOPTERA INDICA.

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at the origin of the upper discocellular, and continuing parallel with it to the hind margin of the cell halfway between the forkings of the median vein, continued obscurely through the submedian space; the outer line runs in a parabola from the costal vein to the upper median, skirting but not touching the end of the cell, and, crossing the base of the upper median space, disappears above the last ocellus. Ocelli six, all perfect, large, with white pupils surrounded by black and ochreous and set in a large violet-whitish ring; the first ocellus is within the line of the others, and is extremely large, the next three subequal, the next larger, the sixth geminate, with two separate white-pupilled black spots in a yellow field; two wavy submarginal pale lines."

Expanse, ♀ $3\frac{1}{4}$ inches.

HABITAT.—Margherita, Upper Assam.

A single female of this species was obtained by Mr. W. Doherty, near Margherita, during his collecting tour on the Upper Assam frontier, between August and December.

Our illustration of this species on Plate No. 86, fig. 2, is a reproduction of the figure of Mr. Doherty's female, as above quoted.

Genus TANSIMA.

Tansima, Moore, Trans. Ent. Soc. Lond. 1881, p. 305.

Lethe (group 3 part), Marshall and de Nicéville, Butt. of India, etc., i. p. 157 (1883).

IMAGO.—Male. Wings short, broad. *Forewing* with the costa very much arched from the base, apex obtusely rounded, exterior margin very slightly oblique and hardly convex, posterior margin almost as long as the anterior, nearly straight; cell broad, extending a little beyond half length of the wing; first and second subcostal branches starting from near end of the cell; discocellulars outwardly oblique, upper angled near the subcostal and concave below, the lower slightly concave anteriorly, radials from the angles. *Hindwing* broadly oval; anterior margin long and arched from the base, apex obtuse, exterior margin oblique, convex posteriorly, very slightly wavy; cell broadly triangular; lower discocellular terminating immediately beyond the middle median veinlet. *Body* rather short; palpi long, narrow, second joint reaching above the head, clothed in front with rather long porrect hairs, apical joint narrow, clothed with much shorter hair in front; middle and hind legs slender, naked; antennæ slender, with an elongated pointed club; eyes hairy.

Type.—T. Satyrina.

TANSIMA VERMA (Plate 86, figs. 3, 3a, b, ♂ ♀).

Satyrus Verma, Kollar, in Hügel's Reise Kaschmir, iv. 2, p. 447, pl. 16, figs. 1, 2 (1844).

Debis Verma, Westwood, in Doubleday and Hewitson's Gen. D. Lep. p. 360 (1851). Moore, Catal. Lep. Mus. E. I. Compy., i. p. 217 (1857).

Leithe Verma, Butler, Catal. Satyr. Brit. Mus. p. 116 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 158, pl. x. fig. 23, ♂ (1883). Elwes, Trans. Ent. Soc. Lond. 1888, p. 310.
Tansima Verma, Moore, Proc. Zool. Soc. Lond. 1882, p. 235.

IMAGO.—Male. Upperside uniformly dusky-brown, somewhat violescent tinted; marginal lines paler bordered; cilia pale brownish-cinereous. *Forewing* crossed by a broad prominent ochreous-white oblique discal band, which terminates at the lower median close to the outer margin. *Hindwing* with two or three more or less defined subanal black white-pupilled ocellate spots. Underside uniformly paler brown; marginal lines either pale ochreous or violet bordered. *Forewing* with a slender indistinct pale violet-grey sinuous line crossing middle of the cell; an oblique transverse ochreous-white band as on upperside, above which are two prominent subapical black perfect ocelli outwardly encompassed by a pale violet-grey line, which ends more prominently on the costa above them. *Hindwing* crossed by a slender undulated subbasal and an angulated discal violet-grey line, beyond which is a series of six very prominent black ocelli, the upper one and the fifth somewhat the largest, each with a white pupil, ochreous ring, a dark brown ring, and all encompassed by an outer violet-grey ring; sometimes each ocellus has a few white speckles as well as the pupil.

Female. Upper and underside as in the male, except that the oblique white band terminates below the lower median veinlet. *Body* and legs beneath pale brownish-ochreous; sides of palpi ochreous-white; antennæ black above, with ochreous tip.

Expanse, 2 to 2½ inches.

HABITAT.—N.-W. and E. Himalayas; Assam; Khasia Hills; Burma.

DISTRIBUTION.—Major H. B. Hellard, in his MS. Notes, records this species from "Masuri and Kaschmir at the end of August, September and beginning of October." Col. A. M. Lang (Ent. Mo. Mag. 1864, 182) says this insect "frequents a region about 200 miles from Kasauli, in the autumn, and affects trees, pitching on the trunks of Rhododendrons and Oaks." Mr. de Nicéville (Butt of India, i. 158) says, "Col. Lang's specimens were taken in Lower Kunawar at an elevation of 7000 feet, and at Masuri, in the autumn. There is, however, a summer brood, as Mr. de Nicéville has taken it then commonly in Simla at about 5000 feet elevation in forest, settled on the dark rough bark of the Deodar, where, till disturbed, it is completely hidden. It was not found in Kashmir either by Baron Hügel or by Capt. B. Reed. Major C. H. T. Marshall found it extremely common in Chumbi in May, at Kujjiar." Major J. W. Yerbury (Ann. Nat. Hist. 1888, 135) records it from "Thundiani, a Hill Station (8700 feet?) near Abbottabad, in September." Mr. W. Doherty, in his list of Kumaon butterflies (J. A. S. Bengal, 1886, 117), records it from the "Lower Himalayan tract at 2500 to 6000 feet; not very

common." In the Kangra district specimens were obtained by the Rev. J. Hocking (P. Z. S. 1882, 235). Major-Gen. G. Ramsay obtained specimens in Nepal. According to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 315), it is "not uncommon in Sikkim up to 8000 feet, between April and November, but commonest at about 4000 feet in the rains." Mr. G. C. Dudgeon obtained it in Sikkim in March. Mr. de Nicéville took it in Sikkim in October, and Mr. Otto Möller in November at 4000 feet elevation" (Butt. of India, 158). The late Mr. W. S. Atkinson obtained it at Cherra Pungi, in Assam, and "Mr. J. P. Cock took it in November at Shillong," (Butt. of India, 158). Mr. J. Jenner Weir has a specimen taken at Shillong in May. Major Godwin-Austen obtained it in the Khasia Hills. In Burma, Dr. N. Manders (Tr. Ent. Soc. Lond. 1890, 518) records it from "Bernardmyo, a Hill Station in the Shan States, at 7000 feet elevation," remarking that "it seems partial to considerable elevations, as I did not take it either at Fort Stedman, 3200 feet, or at Koni, 4500 feet." Signor Leonardo Fea recently obtained specimens in the Karen Hills, in September. Major C. H. E. Adamson (Catal. of Burmese Butterflies, p. 8) records it from the "Taoo Hills in Tenasserim, in October." Mr. O. Limborg (P. Z. S. 1878, 824) obtained it at "Moolai, 3000 to 6000 feet in Upper Tenasserim. Messrs. Elwes and de Nicéville (J. A. S. Beng. 1887, 417) record it from Tavoy.

CHINESE ALLIED SPECIES OF TANSIMA.—The type of the genus, *T. Satyrina* (Lethe Satyrina Butler, Trans. Ent. Soc. Lond. 1871, p. 402). Moore, Tr. Ent. Soc. 1881, p. 305. *Syns.* Lethe Naias, Leech, Tr. Ent. Soc. 1889, p. 100, pl. 8, fig. 4, ♂. *Mycalesis Styppax*, Oberthür, Etudes Entom. 1890, p. 44, pl. 10, fig. 110, ♂. *Habitat* E. Tibet; N. and W. China.—*T. Butleri* (Lethe Butleri, Leech, Tr. Ent. Soc. 1889, p. 99, pl. 8, fig. 3). *Habitat*, W. China.—*T. turpilius* (*Mycalesis turpilius*, Oberthür, Et. Entom. 1890, p. 13, pl. 43, fig. 101). *Habitat*, Moupin, E. Tibet.—*T. Maackii* (*Lasiommata Maackii*, Bremer, Lep. Ost-Siberiene, p. 22, pl. 3, fig. 3 (1864). *Habitat*, Amurland.

Genus SINCHULA.

Lethe (group 3 part), Marshall and de Nicéville, Butt. of India, i. p. 157 (1883). Elwes, Trans. Ent. Soc. Lond. 1888, p. 310.

IMAGO.—Male. Wings very short, broad. *Forewing* triangular; cell extending to more than half the length; two first subcostals emitted before end of the cell; discocellulars outwardly oblique, excurved, radials from near the upper end; median branches very wide apart. *Hindwing* with the apex rounded, exterior margin convex, scalloped; cell long, extending to more than half the wing; discocellulars very oblique, slightly angular above the middle, radial from the angle; middle median emitted at some distance before lower end of the cell. Thorax hairy; palpi long,

slender, very hairy in front; middle and hind femora hairy beneath; antennæ short and with an elongated well-formed club.

Type.—S. Sidonis.

SINCHULA SIDONIS.

WET-SEASON BROOD (Plate 87, figs. 1, 1a, ♂).

Debis Sidonis, Hewitson, Exotic Butt. iii. p. 77, *Debis* pl. 3, fig. 16 (1863), ♂.

Lethe Sidonis, Butler, Catal. Satyr. Brit. Mus. p. 116 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 159 (1883). Staudinger, Exot. Schmett. p. 221, pl. 78, ♂. Elwes, Tr. Ent. Soc. Lond. 1888, p. 310.

IMAGO.—Male. Upperside dark violescent ochreous-brown, glossy; exterior border of both wings with an indistinct dusky lunular submarginal border to the marginal line; cilia brown alternated with cinereous-white. *Forewing* with a very indistinct dusky transverse discal oblique line, which is almost imperceptibly pale bordered externally at its costal end; an indistinct ochreous small costal spot before the apex. *Hindwing* with two or three, sometimes four, submarginal small black spots. Underside paler. *Forewing* with a short ill-defined darker brown pale-bordered streak across the cell, a more distinct transverse oblique discal slightly-undulated dark brown line, which is externally bordered at its costal end with a narrow lilacine-white streak, beyond which is a similar lilacine-white costal streak and three subapical superposed very small indistinct ocelli, each with a white pupil; marginal line pale bordered. *Hindwing* crossed by three slender wavy interrupted glossy lilacine-blue subbasal lines, and an entire irregular similar discal line, the latter being broadly bordered externally with dark brown, followed by a submarginal series of six ocelli, the upper one and the fifth the largest and very prominent, the sixth duplex, each with a black centre, a white pupil, an ochreous ring, a dark brown ring, and then a glossy lilacine-blue outer ring, the white pupil of the upper second, third, and fourth being blurred and blue-tinged; marginal line bordered inwardly by a prominent glossy lilacine-blue lunular line.

Female. Upperside as in the male, except that the dusky lunular submarginal border is more distinct, and on the forewing the two small ochreous costal spots also more defined. Underside as in the male. *Body* and legs beneath pale brownish-ochreous, sides of palpi white.

Expanse, ♂ $2\frac{1}{8}$, ♀ $2\frac{3}{8}$ inches.

DRY-SEASON BROOD (Plate 87, figs. 1, b, c, ♂ ♀).

IMAGO.—Male and female. Upperside of the same glossy dark olivescient ochreous-brown as in the wet-season brood. Both wings somewhat more scalloped.

Forewing with two similar pale ochreous costal spots. *Hindwing* with larger submarginal blackish spots; those of the female with a pale centre. Underside darker than in the wet-season brood. *Forewing* with the cell streak paler bordered, the transverse oblique discal line somewhat posteriorly angulated, more defined, and with more prominent pale lilacine-white external costal border, the outer pale descending costal spot also distinct, and the four subapical superposed ocellate spots larger and with blurred lilacine-blue centres. *Hindwing* with similar basal glossy lilacine-blue wavy lines, and marginal lunular line, the submarginal ocelli being of more uniform size, especially those of the female, and in both sexes the upper five have entirely blurred lilacine-blue centres, the lower duplex ocellus only being perfect.

Expanse, ♂ $2\frac{2}{8}$, ♀ $2\frac{3}{8}$ inches.

HABITAT.—E. Himalayas, Sikkim; Assam; Khasia Hills; Sylhet.

The *dry-season form* of *S. Sidonis* above described is distinguishable from the same form of *S. Vaivarta*, on the upperside, by its general darker colour, the dusky lunular submarginal border on both wings, and somewhat larger spots on the hindwing. On the underside both sexes are also much darker coloured; the forewing having a lilacine anterior border to the discal line, this border being much less defined in both sexes, the subapical ocelli are also larger and with blurred lilacine centres; the hindwing has all the ocelli, except the lower duplex one, with large blurred lilacine-blue centres.

DISTRIBUTION AND HABITS.—In Sikkim, at from 5000 to 7000 feet elevation, Mr. L. de Nicéville took it most commonly in roads through forests, in October, and the late “Mr. Cock took it at Shillong in July” (Butt. India, 160). Specimens in the late Mr. W. S. Atkinson’s collection were labelled Darjiling and Cherra. According to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 316) this is “the commonest species of *Lethe* in Sikkim in the zone of forest from 4000 to 8000 feet, between April and November, where it is constantly seen flitting along the forest paths, and settling both on the ground and on low vegetation. The female seems much rarer, and probably flies but little. Sikkim specimens show the markings of the hindwing below of a much more distinct and brilliant violet than those from Mandi in the N.-W. Himalayas [wet-season brood of *Vaivarta*], and are rather smaller and less brilliant than those I took in the Khasias.” Specimens of both sexes obtained by Mr. Otto Möller in Bhotan, in August, are in Mr. J. H. Leech’s collection. Specimens from the Khasia Hills are in the collection of Colonel C. Swinhoe.

Of the illustrations of this species on our Plate No. 87, figs. 1, 1a, represent the male of the wet-season brood, and figs. 1, b, c, the male and female of the dry-season brood.

SINCHULA VAIIVARTA.

WET-SEASON BROOD.

IMAGO.—Both sexes differ from the wet-season form of *S. Sidonis* in having the forewing less triangular, the apex being more obtusely rounded, and the exterior margin less oblique; the hindwing also is comparatively more convex externally and less scalloped; cilia dusky, alternated with cinereous-white. Upperside of the same colour as in *S. Sidonis*, except that the dusky lunular submarginal border is absent; the *forewing* not possessing a visible dusky oblique transverse discal line which is apparent in *S. Sidonis*, and the apical costal pale spot only is very indistinctly present. Underside similar to the wet-season form of *S. Sidonis*, except that, on the *forewing*, the bar across the cell is more or less obsolescent, the transverse discal darker brown line is more convex and comparatively less oblique and its costal end is less externally pale bordered; the outer costal spot above the small ocelli is also less defined. *Hindwing* similar to *S. Sidonis*, the glossy lilacine-blue lines being less prominent.

Expanse, ♂ ♀ 2 to 2 $\frac{3}{8}$ inches.

DRY-SEASON BROOD (Plate 87, fig. 2, 2a, b, c, ♂ ♀).

Lethe Vaivarta, Doherty, Journ. Asiatic Soc. Beng. 1886, p. 115, ♂ ♀.

IMAGO.—Shape of wings very much as in *S. Sidonis*, except that on the hindwing the angle at end of upper median branch is obsolescent, and those at the ends of the lower medians are more produced. Male. Upperside glossy olivaceous ochreous-brown; cilia alternated with cinereous-white. *Forewing* with two dull ochreous costal spots, and a faint trace of a pale oblique transverse discal band from the inner spot. *Hindwing* with five distinct black submarginal spots. Underside somewhat paler olivaceous-brown than the upperside. *Forewing* with a pale bar across the cell, a distinct transverse discal line with yellowish anterior-bordering fascia; a pale lilacine-white costal spot at the furcation of last subcostals, below which are four very indistinct brown ocellate-spots with minute lilacine pupils. *Hindwing* with three irregular subbasal, and a discal lilacine line, the latter exteriorly bordered by darker brown; six submarginal ocelli, the last duplex, the second, third, and fourth being less prominent than the others and with a small lilacine pupil; submarginal lilacine lunular line indistinct anteriorly. Female. Upperside somewhat paler than the male. *Forewing* with the inner costal spot and discal pale fascia much more distinct; the subapical spot and four lower pale minute ocelli also visible. *Hindwing* with the submarginal black spots slightly pale ringed. Underside as in the male, except that on the forewing the oblique discal fascia is broader, and the subapical spot and four lower small ocellate spots more distinct; and on the hindwing the ocelli are somewhat larger.

Expanse, ♂ 2 $\frac{3}{8}$, ♀ 2 $\frac{4}{8}$ inches.

HABITAT.—N.-W. Himalayas.

The description of the male and female of the dry-season form here given is taken from Mr. Doherty's typical specimens kindly forwarded for our examination by Mr. L. de Nicéville.

In the original description Mr. Doherty adds (l. c. p. 116) the "prehensores close to those of *Sidonis*. The uncus, however, is more bent down, appearing truncate from above, and flattened laterally, while in *Sidonis* it appears acute from above and is cylindrical. In both species the uncial branches viewed from the side are distant from the uncus, and much shorter, and come to meet it at an angle, while in *Maitrya* the uncus and its branches are nearly equal, nearly parallel, and approximate. The clasp also is simply hooked instead of being set with numerous barbs as in *Sidonis* and *vaivarta*."

Our illustrations of this species on Plate No. 87, figs. 2, 2a, b, c, represent the male and female of the dry-season brood, taken from typical specimens kindly lent for this purpose by Mr. L. de Nicéville.

DISTRIBUTION.—Specimens of the *wet-season form*, taken by Colonel A. M. Lang at Masuri, 7000 feet, in June, 1868, are in our collection. The Rev. J. H. Hocking (P. Z. S. 1882, 235) obtained it in Kangra. Mr. A. Graham Young (Butt. Ind. 160) "took specimens on the Tihir Pass in Kulu, in July." Capt. H. B. Hellard (MS. Notes) records it from "Ketruan, in Valley of Rupin River, in September." Mr. W. Doherty (J. A. S. Beng. 1886, 115) probably refers to the wet-season form of this species under his *L. Sidonis*, as being taken by him at Naini Tal, 6000 to 7000 feet; small specimens, and a large dark variety at Kháti, N.-W. Kumaon, 7000 to 8000 feet." Of the *dry-season form* (*vaivarta*) Mr. W. Doherty (l. c. p. 115) obtained both sexes at "Dhankuri, Kháti, Dwáli, in N.-W. Kumaon; and near Khela in East Kumaon, 7000 to 11,000 feet, in the cold season."

SINCHULA NICETELLA (Plate 88, fig. 2, ♂).

Lethe Nicetella, de Nicéville, Proc. Zool. Soc. Lond. 1887, p. 418, pl. 39, fig. 5, ♂. Elwes, Trans. Ent. Soc. Lond. 1888, p. 310.

IMAGO.—Male. Upperside dark olivescient ochreous-brown, glossy, and when fresh with a brilliant golden-bronzy sheen; the outer borders with a regular dusky band devoid of this gloss; cilia alternated with cinereous-ochreous. *Forewing* with a very indistinct short subapical pale ochreous streak at the bifurcation of fourth and fifth subcostal veinlets. *Hindwing* with a submarginal series of five round black spots, each with slightly pale outer ring, the upper second being the largest. Underside paler. *Forewing* with an obscure dusky bar across middle of the cell, a transverse oblique discal pale olivescient-lilacine fascia, which is most prominent at its costal end and becomes obsolete posteriorly; a subapical similar pale descending fascia which is more lilacine-white at its costal end; marginal line pale bordered, but obsolescent hindward. *Hindwing* with three subbasal and a discal glossy lilacine

wavy line, the latter with an outer bordering darker-brown shade; a submarginal series of six ocelli, of which the upper first and the fifth are somewhat the largest, the first, second, and fifth and the duplex sixth composed of a pure black centre, white pupil, an ochreous ring, a dark brown ring, and then an outer glossy lilacine ring; the third and fourth having a lilacine pupil, a lilacine ring with outer rings as in the others; marginal line ochreous-bordered externally and internally by a glossy lilacine lunular line with triangular anal spot.

Female. Upperside. Both wings paler. *Forewing* with the discal fascia of the underside visible. Underside paler; markings as in the male. *Body* above and beneath, forelegs, and femora beneath, clothed with glossy green and ochreous-red hairs; middle and hind legs and fore tarsi ochreous-brown; palpi above and beneath blackish, lateral streak whitish; collar white; antennæ reddish-ochreous, subterminal band black.

Expanse, ♂ ♀ $1\frac{6}{8}$ to 2 inches.

HABITAT.—Sikkim.

DISTRIBUTION.—Mr. L. de Nicéville (P. Z. S. 1887, 419) records “a large series of male and a single female collected in Sikkim by Mr. Otto Möller.” Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 317) says, “I found this much commoner in Sikkim than *L. Nicetas*, the males being abundant along the Goompahar and the flanks of Tonglo, from 7000 to 8000 feet or upwards, in July and August. They settle on the roads in wet places on shady paths, but the female is very much rarer, and I only procured a single good specimen, which differs little from the male.”

SINCHULA SIDEREA (Plate 88, fig. 3, 3a, ♂).

Lethe Siderea, Marshall, Journ. Asiatic Soc. Bengal, 1880, p. 246. Marshall and de Nicéville, Butt. of India, etc., i. p. 159 (1883). Elwes, Trans. Ent. Soc. Lond. 1888, p. 310, pl. 9, fig. 3, ♂.

IMAGO.—Male. Upperside dark glossy olivescient ochreous-brown; cilia dusky, alternated with cinereous. *Forewing* unmarked. *Hindwing* with a faint dusky marginal line and broad dusky submarginal border. Underside of a uniform duller brown. *Forewing* entirely wanting the discal band and the whitish costal spots, the only markings being three minute submarginal white spots beyond the cell, the middle one being faintly ringed with black; marginal line exteriorly bordered with ochreous and inwardly bordered by a slender glossy lilacine-blue submarginal line, both extending only to the middle median veinlet. *Hindwing* with three prominent irregular subbasal and a discal glossy lilacine-blue line, the former being inwardly bordered and the latter outwardly bordered by dark brown; followed by six prominent ocelli, the upper one and the fifth the largest, the lowest duplex, each with a black centre, white pupil, a reddish-ochreous ring, a brown ring, and then an outer glossy lilacine-blue ring; marginal line outwardly reddish-ochreous and

inwardly bordered by a very slender glossy lilacine-blue line throughout its length. *Body*, forelegs and femora beneath clothed with glossy greenish and reddish hairs; legs ochreous-brown above; palpi clothed with blackish hairs, sides whitish streaked; collar white; antennæ blackish above, ochreous-red beneath, subterminal band black. Female unknown.

Expanse, ♂ 2 to $2\frac{1}{8}$ inches.

HABITAT.—Sikkim.

DISTRIBUTION.—Mr. L. de Nicéville (Butt. Ind. 159) records “two specimens of this species from Sikkim.” According to Mr. J. H. Elwes (Tr. Ent. Soc. 1888, 315) “this species has hitherto only been found on Tendong, in Native Sikkim, by Mr. Otto Möller’s native collectors at about 7000 feet, in the rainy season. The female remains unknown. In 1886 it was taken as late as November.”

Our illustrations of this species on Plate No. 88, figs. 3, 3a, represent the male from a specimen kindly lent for this purpose by Mr. H. J. Elwes.

SINCHULA MAITRYA (Plate 88, figs. 1, 1a, ♂ ♀).

Lethe Maitrya, de Nicéville, Journ. Asiatic. Soc. Bengal, 1880, p. 245, ♂. Marshall and de Nicéville, Butt. of India, etc. i. p. 160, pl. x. fig. 20, ♂ (1883). Elwes, Trans. Ent. Soc. Lond. 1888, p. 310.

IMAGO.—Male. Upperside dark olivescient ochreous-brown, with a golden-bronzy gloss when fresh; cilia alternated with ochreous-white. *Forewing* crossed by a dusky brown discal fascia, which is anteriorly pale-ochreous macularly-bordered, the fascia being almost erect posteriorly and curved at its costal end; before the apex is a small ochreous oblique costal spot, intersected by the subcostals. *Hindwing* with three, or four, small dusky black submarginal spots. Underside with the forewing somewhat paler olivescient-brown; the hindwing being darker brown. *Forewing* with a pale olivescient-ochreous curved bar across middle of the cell, a transverse discal anteriorly-curved almost macular fascia bordering the discal line; beyond is a more whitish costal descending streak and three lower minute obsolescent ocelli; and then a narrow ochreous submarginal fascia bordering the marginal line. *Hindwing* crossed by three interrupted wavy subbasal and an entire discal glossy lilacine-white line, the latter outwardly bordered by a broad darker brown shade; a submarginal series of six uniformly-sized ill-defined blurred olivescient-brown ocelli, the sixth duplex, each with a large blurred lilacine-speckled centre and white pupil, an indistinct brown ring and a narrow glossy lilacine outer ring; a slender submarginal glossy lilacine line ending in a large triangular anal spot.

Female. Upperside somewhat paler; cilia alternated with pale ochreous. *Fore-*
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wing crossed by a pale ochreous excurved discal narrow macular band, the five lower portions being dentate and less defined; a prominent costal spot and two lower less-defined denticulate marks. *Hindwing* with three upper submarginal dusky black spots. Underside brighter coloured; the forewing more olivescenscent and the hindwing more ochreous in tint. *Forewing* with a prominent curved pale olivescenscent-ochreous bar within the cell, transverse discal macular band, paler subapical descending streak and lower white dots. *Hindwing* with the basal area between the transverse lilacine lines speckled with lilacine scales, the outer bordering shade to the discal line being distinct; the ocelli as in male; marginal line ochreous and inwardly bordered by the slender glossy lilacine line and its anal triangular spot. *Body* beneath, and legs pale brownish-ochreous; collar white; sides of palpi ochreous-white; antennæ reddish-ochreous, with black subterminal band.

Expanse, ♂ 2 to $2\frac{1}{8}$, ♀ $2\frac{1}{8}$ to $2\frac{3}{8}$ inches.

HABITAT.—N.-W. and E. Himalayas; Bhotan.

DISTRIBUTION.—In the N.-W. Himalayas, Mr. L. de Nicéville (Butt. Ind. 161) “obtained the male on the Jalouri Pass, at about 8000 feet elevation, in July; and in Colonel A. M. Lang’s collection there is a male from Narkunda on the Hindustan and Tibet Road, taken in July.” Mr. W. Doherty (J. A. S. Beng. 1886, 115) records it from “Dhánkuri and Kháti in Western Kumaon, and Sosa in Eastern Kumaon, at 7000 or 11,000 feet.” In Sikkim, “a male and two females were taken by the late Dr. T. C. Jerdon, these Sikkim specimens being somewhat smaller than those from the N.-W. Himalayas” (Butt. Ind. 161). Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 316) says “this species is very abundant on Tonglo and along the Singalelah Range between Sikkim and Nepal, from 9000 to 12,000 feet, in July and August, where it keeps company with *Zophoessa Jalourida*, as in the north-west. I also found it on the Rishilah, in British Bhotan, at 10,000 feet, and my native collectors brought it in great numbers from Bhotan in 1884. *L. Maitrya* is a forest-haunting insect, and has exactly the same habits as *Z. Jalourida*. The female is very rare, and I have only procured one of the sex.”

SINCHULA NICETAS (Plate 88, figs. 4, 4a, b, c, ♂ ♀).

Debis Nicetas, Hewitson, Exotic Butt. iii. p. 78; *Debis* pl. 3, figs. 17, 18 (1863), ♀.

Lethe Nicetas, Butler, Catal. Satyr. Brit. Mus. p. 116 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 161 (1883). Elwes, Tr. Ent. Soc. Lond. 1888, p. 310.

IMAGO.—Male. Upperside dark olivescenscent-ochreous-brown, glossy; cilia alternated with pale cinereous. *Forewing* crossed by an oblique discal indistinct dusky waved-fascia, which is broadest anteriorly and does not extend beyond the lower median veinlet, and is indistinctly macularly-bordered externally with ochreous; beyond is a small oblique ochreous costal spot before the apex. *Hindwing* with five

submarginal blackish spots, of which the upper second is the largest. Underside pale olivaceous ochreous-brown. *Forewing* crossed by a prominent oblique discal excurved irregular darker brown line, externally bordered by a decreasing pale yellow fascia; beyond is a narrow descending costal pale yellow streak and two small distinct subapical ocelli; marginal line medially-bordered internally by a pale yellow line. *Hindwing* crossed by three subbasal and a discal slender indistinct lilacine zigzag line; their interspaces indistinctly speckled with lilacine scales, the former narrowly bordered inwardly and the latter broadly bordered outwardly by darker ochreous-brown, and the dark brown border of the latter line again bordered by pale ochreous, beyond which is a submarginal series of six prominent nearly equal-sized ocelli, the sixth being duplex, each with a black centre and white pupil, a yellow ring, a dark brown ring, and then an outer lilacine ring; the outer border darker ochreous-brown; the marginal line outwardly bordered with reddish-ochreous, and inwardly by a prominent glossy-lilacine lunular line ending in a triangular anal spot.

Female. Upperside darker. *Forewing* with the apical half dusky-brown; crossed by an excurved oblique and somewhat indistinctly-defined narrow macular ochreous band; an ochreous costal spot intersected by the subcostal veins, below which are two small ochreous spots. *Hindwing* with the four, or five, submarginal black spots larger, more distinct, and pale ringed; marginal line bordered with reddish-ochreous. Underside paler, but brighter coloured than in the male. *Forewing* with the discal curved-band ochreous-yellow, more defined, and macular; three subapical small ocelli present, each with lilacine-white centre. *Hindwing* as in the male, but more prominently marked. *Body* above clothed with glossy greenish and reddish-ochreous hairs, paler beneath; legs brownish-ochreous; sides of palpi and collar whitish; antennæ blackish above, reddish-ochreous beneath, subterminal band black.

Expanse, ♂ $1\frac{7}{8}$ to $2\frac{1}{8}$, ♀ 2 to $2\frac{1}{8}$ inches.

HABITAT.—N.-W. and E. Himalayas.

DISTRIBUTION.—In the N.-W. Himalayas it was obtained by the Rev. J. H. Hocking in Kulu (P. Z. S. 1882, 235), and “Mr. A. Graham Young has also taken it in Kulu, in May, July, and October, but never plentifully, and those taken are much smaller than specimens from the Eastern Himalayas” (Butt. Ind. 161). Mr. L. de Nicéville (Butt. Ind. 161) records it as being “found at from 3000 to 6000 feet in suitable localities in the Himalayas from Kulu to Sikkim, not being common anywhere, and is rarer in the West than in the East.” Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 317) records it as “rare in July on the Goompahar Ridge near Darjiling, in virgin forest, at from 7000 to 8000 feet. Has also been taken by Mr. Knyvett on Sinchul, in June and August.”

SINCHULA VISRAVA (Plate 89, figs. 1, 1a, b, c, ♂ ♀).

Debis Visrava, Moore, Proc. Zool. Soc. Lond. 1865, p. 768, pl. 41, fig. 4, ♂.

Lethe Visrava, Butler, Catal. Satyr. Brit. Mus. p. 116 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 161 (1883). Elwes, Trans. Ent. Soc. Lond. 1888, p. 310.

Debis Deliades, Hewitson, Ent. Monthly Mag. 1872, p. 84, ♀.

Lethe Deliades, Marshall and de Nicéville, Butt. of India, etc. i. p. 162, ♀.

IMAGO.—Male. Upperside dull violescent-brown; cilia white. *Forewing* with a very faint trace of a zigzag transverse discal line, beyond which the outer border is greyish tinged; before the apex is an excurved series of four very small black spots with white pupils; marginal line inwardly bordered by a prominent white line. *Hindwing* with an outer series of six blackish spots, the first, second, fourth and fifth large, the two others small, the sixth duplex, each being bordered inwardly by a pale half-ring, and all outwardly by a broad continuous white border with sinuous outer edge, the slender black marginal line also inwardly bordered by a prominent white line and outwardly by brownish-white. Underside paler violescent-brown. *Forewing* with the posterior border more dusky-brown and defined outwardly by the discal zigzag line; three prominent well-formed small subapical brown ocelli, each with a lilacine-white pupil and outer ring; marginal line with a prominent lilacine-white inner border, its outer border being brownish-ochreous. *Hindwing* crossed by four prominent subbasal and a discal interrupted wavy glossy lilacine-white line; six very prominent ocelli, the upper one and the fifth being the largest, the sixth duplex, each with a jet-black centre and white pupil, an ochreous ring, a dark brown ring, and then an outer glossy lilacine-white ring, the outer portion of the latter ring on the second, third, fourth and fifth being broad and sinuous; a marginal slender black line with prominent glossy lilacine-white inner border and ochreous outer border. *Body* beneath pale brownish-cinereous; legs brown above, cinereous beneath; tarsi blackish with whitish bands; sides of palpi and collar white; antennæ blackish, annulated with white, club reddish, band black.

Female. Upperside white. Cilia white. *Forewing* with the basal half of the costal border, including the cell and a little beyond it, and also a continuous triangular spot at the basal interspace of the two upper median veinlets dark rufous-brown; the apical border broadly and obliquely, with the outer border including a rounded spot near the posterior angle, also rufous-brown; curving before the apex is a small tridentate white spot and two lower minute black ocelli dotted with white, beyond which is a slender pale submarginal line. *Hindwing* with an outer series of seven dark rufous-brown blind ocellated spots, the upper first, second, fourth and fifth large, the others small; a submarginal interrupted lunular brown line; the marginal line with ochreous-yellow outer border. Underside white; with similar brown markings as on upperside, except that these are much less distinctly defined;

the spots on the hindwing being replaced by perfect ocelli, each of which have a black centre, a white pupil, and a broad ochreous outer ring; and the submarginal lunular line and marginal bordering line is ochreous. Body pale-brown above, white beneath; legs pale ochreous-white beneath; palpi clothed with brown hairs, side streak white; collar white; antennæ reddish-ochreous, annulated with white, with blackish subterminal band.

Expanse, ♂ 2 to $2\frac{2}{8}$, ♀ $2\frac{2}{8}$ inches.

HABITAT.—Sikkim; Bhotan.

DISTRIBUTION.—According to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 318), "It is extremely rare in Sikkim, where Mr. Otto Möller procured a single female in June. In Bhotan, however, it is commoner, as Mr. Knyvett's collectors procured several males in June on the hills, two or three marches north of Buxa."

Of our illustrations of this species on Plate No. 89, figs. 1, 1a, represent the male, and figs. 2, 2a, the female, the latter taken from the specimen captured by Mr. Möller, and now in the collection of Mr. J. H. Leech.

INDO-MALAYAN AND CHINESE ALLIED SPECIES OF SINCHULA.—*S. Dataensis* (Debis Dataensis, Semper, Reise Archipel. Philip. Lep. p. 57, pl. xi. fig. 4, ♂, 1886). *Habitat*, Luzon, Philippines.—*S. Moupinensis* (Debis Moupinensis Poujade, Bull. Soc. Ent. France, 1884, p. cxl.). *Habitat*, E. Tibet.—*S. Violaceopicta* (Debis violaceopicta, Poujade, id. 1884, p. clviii.). *Habitat*, E. Tibet.—*S. Titania* (Debis titania, Leech, Entomologist, 1891, p. 67). *Habitat*, W. China.—*S. Calisto* (Debis Calisto, Leech, Entomologist, 1891, p. 23). *Habitat*, W. China.

Genus KERRATA.

Wings short, broad. *Forewing* triangular; costa almost straight, apex obtuse, exterior margin almost erect, even, posterior angle rounded, posterior margin straight; cell broad, extending more than half the length; second subcostal emitted immediately before end of the cell; discocellulars excurved, waved, radials from near upper end. Male, on upperside of the forewing with an inwardly oblique transverse discal dentiform glandular patch, disposed from the base of upper median to the submedian, above which it is interrupted, the patch exclusively clothed with very peculiar shaped jet-black scales, which are entirely different in shape from any present in this group of Satyrids, these black scales being moderately short, with the base attenuating to a point, a broad expanding tip having a lateral excurved point on each side, and in some of them also a central point. *Hindwing* with the exterior margin slightly scalloped and obtusely angular at end of the middle median; cell extending to more than half the length; middle median emitted before the end.

Middle and hind femora very hairy beneath. Antennæ short, with a lengthened well-formed thickened club.

Type.—*K. tristigmata*.

KERRATA TRISTIGMATA (Plate 89, figs. 2, 2a, b, c, ♂ ♀).

Lethe tristigmata, Elwes, Proc. Zool. Soc. Lond. 1887, p. 444; *id.* Trans. Ent. Soc. Lond. 1888, p. 318, pl. 8, fig. 1, ♂. De Nicéville, Journ. Bombay Nat. Hist. Soc. 1889, p. 163, pl. A. fig. 4, ♀.

IMAGO.—Male. Upperside olive-brown; glossy; cilia dusky cinereous. *Forewing* with two dusky-brown bars across middle of the cell; a transverse discal sinuous dusky-brown narrow band, which is dilated towards the costa and is faintly pale-bordered on its outer edge; a series of four minute pale olivescient-ochreous superposed subapical spots, and a submarginal darker brown shade. From the base of the upper median to the submedian vein, extends an inwardly *oblique dentiform glandular patch*, which is entirely clothed with *jet-black scales*; these scales, as seen under the microscope, are moderately short, with the base attenuating to a point, a broad expanding tip having a lateral excurved point on each side, and in some of them also a central point. *Hindwing* with a narrow discal sinuous dusky line, a subapical series of five blackish spots, a slender marginal line inwardly bordered by a pale line and outwardly by ochreous-brown; a submarginal dusky lunular shade.

Underside pale olivescient-ochreous. *Forewing* with the discal area somewhat cinerous; cell streaks, sinuous discal band, the former with pale interspace, dark ochreous-brown; subapical spots distinct and pure white; marginal line with a slender pale inner-border. *Hindwing* with two subbasal and a discal sinuous dark ochreous-brown narrow band, the two former outwardly and the latter inwardly bordered by a narrow pale ochreous line; a series of five equal-sized ocelli, the fifth duplex, each with a small black centre and white pupil, an ochreous ring, a brown ring, and then an outer lilacine ring, the last being obsolescent on the two lowest ocelli; marginal line outwardly-bordered by ochreous and inwardly by a slender lilacine-white line ending in a triangular anal spot.

Female. Upperside somewhat paler. *Forewing* with the cell streaks, the sinuous discal anteriorly-dilated narrow band more sharply defined and blackish; the submarginal shade darker, subapical superposed-spots being five in number, larger, and more strongly defined. *Hindwing* with the discal sinuous line somewhat more distinct, the black spots larger, more prominent and each with a pale outer ring; marginal lines and the submarginal shade brighter coloured. Underside of a much brighter ochreous tint than in male. *Forewing* with the cell streaks and the upper discal area to the sinuous line darker and brighter ochreous-brown; the five subapical white spots as above; marginal line with a slender pale inner bordering

line. *Hindwing* with the two subbasal and the discal band darker and brighter ochreous-brown, their pale border less distinct; ocelli and lilacine-white inner marginal line and the ochreous outer line brighter and more prominent than in male. *Body* above clothed with glossy green and ochreous hairs; legs ochreous; palpi clothed with blackish hairs and its sides streaked with white; collar white; antennæ black above, ringed with white, reddish-ochreous beneath and at the tip.

Expanse, ♂ $2\frac{2}{8}$, ♀ $2\frac{4}{8}$ inches.

HABITAT.—Sikkim.

DISTRIBUTION.—Mr. H. J. Elwes remarks (Tr. Ent. Soc. 1888, 318), “Mr. Möller and myself both procured this species in Sikkim in 1886. I found the males only in July, on the Singalelah Range from about 9000 to 10,000 feet elevation, in open spots in the dense bamboo thicket. Many of them were then worn, and Möller’s native collectors found it fresh in June. The insect is not so gregarious in its habits as some of the other *Lethes* found with it. We made numerous attempts to find the female at different seasons in the same spots where the males were taken, but did not discover it.” According to Mr. L. de Nicéville (Journ. Bomb. N. H. S. 1889, 163) “a single female in Mr. Otto Möller’s collection was obtained at Kala Pookri, 10,000 feet, in Native Sikkim on 19th July, 1888.”

Our illustrations of this species on Plate No. 89, figs. 2, 2a, b, c, represent the male and female from specimens kindly lent for this purpose by Mr. H. J. Elwes and also by Mr. L. de Nicéville.

CHINESE ALLIED SPECIES OF KERRATA.—*K. nigrifascia* (*Lethe nigrifascia*, Leech, Entomologist, 1890, p. 28). *Habitat*, W. China.—*K. ocellata* (*Debis ocellata* Poujade, Bull. Soc. Ent. Fr. 1885, p. x.); *Syn.* *Lethe simulans*, Leech, l. c. 1891, p. 23. *Habitat*, E. Tibet; W. China.

Genus PUTLIA.

Charma,* Doherty, Journ. Asiatic Soc. Bengal, 1886, p. 117.

IMAGO.—*Forewing* short, triangular; costa very slightly arched, apex obtusely rounded, outer margin straight, even, posterior angle rounded; costal and median vein slightly swollen at the base; cell less than half length of the wing, broad at the end; first and second subcostal branches emitted before end of the cell; discocellulars outwardly oblique, long, slightly incurved; radials from near upper end, upper radial close to subcostal; upper median curving upward from the base. *Hindwing* rather elongated and narrow posteriorly; anterior margin convex, exterior margin scalloped and with a prolonged angle at end of upper and lower median veinlets; cell broad; first subcostal emitted at fully one-third before end of the cell; disco-

* Preoccupied through *Charmus*, for a genus of Arachnidæ, in 1879.

cellular long, outwardly oblique, radial from above its middle; two upper medians emitted from extreme end of the cell, lower median at one-fifth before the end; submedian straight; inner vein recurved; a *glandular patch** situated between the costal and subcostal vein, and extending into the cell and just within the fork of the subcostal veinlets, clothed with rather short narrow tapering *black scales*, which have either an obtuse pointed tip, or bidentate or tridentate tips. Thorax clothed with long silky hairs; palpi clothed with long fine hairs in front, apical joint short; legs rather stout, femora hairy beneath; antennæ slender and with a well-formed flattened club; eyes hairy. According to Mr. Doherty, "the prehensores are of extraordinary structure; the uncus (which is provided with rather short and slender branches) being cleft into two strong lobes lying in the same vertical longitudinal plane, and resembling the open claw of a lobster, the lower point being slightly the longer; a structure unknown among all other tetrapod butterflies."

Type.—P. Baladeva.

PUTLIA BALADEVA (Plate 90, fig. 1, 1a, ♂ ♀).

Zophoessa Baladeva, Moore, Proc. Zool. Soc. 1865, p. 769, pl. 41, fig. 5, ♂. Butler, Catal. Satyr.

Brit. Mus. p. 109 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 167 (1883).

Staudinger, Exot. Schmett. p. 221, pl. 78 (1887).

Charma Baladeva, Doherty, Journ. Asiatic Soc. Beng. 1886, p. 117.

Male and Female. Upperside olivescient ochreous-brown. Cilia edged with ochreous-white. *Forewing* crossed by an outwardly-oblique pale brownish discal fascia, terminating a little beyond the lower median veinlet, followed by a linear row of five small slightly pale-ringed blackish spots, all being encompassed by a lateral pale bordering slender fascia, beyond which is a narrow submarginal pale similar lunular fascia, and then a slender marginal line. *Hindwing* with a *glandular patch* situated between the costal and subcostal vein, clothed with rather short, narrow, tapering *black scales*, with either an obtuse tip, or bidentate or tridentate tips; an outer series of six black spots, the lowest being minute, each with an ochreous outer ring, and the lower fifth also with a minute white pupil; marginal brown line pale-bordered. Underside bright olivescient brownish-ochreous. *Forewing* with three pale-yellow bars across the cell, the middle one sharply defined; crossed by a broad pale-yellow oblique discal fascia, followed by a linear row of six ocelli, each with a very small black centre and white pupil, a broad ochreous ring, then a slender brown ring, and all encompassed by a narrow inward silvery-white band, and a slender outward yellow line; beyond is a pale-yellow lunular fascia, and then a slender marginal line. *Hindwing* crossed by a short outwardly-oblique subbasal pale-yellow narrow straight band, a broader straight medial discal band which is silvery-white

* This glandular patch is not present in *P. Ramadeva*, nor in *P. Andersoni*.

from the costa to lower end of the cell, and from thence to end yellow; beyond is a slender undulated pale-yellow discal band, an outer series of six prominent ocelli, the upper one being the largest and inwardly situated, each with a small black centre with white pupil, a bright ochreous broad ring, and a slender black ring, all being inwardly bordered by a silvery-white line and outwardly by a yellow line; marginal black line bordered by pale-yellow; the lower median and submedian vein also lined with yellow. *Body* and legs beneath, collar, and sides of palpi pale-ochreous; antennæ brown above, with blackish subterminal band and reddish tip.

Expanse, $2\frac{1}{8}$ to $2\frac{4}{8}$ inches.

HABITAT.—N.-W. and E. Himalayas.

DISTRIBUTION.—In Sikkim, Mr. H. J. Elwes “found this species rare on the road up to Tonglo, in July; a specimen was also taken on the Goompahar in June, and a few others on Tonglo and Tendong in August. It occurs at from 7000 to 9000 feet, and has the same habits as the *Zophoessas*. My collectors also brought it from the interior in 1881 and 1883. The female, which is rare, only differs from the male in being larger and paler” (Trans. Ent. Soc. 1888, 320). Mr. L. de Nicéville (Proc. As. Soc. Beng. 1887, 147) also records “its capture in Sikkim in September.” Mr. W. Doherty (Journ. As. Soc. Bengal, 1886, 117) records the capture of specimens, which he refers to this species, in the Pindari Valley, at 7000 to 8000 feet elevation in N.-W. Kumaon, “these specimens being darker than those from Sikkim, and the silver band narrower.” A specimen, taken in Kumaon, at 9000 feet, in June, is also in the British Museum collection.

PUTLIA RAMADEVA (Plate 90, figs. 3, 3a, ♂ ♀).

Zophoessa Ramadeva, de Nicéville, Proc. Asiatic Soc. Bengal, 1887, p. 147; *id.* Journ. Asiatic Soc. Beng. 1888, p. 274, pl. 13, fig. 3, ♂. Elwes, Trans. Ent. Soc. Lond. 1888, p. 320, pl. ix. fig. 2.

IMAGO.—Upperside olivescient ochreous-brown. Differs from *Baladeva* in the *forewing* being crossed by a broader oblique discal pale-brown band, an outer row of larger blackish spots encompassed by a broader pale lateral band, and followed only by a slender marginal line. *Hindwing* with similarly-disposed larger but less pale ringed spots. Underside much darker olive-brown. *Forewing* with only the middle pale olivescient-yellow bar across the cell, a discal band of the same width, followed by the silvery-white inner-bordered row of six darker and more prominent ocelli, and outer yellow lines. *Hindwing* crossed by a medial band which is silvery-white anteriorly and olive-yellow posteriorly, followed by the series of prominent ocelli, each with larger black centre, a white pupil, narrow ochreous ring, and then a dark-brown ring, all inwardly-bordered by dull silvery-white and outwardly the upper four ocelli by olivescient-yellow; the extreme outer margin of the wing being also yellow and traversed by the two dark brown marginal lines. *Body* and legs beneath, collar, and

sides of palpi pale olivescence-yellow; antennæ brown above, with dark subterminal band and reddish tip.

Expanse, $2\frac{2}{8}$ inches.

HABITAT.—Sikkim.

DISTRIBUTION.—Mr. L. de Nicéville (Proc. As. Soc. Beng. 1887, 147) records “a single male taken by Mr. O. Möller’s native collectors in August, 1886, in the interior of Sikkim.” Two specimens from Mr. Möller’s collection, taken in July and August, are also in Mr. J. H. Leech’s possession. Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 320) records “a single male, taken, either by himself or one of his collectors, on Tonglo, in July, 1886.”

PUTLIA ANDERSONI (Plate 90, figs. 2, 2a, ♂).

Zophoessa Andersoni, Atkinson, Proc. Zool. Soc. 1871, p. 215, pl. 12, fig. 3; *id.* Anderson’s Zool. Researches Yunan Exp., i. p. 922, pl. 81, fig. 3 (1878) ♂. Marshall and de Nicéville, Butt. of India, etc., 1, p. 168 (1883).

Debis Andersoni, Oberthür, Etudes Ent. 1890, p. 41, pl. x. fig. 109, ♂.

IMAGO.—Male. Upperside olivaceous ochreous-brown; cilia ochreous-white. *Forewing* crossed by an outwardly-oblique pale brownish-ochreous narrow discal fascia terminating at the lower median veinlet, and a submarginal series of five pale brownish-ochreous spots, each with white pupil, followed by a slender pale marginal line. *Hindwing* with a series of four pale-bordered black spots, and a pale-bordered slender marginal line. Underside bright ochreous. *Forewing* with three transverse silvery-white bands, the outer one with an exterior contiguous slender pale-ochreous lunular line, followed by a slender pale-ochreous marginal line. *Hindwing* with a transverse median and an outer discal silvery-white band; bordering the latter is a series of six ocelli, each composed of a small black spot with white pupil, a broad bright ochreous ring, a slender blackish ring, and outwardly bordered by a narrow pale ochreous-yellow interrupted line, the upper and lower ocellus being entirely bordered by the silvery-white; marginal line pale ochreous-yellow; abdominal margin also edged with white. *Body* beneath pale brownish-ochreous; legs ochreous, femora white beneath; collar and sides of palpi white; antennæ dusky-brown above annulated with white, subterminal band black, tip ochreous-red.

Expanse, $2\frac{2}{8}$ to $2\frac{4}{8}$ inches.

HABITAT.—Eastern Burma; Yunan.

DISTRIBUTION.—There were two specimens of the male of this rare butterfly in the late Mr. W. S. Atkinson’s collection, labelled Bhamo, Yunan, taken by Dr. J. Anderson. These are now in the Hewitsonian collection at the British Museum. “There are also two males in the Indian Museum, Calcutta, one being from Pensee, where

it was taken by Dr. Anderson during the Yunan Expedition in March, 1868, the other being without locality" (Butt. Ind. i. 168).

CHINESE ALLIED SPECIES OF PUTLIA.—*P. albolineata* (Debis albolineata, Poujade, Bull. Ent. Soc. France, 1885, p. 143, Oberthür, Etudes Ent. p. 41, pl. x. fig. 111). *Habitat*, E. Tibet.—*P. luteofasciata* (Debis luteofasciata, Poujade, *l. c.* p. 144. Oberthür, *l. c.* p. 41, pl. x. fig. 108). *Habitat*, E. Tibet.—*P. argentata* (*Zophoessa argentata*, Leech, Entomologist, 1891, p. 1). *Habitat*, W. China.

Genus ZOPHOESSA.

Zophoessa, Doubleday and Hewitson, Gen. Diurnal Lep. pl. 61, fig. 1 (1849); Westwood, *id.* p. 362 (1851). Butler, Ent. Mo. Mag. 1868, p. 195; Catal. Satyr. Brit. Mus. p. 108 (1868). Scudder, Amer. Soc. Arts and Sci. Boston (1875), p. 292. Marshall and de Nicéville, Butt. of India, etc. i. p. 162 (1883).

IMAGO.—Male. *Forewing* short, broad, triangular; costa very slightly arched, apex obtuse, exterior margin very slightly scalloped. Upperside not hairy; with a very broad transverse discal *glandular fascia*, clothed with short more or less broad basally-tapering scales, having either two, three, or four-toothed tips, and with numerous interspersed very narrow shorter androconia having three very short fine straight hair-like tips and truncate base; costal vein slightly swollen; cell long, extending beyond half the wing, moderately broad; two first subcostal branches emitted before end of the cell; discocellulars excurved, outwardly oblique, radials from near upper end; median veinlets widely separated. *Hindwing* short, broad, exterior margin scalloped and with a prolonged angle at end of upper median veinlet and a shorter more obtuse angle at end of the lower median; cell broad; first subcostal branch emitted at nearly one-fourth before end of cell; discocellulars long, outwardly oblique, angular in the middle, radial from the angle; two upper medians from extreme end of the cell. *Thorax* finely hairy; palpi long, slender, elevated, hairy in front, apical joint slender; femora finely hairy beneath; antennæ long, slender, with an elongated cylindrical club; eyes hairy.

Type.—Z. Sura.

ZOPHOESSA SURA (Plate 91, figs. 1, 1a, ♂ ♀.)

Zophoessa Sura, Doubleday and Hewitson, Gen. D. Lep. pl. 61, fig. 1 (1849); Westwood, *id.* p. 362 (1851). Butler, Ent. Mo. Mag. 1868, p. 195; Catal. Satyr. Brit. Mus. p. 108 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 162 (1883).

IMAGO.—Male. Upperside dark olivaceous ochreous-brown, somewhat ænescent and glossy in certain lights; cilia alternately brown and white. *Forewing* with an indistinctly defined transverse discal broad dusky-brown sinuous-edged *glandular fascia*, which is clothed with short more or less broad basally-tapering scales, having either two, three, or four-toothed tips, and with numerous interspersed very narrow

shorter androconia having three very short fine straight hair-like tips and truncate base; beyond is a narrow submarginal dusky-brown lunular ordinary fascia, and before the apex are two small indistinct pale brownish-ochreous costal spots. *Hindwing* with an ill-defined transverse discal angular dusky-brown fascia, and a submarginal lunular fascia, their intermediate area being paler ochreous-brown, and bearing five round blackish slightly pale-ringed spots; marginal line slender and bordered by pale brownish-ochreous. Underside pale olivaceous ochreous-brown, glossy. *Forewing* with two broad darker-brown bands crossing the cell, with a broad intervening and a narrow outer glossy purplish-white band; a posteriorly decreasing transverse discal dark-brown band with outer purplish-white border; beyond which are three, sometimes four, small superposed pale ocelli, and above them a costal whitish intersected spot, followed by a brown submarginal fascia and a slender marginal line. *Hindwing* crossed by three subbasal and a discal interrupted zigzag glossy purplish-white line, the third subbasal line narrowly inwardly-bordered by a dark-brown, and the discal line broadly outwardly-bordered by a dark-brown angular fascia; beyond which is a series of six prominent ocelli, the sixth being duplex, each with a black centre and white pupil, and the upper four also blue-speckled, an ochreous ring, a broader brown ring, and then an outer glossy purplish-white ring; outer marginal border dark-brown, traversed by a prominent slender glossy purplish-white marginal line, which is dilated before the anal angle.

Female. Upperside paler. *Forewing* darkest basally; with a broad transverse dusky-black discal fascia, having a sharply-defined, wavy, sinuous outer edge; the outer third of the wing being pale ochreous-brown, and traversed by a darker submarginal narrow fascia; subapical costal spots as in male. *Hindwing* as in male, with the spots placed on a pale ochreous-brown ground. Underside much more ochreous in tint, paler than in male; markings the same, except that on the forewing the cell bands are outwardly-bordered with pale-ochreous, the transverse fascia broader and paler, and the basal markings on the hindwing are pale-ochreous bordered, instead of by purplish-white. *Thorax* clothed with glossy iridescent and reddish hairs; abdomen beneath, and legs pale brownish-ochreous, femora and tibiae beneath whitish; collar and sides of palpi white; antennae brown above, annulated with white, with a long slender black subterminal club, tip reddish.

Expanse, ♂ $2\frac{6}{8}$ to $3\frac{2}{8}$, ♀ $3\frac{2}{8}$ to $3\frac{6}{8}$ inches.

HABITAT.—Sikkim; Khasia Hills; Upper Burma.

DISTRIBUTION AND HABITS.—“Not uncommon in Sikkim in the forest from about 8000 feet, from the end of June on until November. The males are seen singly, or in company with other Satyrinae, sitting on the path or low herbage, and if disturbed generally fly up and settle on the trunk of a tree, where they are difficult to distinguish among the dark moss. I took males in June and July on Sinchul; females are rarer, and fly but little, though sometimes taken

on the bare top of the hill at Sinchul and Jellapahar. I found it also in the Khasia Hills, near Cherra Punji, at 4000 feet, in the end of September" (Elwes, Trans. Ent. Soc. 1888, 318). Mr. Otto Möller took males near Darjiling, at 6000 feet, in November (Butt. Ind. i. 165). A female, taken also by Mr. Möller in Sikkim, at 7000 feet, at end of October, is in Mr. J. H. Leech's collection. Specimens were in the late Mr. W. S. Atkinson's collection from Darjiling and the Khasia Hills. Mr. Elwes (P. Z. S. 1891, 264) also records it as having been taken by Mr. W. Doherty as "common near Bernardmyo, at 6000 feet, in Upper Burma."

ZOPHOESSA DURA (Plate 91, fig. 2, ♂).

Zophoessa Dura, Marshall, Journ. Asiatic Soc. Beng. 1882, p. 38, pl. 4, fig. 2, ♂. Marshall and de Nicéville, Butt. of India, etc. i. p. 165 (1883).

IMAGO.—Male. Upperside dark velvet-brown, with a faint purplish gloss, and in some lights a golden sheen; the outer margins being abruptly paler, the pale margin widening on the hindwing where it occupies nearly half the wing. Cilia alternated with white. *Forewing* crossed by a very broad discal indistinct dusky *glandular fascia* and a brown submarginal line; a small very indistinct ochreous intersected spot on the costa before the apex. *Hindwing* with an outer series of four small round blackish spots on the pale outer border, followed by a submarginal dusky lunular line, and pale ochreous-bordered marginal lines. Underside paler. *Forewing* with an excurved glossy silvery-grey brown-bordered band within the cell, a wavy excurved brown transverse discal fascia, with glossy silvery-grey border at its outer costal end; followed by three small silvery-grey subapical ocelli and an upper costal prominent intersected spot, beyond which is a narrow brown lunular submarginal line and a very slender marginal line. *Hindwing* crossed by three subbasal and a discal glossy silvery-grey zigzag line, with the inner and outer brown border, as in *Z. Sura*, followed by a series of similar ocelli, but which have paler-ochreous rings and the outer encompassing silvery-grey ring broader externally; marginal lines narrower. *Abdomen* and legs beneath pale ochreous-grey; collar and sides of palpi white; antennæ blackish above, annulated with white, and with a long slender black club, tip reddish-ochreous.

Expanse, $2\frac{6}{8}$ inches.

HABITAT.—Upper Tenasserim.

DISTRIBUTION.—The type specimen described and figured by Col. Marshall was taken by Capt. C. T. Bingham "in the lower Thoungyeen forests, Upper Tenasserim, in May" (Butt. Ind. i. 165).

The illustration of this species on Plate 91, fig. 2, is a reproduction of Col. Marshall's figure above referred to.

ZOPHOESSA GAMMIEI (Plate 91, fig. 3, ♂).

Zophoessa Dura, Elwes, Trans. Ent. Soc. 1888, p. 319, pl. ix. fig. 1, ♂.

IMAGO.—Male. Upperside paler than in typical *Z. Dura*. *Forewing* with the outer border distinctly paler, and the costal spot distinct. *Hindwing* also with the outer border distinctly paler, being of a glossy cinerous tint, and divided from the dark basal area by a distinct recurved edge; the lunular submarginal line, and marginal lines prominent; the series of small blackish spots are five in number.

Underside also paler than in *Z. Dura*; similarly marked, except that, on the forewing, the three subapical spots are ocellated, each having a blackish centre, a white pupil, and a silvery-grey outer-ring; on the hindwing, the dark outer border to the discal silvery-grey zigzag line is much broader; the five upper ocelli also being almost entirely blue-speckled in their centre.

Expanse, $2\frac{7}{8}$ inches.

HABITAT.—Bhotan.

DISTRIBUTION.—According to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 319) “two males were procured by Mr. Gammie’s Native collectors somewhere East of the Tista River, in Bhotan, in 1884 and 1885.” Mr. O. Möller also obtained males in Bhotan in September, 1888.

Our illustration of this species on Plate 91, fig. 3, represents a male, taken by Mr. O. Möller in Bhotan, kindly lent for this purpose by Mr. J. H. Leech.

ZOPHOESSA GOALPARA (Plate 91, figs. 4, 4a, ♂).

Zophoessa Goalpara, Moore, Proc. Zool. Soc. 1865, p. 768, Butler, Catal. Satyr. Brit. Mus. p. 109 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 165 (1883). Staudinger, Exot. Schmett, p. 221, pl. 78 (1887).

IMAGO.—Male. Upperside dark olivaceous ochreous-brown, with an ænescent gloss; cilia slightly alternated with white. *Forewing* crossed by a posteriorly-broad discal dusky-brown *glandular fascia*, with a black sinuous exterior edge, and clothed with exactly the same kind and shaped scales as in *Z. Sura*, the fascia being exteriorly bordered at its costal end by pale brownish-ochreous; two short dusky-brown bars across the cell, and a dusky-brown submarginal lunular fascia, and a pale brownish-ochreous spot on the costa before the apex. *Hindwing* crossed by a dusky-black narrow angulated discal band, a series of five round black spots, a submarginal lunular fascia, and a slender marginal line, the latter being dark ochreous-bordered. Underside very pale olivaceous brownish-ochreous. *Forewing* crossed by two dark ochreous-brown medial bands within the cell, and another bordering the discocellulars, a prominent discal fascia with sharply-defined sinuous exterior edge and pale-yellow bordering at its costal end, followed by one (generally two) small subapical pale ocelli, above which is an intersected whitish costal spot, and beyond a submarginal

brown fascia and slender marginal line. *Hindwing* crossed by a dark ochreous-brown basal angulated band, a subbasal sinuous line, and a sharply-defined sinuous discal fascia, the former outwardly and the latter inwardly pale-bordered; a series of six prominent ocelli, the sixth being duplex, each with a black centre, white pupil and also bluish speckles, a narrow ochreous ring, a broad brownish ring, and then a narrow pinkish-white outer ring; marginal line inwardly-bordered by a pinkish-white line, which is broadly lunular from the median angle, and outwardly by reddish-ochreous; the area bordering the ocelli pale ochreous-brown. *Body* beneath and legs brownish-ochreous; femora beneath whitish; palpi darker-brown, sides white; collar white; antennæ dark-brown above, with a short broad stout black club.

Expanse, $2\frac{5}{8}$ to 3 inches.

HABITAT.—N.-W. and E. Himalayas; Assam.

DISTRIBUTION.—“ Though apparently very local, this species has a wide range. The Indian Museum, Calcutta, possesses specimens from Sibsager in Upper Assam; in the neighbourhood of Darjiling, in Sikkim, it is found but rarely; and in the neighbourhood of Simla, it is not uncommon in some years at Sidhpur and in the Narkunda forests, at about 9000 feet elevation, at the end of July and beginning of August, but there is no record as yet of its occurrence in the vast intermediate area. The specimens from Simla differ from those from Sikkim in having, on the upper-side, the spots on the hindwing smaller, and on the underside in that the yellowish basal area of the hindwing is much more suffused with brown, especially towards the abdominal margin, the pure yellowish tone being confined to the space between the subbasal and discal brown bands above the median vein, and to narrow diffused edgings to all the brown bands. This suffusion with brown is apparent even in Sikkim specimens, but in them it is far less pronounced and less extended ” (Butt. Ind. i. 166). Mr. W. Doherty (Journ. A. S. Beng. 1886, 117) records the capture of specimens in Kumaon, at Dhankuri, and at Khati, from 7000 to 9000 feet elevation.” Mr. H. J. Elwes says (Tr. Ent. Soc. 1888, 319), “ I have not taken this species myself in Sikkim, but Mr. O. Möller took it at 6000 feet in November, and it seems to be commoner than *Z. Sura* in the forest at 6000 to 8000 feet in British Bhotan, where I took it in August near Rikisum. My Shikaris brought it from Tendong and from Bhotan, and it occurs as far North-West as Simla. I have not seen the female.”

ZOPHOESSA ATKINSONIA (Plate 92, figs. 1, 1a, ♂).

Zophoessa Atkinsonia, Hewitson, Entom. Monthly Mag. 1876, p. 151, ♂; Moore, Desc. Lep. Coll. Atkinson, p. 2, pl. 1, figs. 2, 3 (1879); Proc. Zool. Soc. 1882, p. 406. Marshall and de Nicéville, Butt. of India, etc. i. p. 166.

IMAGO.—Male. Upperside olivescens ochreous-brown, darkest exteriorly; cilia

pale-ochreous. *Forewing* crossed by two blackish bars within the cell, with their interspace ochreous; an inner discal interrupted *glandular fascia*, which is clothed with numerous rather short narrow blackish-brown scales, having slightly divergent bidentate tips, and a few larger wide paler ribbed-scales with tridentate tips; beyond which is an outer discal blackish angulated band, outwardly bordered by an ochreous macular band, followed by a subapical superposed row of small ochreous spots, and a submarginal blackish lunular fascia. *Hindwing* crossed by a narrow angulated blackish discal band and a submarginal lunular band, their interspace being ochreous and bearing five rounded black spots, each of which has a slightly paler outer ring, the two upper spots being the largest and the third the smallest. Underside paler olivaceous brownish-ochreous (as in *Z. Goalpara*). *Forewing* crossed by two broad dark olivaceous-brown bars within the cell, with pale olivaceous-ochreous interspaces; followed by a dark discal angulated pale-ochreous outer bordered band, two superposed small white subapical spots, and an upper white intersected costal spot; beyond which is a dark narrow submarginal fascia, and a slender marginal line. *Hindwing* crossed by a subbasal wavy dark-brown band with white border, a narrow bidentate medial streak, and a broad angulated discal band, their inner areas being pale-ochreous; followed by a series of five ocelli (the usual anal ocellus being absent), each with a black centre and blue-speckled pupil, a narrow ochreous ring, and then a narrow brown ring, the upper ocelli being further bordered exteriorly with white; marginal line with a slender nacreous-white inner border, which is triangularly dilated at the anal angle. *Body* beneath, fore legs, middle and hind legs beneath, and sides of palpi pale-ochreous; collar white; antennæ brown above, reddish-ochreous beneath, with a well-formed club having a subterminal black band.

Expanse, $2\frac{1}{8}$ to $2\frac{2}{8}$ inches.

HABITAT.—Sikkim; Bhotan.

DISTRIBUTION.—“Taken at Senchal, in Sikkim, at 8000 feet, in August, by Mr. Paul Mowis” (J. A. S. Beng. 1883, 93). Mr. H. J. Elwes writes (Tr. Ent. Soc. 1888, 319), “I found this species, which has hitherto been very rare in collections, not uncommon on the road to Tonglo, in Sikkim, at 8000 to 9000 feet, in July; and Mr. Möller’s collectors brought numerous specimens from the same locality in August. It also occurs in the interior of Bhotan and Sikkim. It settles on the path and flies into the forest when disturbed. The females are seldom taken, and differ but slightly from the male.”

ZOPHOESSA JALAUROIDA (Plate 92, figs. 2, 2a, ♂).

Zophoessa Jalaurida, de Nicéville, Journ. Asiatic Soc. Bengal, 1880, p. 245. Marshall and de Nicéville, Butt. of India, etc. i. p. 166, pl. x. fig. 19, ♂.

IMAGO.—Male. Upperside dusky olive-brown, glossy; cilia prominently alter-

nated with ochreous-white. *Forewing* crossed by an inner-discal *glandular fascia*, clothed with numerous short tapering black-scales, with tridentate tips, the outer points of which are divergent, and a few interspersed larger broad ribbed-scales, with tridentate or quadridentate tips; two blackish bars within the cell, their interspace being pale olivescient-ochreous; an outer-discal black sinuous band terminating outwardly on the posterior margin, and with a pale olivescient-ochreous macular outer border, followed by four superposed subapical minute pale-ochreous spots, and an upper costal intersected spot, and beyond by a blackish submarginal fascia. *Hindwing* crossed by an indistinct blackish short medial band, which is divided in crossing the cell, an angular discal band, a series of five prominent (and a sixth obsolescent) black round spots with slight pale outer ring, followed by a lunular submarginal fascia and a slender marginal line. Underside paler olive-brown. *Forewing* with the bands and spots as above, but much more distinctly defined, and the pale bordering yellower, the subapical spots more prominent and ocellate—being black with a lilacine-white speckled pupil, and all inwardly bordered by a whitish fascia; submarginal fascia followed by a slender marginal line. *Hindwing* crossed by two silvery-white slender wavy subbasal lines and a discal line, the latter being broad at its costal end and tapering to the upper median veinlet, where it is also brown-speckled and has a contiguous short streak within the cell, and from thence it extends slenderly and sinuous to its end, each line being also bent inward posteriorly and joins a silvery-white line along the abdominal border; a silvery-white streak also extending along the lower median veinlet from its base to the discal line; the subbasal line, the upper inner-portion and the entire outer-edge of the discal line, bordered with darker olive-brown; beyond is a series of six prominent ocelli, the sixth being duplex, each with a black centre and blue-speckled pupil, ochreous ring, a brown ring, and all encompassed by a narrow indistinct lilacine-white outer line, which is dilated exteriorly towards the apex; beyond is a slender black marginal line, inwardly bordered by a silvery-white line—which is dilated at the anal end, and outwardly by ochreous. *Abdomen* and legs beneath pale olivescient-ochreous; legs above brown; palpi black edged and with white lateral streak; collar white.

Female. Differs from the male only in its larger size, broader wings, and somewhat paler markings.

Expanse, $2\frac{1}{8}$ to $2\frac{2}{8}$ inches.

HABITAT.—N.-W. Himalayas.

DISTRIBUTION.—“Appears to be confined to the Western Himalayas. Mr. L. de Nicéville took a large number of this species near the top of the Jalauri Pass on July 29th, 1879; none were on the wing, but all were settled on the red flower of a *Persicaria*, which grows abundantly in the thick forest, between 6000 to 8000 feet, clothing the Kulu side of the Pass. Strangely enough, this flower was entirely dis-

regarded by all other butterflies (except the single *Lethe Maitrya* taken in the same place) flying about, and were taken settled on nothing else. This species is also not uncommon in the Narkunda and Bhagi forests in the neighbourhood of Simla, at about 8000 to 9000 feet elevation, at the end of July and the beginning of August. Col. A. M. Lang took several specimens there in 1865 and in 1882. Mr. W. Doherty found it commonly there at the same season" (Butt. Ind. i. 167). Mr. W. Doherty (J. A. S. Beng. 1886, 117) also records it from "Dhankuri, Khati, and Dwali, in North-West Kumaon, at from 7000 to 11,000 feet elevation."

ZOPHOESSA ELWESI (Plate 92, fig. 3, ♂).

Zophoessa Jalaurida, Elwes, Trans. Ent. Soc. 1888, p. 320, pl. 8, fig. 4, ♂. (*Nec de N.*)

Upperside similar to typical *Z. Jalaurida*. *Forewing* with the transverse discal pale macular band more irregular in its course. Underside differing in its general paler colour. *Forewing* conspicuously pale olivaceous ochreous-brown basally, with prominently defined dark-brown cell bands and sinuous discal band. *Hindwing* paler olivaceous-brown, with distinctly sharper defined silvery-white lines, the upper portion of the discal band broader to its end beyond the cell, the anal ocellus being single, not duplex as in *Jalaurida*.

Expanse, 2 to 2½ inches.

HABITAT.—E. Himalayas; Sikkim; Bhotan.

This is sufficiently different from its N.-W. Himalayan ally to be distinguished as a local form, the differences above noted being constant in a number of examples of both forms under examination.

DISTRIBUTION AND HABITS.—Mr. H. J. Elwes writes (Tr. Ent. Soc. 1888, 320), "I found this very abundant all along the Singalelah Range between Sikkim and Nepal, from 9000 to nearly 12,000 feet, in July and August. It is the most abundant butterfly here, and frequents the open places in the forest, flying quickly in dull and rainy weather, and settling on the paths, where several collect together at any ordure. It settles on bamboo, and also rocks, where many might be found on wet days and in the evening, and bottled like moths. I also found it on the top of the Rishilah, in British Bhotan, at 10,000 feet, and my shikaris brought it from Chumbi or Bhotan in 1884 and 1885. The female is comparatively scarce, and hardly differs from the male."

ZOPHOESSA MÖLLERI (Plate 92, figs. 4, 4a, ♂).

Zophoessa Mölleri, Elwes, Proc. Zool. Soc. 1887, p. 445; *id.* Trans. Ent. Soc. 1888, p. 321, pl. 8, fig. 3.

IMAGO.—Male and Female. Nearest allied to *Z. Elwesi*. Upperside differs on the *forewing* in the absence of the pale cell-bar, in the more acutely sinuous dusky discal

fascia terminating inwardly on the posterior margin, and its much less defined (almost obsolescent) macular outer border, as well as the much less distinct subapical spots. On the *hindwing*, the discal angular fascia is less defined and nearer the series of ocelli. Underside. *Forewing* with similar pale olivaceous ground-colour, a broader pale interspace between the dark-brown cell bars, the discal sinuous band terminating inwardly on the posterior margin. *Hindwing* with two straight subbasal silvery-white bands, distinctly broader, but the inner one the least defined, the discal silvery-white band being much broader and of uniform width from the costa to the median vein, where it incloses the brown discocellular veinlet; ocelli with a less blue-speckled pupil, and the anal ocellus duplex.

Expanse, 2 to 2½ inches.

HABITAT.—E. Himalayas; Sikkin.

DISTRIBUTION.—Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 321) writes, "I found this species, in Sikkin, on the Singalelah Range from 9000 to 10,000 feet, in July, 1886, mixed with the preceding species [Elwesi], but not nearly so abundant. The females, of which I took one or two, are very rare. It has the same habits."

CHINESE ALLIED SPECIES OF ZOPHOESSA.—*Z. libitina*, Leech, Entomologist, 1891, p. 2. *Habitat*, W. China.—*Z. Helle* Leech, *id.* p. 1. *Habitat*, W. China.—*Z. procne*, Leech, *id.* p. 2. *Habitat*, W. China.—*Z. Armandina* (Debis Armandina Oberthür, Etud. Ent. 1881, p. 16, pl. 7, fig. 6). *Habitat*, E. Tibet.—*Z. gracilis* (Pararge gracilis, Oberthür, Etudes Ent. 1886, p. 23, pl. 4, fig. 19). *Habitat*, E. Tibet.

The following is an allied Japanese form. *Genus nov.* HARIMA.—Male. *Forewing* elongate, subtriangular; costa very slightly arched, apex obtusely rounded, exterior margin slightly convex; cell very long, radials near upper end of discocellulars; *no androconial patch*. *Hindwing* slightly elongate, broadly pyriform, exterior margin very convex, very slightly scalloped and angulate in the middle; cell long, discocellular very oblique; two upper median veinlets emitted from end of the cell. Palpi elongate, slender, clothed in front with very short hairs. Antennæ rather stout, with a gradually thickened club. TYPE.—*H. Callipteris* (Neope Callipteris Butler, Ann. Nat. Hist. S. 4, xix. p. 92. Pryer, Butt. of Japan, p. 32, pl. 10, fig. 2 (1889)). *Habitat*, Japan.

Genus BLANAIDA.

Enope,¹ Moore, Catal. Lep. Mus. E. I. Compy. i. p. 228 (1857).

Neope,² Moore, Proc. Zool. Soc. 1865, p. 770. Butler, Ann. Nat. Hist. 1867, p. 166. Marshall and de Nicéville, Butt. of India, etc. i. p. 169 (1883).

Blanaida, Kirby, Syn. Catal. D. Lep. Suppl. p. 699 (1877).

IMAGO.—Male. *Forewing* triangular, somewhat elongated, and narrow; costa

¹ Preoccupied in Lepidoptera, by Walker, 1854.

² Preoccupied through *Neopus*, in Aves, by Hodgson, 1844.

arched, apex rounded, exterior margin slightly scalloped. Upperside with a slightly perceptible broad transverse discal *glandular fascia*, clothed with long narrow dark scales with bidentate or tridentate tips, interspersed with very numerous slender long *androconia* with long bulbous base and fine hair-like tasselled tip, and also with a few fine long hairs; costal vein slightly swollen at the base; cell extending to more than half the wing; discocellulars outwardly oblique and slightly excurved, upper radial near the subcostal, lower radial from slight angle above the middle. *Hindwing* short, broad; exterior margin obliquely-convex, scalloped and with an obtuse broad angle at end of middle median veinlet, anal angle rounded; cell extending fully half the wing; discocellulars very oblique and angular in the middle, radial from the angle; middle median emitted at end of the cell. *Body* rather robust, thorax finely hairy; palpi rather short and stout, thickly hairy in front, apical joint long, cylindrical; legs stout, femora finely hairy beneath; antennæ rather stout, with a well-formed thickened club; eyes hairy.

Type.—B. Bhadra.

BLANAIDA BHADRA (Plate 93, figs. 1, 1a, b, ♂ ♀).

Lasiommata (Enope) Bhadra, Moore, Catal. Lep. Mus. E. I. Compy. i. p. 227 (1857).

Neope Bhadra, Moore, Proc. Zool. Soc. 1865, p. 770. Butler, Ann. Nat. Hist. 1867, p. 166; Catal. Satyr. Brit. Mus. p. 112 (1868). Marshall and de Nicéville, Butt. of India, i. p. 171 (1883). Staudinger, Exot. Schmett. p. 222, pl. 78, ♂ (1887).

IMAGO.—Male. Upperside dusky olivescient ochreous-brown, darkest exteriorly; cilia alternated with ochreous-white. *Forewing* crossed by a slightly-perceptible broad dusky discal *glandular fascia*, clothed with long narrow scales with bidentate or tridentate tips, and interspersed with very numerous slender *androconia* with long bulbous base and fine hair-like tasselled tip, of similar length, and also with a few fine long hairs; two prominent ochreous-white sinuous streaks within the cell, an elongated streak below the cell, and two outer discal transverse irregular series of spots, the posterior streak being more or less ochreous at its base. *Hindwing* with two outer curved series of dark ochreous-yellow conical spots, those between the median veinlets and also of the radial having an intervening blackish spot, the lowest spot always being round and encircled by a distinct ochreous ring, the other two being generally quadrate; the cell and abdominal border clouded with ochreous. Underside dark-brown. *Forewing* with the cell streaks, the posterior streak, and the outer series of spots, as on the upperside, but more irregularly defined and whiter; between the radials and also between the two upper medians is a black ocellate spot, each with an ochreous ring and then a more or less defined black ring, the upper spot being the smallest and more prominent; a third similar-ringed spot is also present between the lower radial and upper median, but is almost obliterated by the ordinary white spot; along

the costa and also before the apex are four white streaks, the intervening area between the latter and the ocellus being speckled with pinkish scales; marginal lines blackish, sinuous. *Hindwing* variegated with a short pinkish-white streak along base of the costa, then a broad broken irregular-bordered dark-brown band intersected by another irregular pinkish-white band, having a distinct brown spot within the cell, followed across the disc by a very irregular zigzag angulated dark-brown bordered band, having an elongated dash above the base of upper median veinlet; outside this is a series of eight prominent ocelli, the seventh being also duplex, each with a small black centre and white pupil, an ochreous ring and then an outer black ring; the eighth ocellus, small and more or less developed, being situated above the anal angle; marginal blackish slender line more or less ochreous-bordered; the area bordering the ocelli irrorated with pinkish-grey scales. *Body* brown; abdomen beneath pale-ochreous; streak on sides of palpi, collar, entire forelegs, middle and hind femora beneath ochreous-white; antennæ reddish.

Female somewhat larger. Upper and underside marked as in male.

Expanse $3\frac{3}{8}$ to $3\frac{7}{8}$ inches.

HABITAT.—Sikkim; Assam; Western Burma.

SEASONAL FORM (Plate 93, fig. 1, c, ♂). Somewhat smaller.—Upperside with similarly-disposed markings on both sexes. *Forewing* with the pale ochreous-white markings broader. *Hindwing* pale brownish-ochreous, with the anterior marginal border paler brown, and the brown markings more restricted. Underside of a paler ground-colour, the darker parts also more subdued. *Forewing* with similar but broader markings. *Hindwing* with similar basal and discal broken brown markings; the ocelli, however, are much less developed, being only about half the size, and much paler.

Expanse, ♂ $3\frac{2}{8}$, ♀ $3\frac{3}{8}$ inches.

Males of this form, from Sikkim, are in our own collection, and also in that of Mr. H. Grose-Smith. A female under examination was taken in Sikkim, in March, by Mr. O. Möller, and is in the collection of Mr. J. H. Leech.

DISTRIBUTION AND HABITS.—Mr. L. de Nicéville found this species in profusion in the Great Runjeet Valley, Sikkim, in October. "It settles on the road with closed wings, flying off into the jungle when disturbed. The beautifully variegated underside of this species effectually hides it when settled, as is its habit, amongst dead leaves. Mr. O. Möller has also taken it in the neighbourhood of Darjiling in May and June" (Butt. Ind. I. 171). A female, in the collection of Mr. J. H. Leech, was taken by Mr. Möller in Sikkim, in November. Mr. H. J. Elwes records this species as being "found in the hot valleys of Sikkim from 1 to 3 or 4000 feet, between May and December. I never saw it in profusion, but only solitary specimens. It settles on the ground as well as on tree-trunks, and if disturbed goes off

at once into the forest" (Tr. Ent. Soc. 1888, 321). Specimens were in the late Mr. W. S. Atkinson's collection from Darjiling and Cherra Punji. Major C. H. E. Adamson (Catal. of Burmese Butterflies, p. 8) records "a single specimen caught in bamboo forest, in April, 1883, at 3000 feet, in the Arrakan Hills." According to Mr. H. J. Elwes (P. Z. S. 1891, 265) "examples not differing from Sikkim and Khasia specimens, except that the markings of the hindwing are somewhat paler, were taken by Mr. W. Doherty in the Karen Hills at 4000 to 5000 feet elevation." We have examined specimens obtained by Signor Leonardo Fea at Cabopa in the Karen Hills, in October, and at Meteleo, in September.

BLANAIDA KHASIANA (Plate 93, fig. 2, ♂).

Neope khasiana, Moore, Trans. Ent. Soc. Lond. 1881, p. 306. Marshall and de Nicéville, Butt. of India, etc. i. p. 172 (1883).

IMAGO.—Male. Upperside. *Forewing* with similar markings to those in *B. Bhadra*; the two streaks within the cell much less distinct, the one crossing the middle almost obsolete; the streak between the lower median and submedian confluent with its terminal spot. *Hindwing* ochreous-yellow, with the costal border and apical end of the exterior border brown, the immediate base of the wing ochreous-brown; a large oval dark-brown spot beyond lower end of the cell, and a discal curved series of six round spots decreasing in size to a minute spot above anal angle. Underside similarly marked to *B. Bhadra*, except that on the forewing there are two subapical ocelli, the lower one situated between the upper and middle median veinlets, the three streaks crossing the cell are angled outward in the middle, and the posterior margin is broadly ochreous. *Hindwing* with a regular transverse sub-basal ochreous-white fascia, the dark spot beyond end of the cell smaller and more prominent, the series of ocelli also smaller, their interspace on both sides paler ochreous-brown.

Expanse, $3\frac{2}{3}$ inches.

HABITAT.—Khasia Hills; Naga Hills; Eastern Burma.

This is nearest allied to *B. Armandii*, Oberthür, Etudes Entom. 1876, p. 27, pl. 2, fig. 5, from Moupin, E. Tibet, specimens of which have been compared in the collections of Mr. J. H. Leech and Mr. H. Grose-Smith.

From the *seasonal form* of *Bhadra*, above described, and figured, *Khasiana* differs, on the upperside, in the markings of the forewing being smaller and posteriorly ochreous in colour, the basal cell streak being obsolete; and, on the hindwing, by the brighter ochreous-yellow colour, smaller brown mark beyond the cell, and in the more developed series of ocelli. On the underside, the pale ground colour is bright ochreous. In the forewing the pale cell streaks are very narrow, angular, and the middle one differently positioned, the edge of the upper discal dark-brown patch

more convex and less sinuous, and there are two prominent ocelli present. In the *hindwing*, the broken subbasal and discal brown portions are somewhat different, the ocelli being also more prominently developed.

DISTRIBUTION.—Two males of this species, from the Khasias, are in our own collection. Mr. H. J. Elwes (P. Z. S. 1891, 265) records under the name of *Neope armandii*, “two males captured by Mr. W. Doherty, in the Naga Hills, and one from Bernardmyo, in the Shan States, Burma.” The male here referred to from Bernardmyo, which Mr. Elwes has kindly lent us, is identical with the male type of *Khasiana*. A female, also sent with it, from the Naga Hills, two inches and six-eighths in expanse, has the upperside of the forewing similar to the male, but the hindwing is dark olivescence-brown throughout, with yellow markings only upon the outer border of the cell, and the submarginal series of ringed and dentate spots, similar to those in *B. Pulahoides*. The underside is also darker coloured, the markings more compact than in the male. Those on the forewing similar to the male. On the hindwing the basal and lower discal dark portions are also similar but somewhat broader and darker, the intervening subbasal division being narrower, and the entire outer area of the wing is also darker coloured, being of an olivescence-brown tint, not ochreous as in the male; the ocelli are like those of the male but a little darker.

The illustration of this species on our Plate 93, fig. 2, represents the male type in our own collection.

BLANAIDA PULAHA (Plate 94, fig. 1, ♂).

Lasiommata (Enope) Pulaha, Moore, Catal. Lep. Mus. E. I. Compy. i. p. 227 (1857).

Enope Pulaha, Moore, Proc. Zool. Soc. 1865, p. 499.

Neope Pulaha, Moore, Proc. Zool. Soc. 1865, p. 770. Butler, Ann. Nat. Hist. 1867, p. 166; Ent. Mo. Mag. 1868, p. 195; Catal. Satyr. Brit. Mus. p. 112 (1868). Marshall and de Nicéville, Butt. of India, i. p. 170, pl. xi. fig. 25, ♀ (1883).

IMAGO.—Male. Upperside dusky olivescence ochreous-brown, darkest externally; cilia blackish alternated with ochreous-white. *Forewing* crossed by a dusky blackish indistinctly-defined *glandular fascia*, clothed with long narrow scales with tridentate or quadridentate tips, and numerous interspersed slender *androconia*, of similar length, with bulbous base and fine hair-like tasselled tip; the median vein and its branches at their base, and the submedian to near its end, lined with yellowish-ochreous; within the cell is a yellowish-ochreous oblique streak at its end, and a much less-defined streak across its middle; beyond is an irregular transverse discal and a similar submarginal series of yellowish-ochreous spots. *Hindwing* with two outer curved-rows of yellowish-ochreous spots and an intervening discal series of ill-defined black oval spots. Underside dark brown. *Forewing* with three zigzag bars across the cell, and two costal streaks beyond ochreous-white; base of median vein

with its veinlets and of the submedian, a patch below the cell, and the two outer lower series of spots, as above, ochreous-yellow; the two sets of spots between the medians having an intervening black spot, and above the upper ochreous spot are two more-or-less-developed subapical ocelli, the apical area being grey-speckled; a slender pale-bordered blackish marginal line. *Hindwing* with two irregular subbasal series of yellowish-ochreous ringlet-spots with an intervening transverse zigzag blackish-brown fascia, and a similar zigzag and angulated discal fascia, beyond which is an outer recurved-series of eight round ocelli, the seventh or anal being duplex, and the eight small and situated above the anal angle, the ocelli black with white pupil and ochreous-yellow outer ring; the basal markings bordered and the intervening outer area clouded with grey-speckles. *Body* dark brown; abdomen beneath brownish-ochreous; legs ochreous-brown; collar, sides of palpi, forelegs beneath, and middle and hind femora beneath ochreous-white; antennæ reddish.

Female. Upperside as in male, except that the markings are somewhat paler. Underside as in male.

Expanse, $2\frac{5}{8}$ to 3 inches.

HABITAT.—N.-W. and E. Himalayas.

DISTRIBUTION.—Col. A. M. Lang (Ent. Mo. Mag. 1864, 182) records having "taken specimens of this insect in Lower Kunawur, at 7000 feet elevation, and at Narkunda, near Simla, at about 9000 feet, in dark forests of oak, sycamore, and horse chestnut, affecting shade and pitching on trunks of trees." In his MS. notes, Col. Lang gives May and June as the months of capture. Major C. H. T. Marshall took it at Kajiar, near Chamba, in April (Butt. Ind. i. 171). Mr. A. Graham Young obtained it on the Tihir Pass and the Jamere Mountain, Kulu. On July 21st 1872 "it was in swarms round an oak tree on the top of a stony ascent" (Butt. Ind. 171). Major Hellard, in his Notes, records its capture at Simla in July. Mr. W. Doherty (J. A. S. Beng. 1886, 117) "took it at Khati and at Kapkot, in Kumaon, at from 7000 to 8000 feet; rare." According to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 321) it was "not rare on the Singalelah Range between Sikkim and Nepal at 9000 to 11,000 feet, in July, and common on Tendong, and in British Bhotan, near Rikisum, in August. It settles on ordure in the paths, and when disturbed flies quickly into the forest, but returns in a short time to the same place. Mr. O. Möller also notes its occurrence in March."

BLANAIDA PULAHOIDES (Plate 94, figs. 2, ♂).

Neope Pulaha, Elwes, Proc. Zool. Soc. 1891, p. 265.

Male. Upperside with the basal area of both wings paler, and the outer area more dusky, than in typical *B. Pulaha*; all the streaks and spots larger, broader,

more prominently defined, and of a conspicuously paler colour, all being pale-yellow. Underside. *Forewing* with the pale borders to the cell streaks and to the subapical markings, white; the discal spots and posterior streaks being also pale ochreous-white; the dark cell streaks are also sharply defined and with well-separated pale interspaces. *Hindwing* with brighter dark markings, paler ochreous borderings and lilacine-grey speckled edgings; the ocelli paler ochreous-ringed, and the submarginal clouded-border bright fulvous.

Expanse, 3 inches.

HABITAT.—Naga Hills; E. Pegu.

DISTRIBUTION.—According to Mr. H. J. Elwes (P. Z. S. 1891, 265) this species was obtained by Mr. W. Doherty “in the Naga Hills, at 5000 to 8000 feet, July to August, and also found very abundant in the Karen Hills, East Pegu, at 4000 to 5000 feet elevation; March to April.”

The illustration of this species on our Plate 94, fig. 2, represents a male from the Karen Hills.

CHINESE AND JAPANESE ALLIED SPECIES OF BLANIDA.—*B. Armandi* (Satyrus Armandi, Oberthür, Etudes Ent. 1876, p. 27, pl. 2, fig. 5). *Habitat*, E. Tibet.—*B. fusca* (Neope Armandi, var. fusca, Leech, Entomologist, 1891, p. 68). *Habitat*, W. China.—*B. simulans* (Neope simulans, Leech, *id.* 1891, p. 66). *Habitat*, W. China.—*B. agrestis* (Satyrus agrestis, Oberthür Et. Ent. 1876, p. 27, pl. 2, fig. 3). *Habitat*, E. Tibet.—*B. albicans* (Satyrus albicans, Leech, Butt. Japan, China, etc., p. 54). *Habitat*, W. China.—*B. ramosa* (Neope ramosa, Leech, Ent. 1890, p. 29). *Habitat*, W. China.—*B. Goschkevitschii* (Lasiommata Gosch. Menétries, Catal. Mus. Petrop. Lep. p. 121, pl. x. fig. 4 (1857). Pryer, Lep. Japan, p. 32, pl. 9, fig. 11. *Habitat*, Japan.—*B. Niphonica* (Neope Niphonica, Butler, Ann. N. H. 1881, p. 133). *Habitat*, Japan.—*B. Japonica* (N. Japonica, Butler, *id.* 1867, p. 167). *Habitat*, Japan.—*B. Bremeri* (Lasiommata Bremeri, Felder, Wien. Ent. Monats. 1862, p. 28. *Syn.* Neope Romanovi, Leech, Entom. 1890, p. 29). *Habitat*, W. China.—*B. Oberthuri* (N. Oberthuri, Leech, Entom. 1891, p. 24). *Habitat*, W. China.—*B. Moorei* (N. Moorei, Butler, Ann. N. H. 1867, p. 166, pl. 4, fig. 7). *Habitat*, China.

Genus PATALA.

Differs from typical *Blanida*. *Forewing* comparatively shorter, broader, and more triangular in form; the apex more pointed, and the cell broader; the *glandular fascia* is broader and more apparent, being clothed with extremely delicate long narrow ribbed-scales with bidentate or tridentate tips, and with several interspersed long slender *androconia* with truncated-bulbous base and hair-like tasselled-

tip. *Hindwing* shorter and more triangular in form, exterior margin less angulated. Upper and undersides dissimilar in markings.

Type.—P. Yama.

PATALA YAMA (Plate 94, fig. 3, ♂).

Zophoessa Yama, Moore, Catal. Lep. Mus. E. I. Company, i. p. 221 (1857), ♂ ♀. Butler, Catal. Satyr. Brit. Mus. p. 109 (1868). Marshall and de Nicéville, Butt. of India, etc. i. p. 169 (1883).

IMAGO.—Male. Upperside olivescient ochreous-brown, somewhat ænescent and glossy in certain lights; cilia ochreous-white. *Forewing* with an indistinctly perceptible transverse short broad lower-discal dusky-cinereous *glandular fascia*, which is clothed with extremely delicate long narrow ribbed-scales with bidentate or tridentate tips, and several interspersed long slender *androconia* with truncated-bulbous base and fine hair-like tasselled-tip, and also with a few long fine hairs; beyond which are three very indistinct dusky-brown superposed subapical spots, and a similar indistinct dusky-brown broad marginal border; on the costa before the apex are two small ochreous-white intersected spots. *Hindwing* with an ill-defined discal-series of five dusky-brown pale-bordered rounded spots, and a broad dusky-brown marginal border. Underside paler. *Forewing* with four dark-brown bars with intervening ochreous-white bars crossing the cell from the costa; a dark-brown transverse-discal sinuous-bordered wavy band, a series of five brown ocelli (the upper one being obsolescent) each with a minute white pupil, a pale olivescient-ochreous ring, and then a narrow brown outer ring; followed by a brown submarginal fascia and a slender straight marginal line; the intervening area between the discal and submarginal fascia being pale olivescient-ochreous and brown speckled, with the two costal whitish spots before the apex, as on upperside. *Hindwing* crossed by two irregular ochreous-white bordered dark-brown short subbasal broken bands from the costa, a similar-coloured transverse discal irregular zigzag band, followed by a series of seven prominent black ocelli, the seventh being duplex, each with a white pupil, dark-ochreous ring, and then a dark-brown ring; beyond these is an interrupted dark-brown submarginal fascia, and a slender marginal line, both of which are posteriorly pale-ochreous bordered from the upper median vein; the subbasal intervening spaces thickly speckled with pale-ochreous scales, and the area bordering the ocelli with purplish-ochreous scales.

Female. Upperside similar to the male, except that on the forewing there is an indistinctly-defined transverse nearly-erect narrow dusky-brown fascia. Underside as in the male; sometimes the forewing has an additional or lower ocellus between the median and submedian vein. *Body* beneath pale ochreous-brown; forelegs, middle and hind femora beneath pale-ochreous; collar, and sides of palpi ochreous-white; antennæ reddish-ochreous, with blackish terminal band.

Expanse, $2\frac{6}{8}$ to 3 inches.

HABITAT.—N.-W. Himalayas.

DISTRIBUTION.—“This species occurs at Simla, at 7000 feet elevation, in June. The late Mr. E. T. Atkinson obtained it in the outer ranges of the Himalayas, in Kumaon.” (Butt. Ind. i. p. 169.) Specimens from Masuri were in the collection of the late Mr. W. S. Atkinson.

PATALA YAMOIDES (Plate 94, fig. 4, ♂.)

Zophoessa Yama, Marshall and de Nicéville, Butt. of India, i. pl. x. fig. 21, ♂.

IMAGO.—Differs from typical *P. Yama* from the North-Western Himalayas in being somewhat larger. Upperside much darker brown, the marginal border on both wings comparatively broader, and that on the hindwing darker and more conspicuous, and the cilia very prominent; the spots are darker, and the lower spots on the hindwing also larger. Underside also darker coloured throughout and with much more prominently pale greyish-ochreous borders to the markings. *Forewing* with the pale bar crossing the cell somewhat less obliquely, the outer bar straight (not recurved), the discal fascia is broader, much darker, and undulated (not straight), the subapical ocelli are larger. On the *hindwing*, the short dark sub-basal band is broader and extends unbroken to the costa, the parallel contiguous outer band is also nearer to it and straight in its course, the interspace between these two bands is uniformly pale ochreous-white its entire length; the outer discal dark irregularly angulated fascia is broader; the ocelli darker and larger, the two upper being situated more obliquely inward, and all are less definitely pale ringed, there is also an intervening interrupted pale line between the upper ocelli and the outer marginal black line; the pale ochreous-white basal bordering to the marginal line is also broader.

Expanse, $3\frac{2}{8}$ to $3\frac{4}{8}$ inches.

HABITAT.—E. Himalayas; Bhotan; Khasia Hills; Silhet; Naga Hills; Upper Burma.

DISTRIBUTION.—In Sikkim, according to Mr. H. J. Elwes (Tr. Ent. Soc. 1888, 321) “this species seems rare. It occurs on Tendong, at 6000 to 7000 feet in June and July, and to the Eastward, where I saw a single specimen at Rikisum in British Bhotan, in August. Mr. Knyvett’s collectors also found it commoner near Buxa, in Bhotan.” “It also occurs in the Khasia Hills, in May” (Butt. Ind. i. 169). Mr. Elwes also records it (P. Z. S. 1891, 254) as being “common in the Naga Hills, and near Bernardmyo in Upper Burma.”

PATALA BHIMA (Plate 94, figs. 5, 5a, ♂ ♀).

Neope Bhima, Marshall, Journ. Asiatic Soc. Bengal, 1880, p. 246. Marshall and de Nicéville, Butt. of India, etc. i. p. 172, pl. xi. fig. 26, ♀ (1883). Manders, Trans. Ent. Soc. Lond. 1890, p. 518.
Neope Muirheadi, var. *Bhima*, Elwes, Proc. Zool. Soc. 1891, p. 266.

IMAGO.—Male. Upperside pale olivescient ochreous-brown; marginal line indistinctly pale bordered; cilia pale ochreous-white. *Forewing* with a broad transverse discal indistinctly-defined darker *glandular fascia* clothed with a few long narrow scales with acute bidentate or tridentate tips, and very numerous interspersed long slender *androconia* with lengthened truncated-base and fine hair-like tasselled-tip, and also a few fine hairs; beyond which is an outer discal series of pale olivescient-yellow elongated spots situated between the veins, the one between the radials and also that between the upper medians enclosing an oval black spot. *Hindwing* with a series of four prominent black oval spots, with a pale olivescient-yellow outer ring, above which is a subapical small incipient similar spot, and at the anal angle an indistinct duplex spot. Underside ochreous-grey speckled with brownish-ochreous scales. *Forewing* with three sinuous brown bars crossing the cell, the basal one being narrow, the next broad and catenulate, the outer one broad and zigzag; crossing the discocellulars are two small brown spots; beyond is a broad transverse discal brown band, which is traversed by a very slender sinuous inner pale line, its outer edge being recurved and broadly bordered by pale ochreous-grey; following is a series of four prominent ocelli, each with large black centre and white pupil, an ochreous-yellow ring, and then a brown bordering extending laterally to the costa, beyond which is a brown submarginal and marginal line with pale ochreous-grey borders. *Hindwing* with a basal transverse series of three small brown rings, two subbasal pale-bordered brown zigzag interrupted bands, and a similar recurved discal continuous band, the latter with a prominent pale ochreous-grey outer border, followed by a recurved series of eight prominent ocelli, the seventh and eighth being conjoined but both well developed, each with a black centre and white pupil, an ochreous-yellow ring and an outer dark-brown ring, all again outwardly bordered by brown speckles; marginal lines dark-brown, sinuous. *Body* beneath pale ochreous-grey; legs above brown, ochreous-grey beneath; collar and sides of palpi ochreous-white; antennæ brown with blackish subterminal band and reddish-ochreous tip.

Female. Upperside pale olivescient ochreous-brown. *Forewing* with an ill-defined narrow pale brownish-ochreous transverse discal recurved fascia, an outer discal row of four, sometimes with five, prominent black oval spots, the upper one being situated between the radials, the lowest, when present, between the lower median and submedian vein, the upper second generally small and imperfectly developed, the upper first, the third and fourth large and of nearly equal size;

each spot is encircled by a pale ochreous-yellow ring, these rings being broadened exteriorly and altogether forming a nearly straight submarginal edge to the series of ocelli, the yellow extending above the ocelli to the costa before the apex. *Hindwing* crossed by an ill-defined pale bordered angular discal line, followed by an outer series of five oval black spots, each encircled by a pale ochreous-yellow outer ring, the latter ring more or less broadened exteriorly, and either touches or extends to near the dark-brown submarginal sinuous line; marginal line slender, brown. Underside as in the male, except that the pale border to the discal brown band is broader, and on the hindwing there is, in some specimens only, an additional small well-formed ocellus situated at the end of the discal band above the anal angle.

Expanse, ♂ $2\frac{7}{8}$, ♀ 3 to $3\frac{2}{8}$ inches.

HABITAT.—Burma.

DISTRIBUTION AND HABITS.—We are indebted to Capt. C. T. Bingham for the discovery of this species, “two females being taken in Upper Tenasserim in the Upper Thoungyeen forests in March and April” (Butt. Ind. i. 173). Dr. N. Manders (Tr. Ent. Soc. 1890, 518) “obtained two males and a female at Yatsouk and Bogeathat, at the north end of the Nyoungwe Valley in the Shan States; being found in open scrub-jungle, where the trees are of medium size. It is fond of settling in the middle of the road, and then flying off into the jungle to settle on a tree-trunk, and is consequently difficult to catch.” Capt. E. Y. Watson (J. Bombay Nat. Hist. Soc. 1891, 34), during the Chin-Lushai Expedition of 1889-90, obtained it “on the road from Pauk to Tilin in October and November, and at Tilin also in November, April, and May. Those caught at the end of the year were in poor condition. The spring brood appeared about the middle of April, and did not differ in markings from the autumn brood. It settles almost invariably on tree-trunks, on which I usually obtained it in the very early morning. It is crepuscular in its habits, but does not seem to frequent very dense jungle. When seen either at rest or on the wing, this species seems altogether out of place in this fauna, and one would rather expect to find it sitting on stones in the hills in company with *Hipparchus*. It rests with its wings closed over the back, its underside harmonizing well with the bark of tree-trunks.”

Mr. H. J. Elwes (P. Z. S. 1891, 266) records “several specimens taken by Mr. W. Doherty in the Karen Hills and at Momeit, Upper Burma, at 1500 to 2000 feet.”

CHINESE ALLIED SPECIES OF PATALA.—*P. Muirheadi* (Neope Muirheadi, Felder Wien. Ent. Monats. 1862, p. 28, *Syn. Debis Segonax*, Hewits. Ex. Butt. Deb. pl. 1. f. 5, *N. Segonacia*, Oberthür, Et. Ent. 1881, p. 14, pl. 7, fig. 4). *Habitat*, China.—*P. Christi* (Neope Christi, Oberthür, Et. Ent. 1886, p. 25, pl. 3, fig. 18, ♀). *Habitat*, E. Tibet.

The following is an allied form.

Gen. Nov. NINGUTA.—Wings large, short, very broad, basal area densely hairy. Male. *Forewing* subtriangular; costa arched, apex obtusely rounded, exterior margin slightly oblique, wavy; cell broad; discocellulars outwardly-recurved, upper radial from angle close to subcostal, lower radial from the middle; median branches widely separated. *Hindwing* broadly subovate; exterior margin convex, obtusely scalloped, anal angle rounded; cell broad; discocellular angular in its middle, radial from the angle; middle median emitted from beyond end of the cell; submedian and internal vein running close together for half their length, the latter then recurving to abdominal margin above the anal angle, their proximity thus causing a *longitudinal fold* of the membrane on the upperside of the wing, this fold being there *overlapped* for a portion of its length by *elongated spatular-tipt hairs*. Palpi densely clothed in front, apical joint long. Antennæ short, with an imperceptibly elongated slender tip.

TYPE.—*Schrenkii* (Pronophila Schrenkii, Menétr. Bull. Acad. Petr. 1859, p. 215. Schrenk's Reise Amur. Lep. p. 32, pl. 3, f. 3 (1859). Leech, P. Z. S. 1887, p. 426. Lethe Schrenki, Elwes, P. Z. S. 1881, p. 908. *Habitat*, Mount Bureia; Corea; Japan.

ADDENDA ET CORRIGENDA.

- Page 3. Line 10 from bottom, for microscopic read *microscopic*.
 „ 132. Line 20 from top, for Isamia Choë read *I. Chloë*.
 „ 153. Line 5 from bottom, for subcostal read *submedian*.
 „ 164. *Gareris Sanatana* (Dry-season brood). Add the following as a synonym, viz., *Mycalasis Antimus*, Frivaldszky, Term. Fuz. Magyar, Nem. Mus. p. 40, pl. 4, fig. 5 (1886).
 „ 254. *Lethe Europa*. Add to Plate 82, figs. 1 b. and 1 c.

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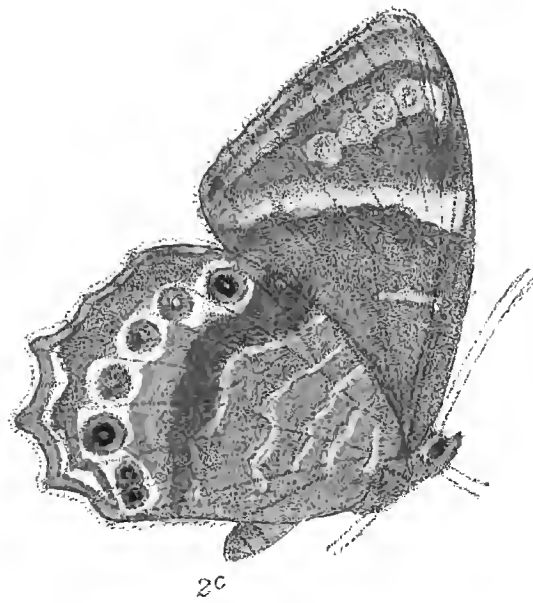
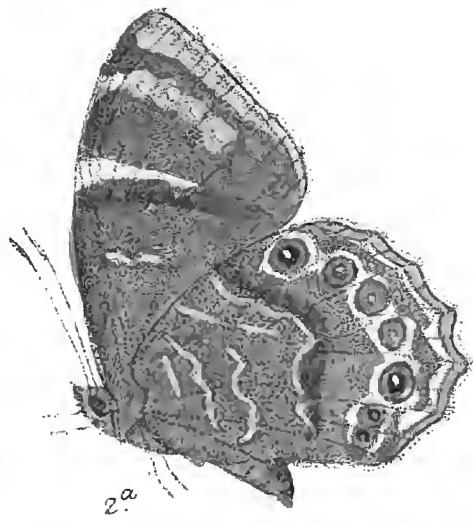
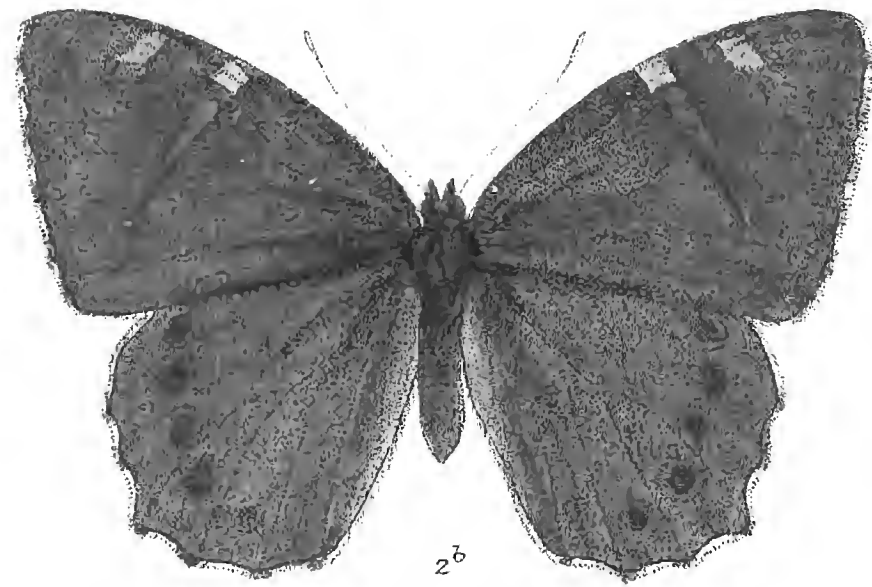
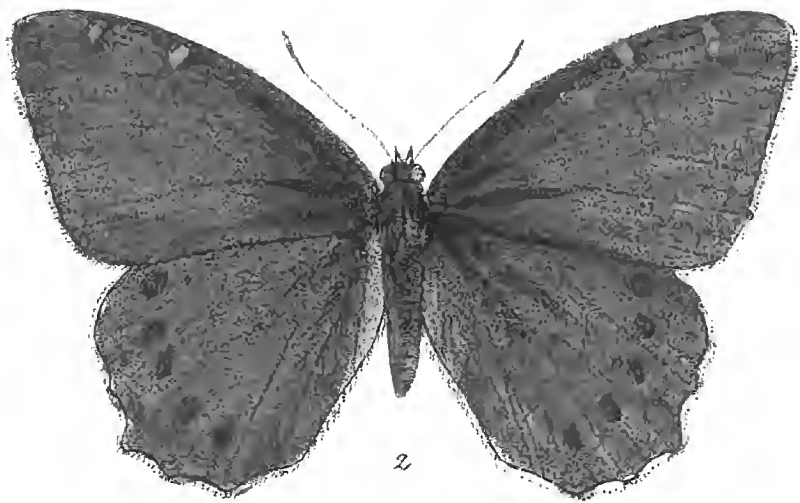
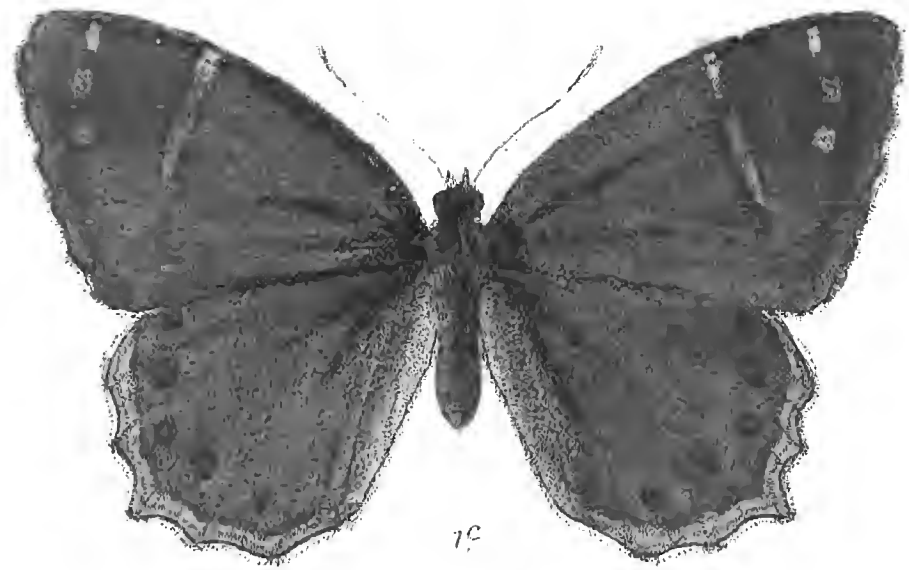
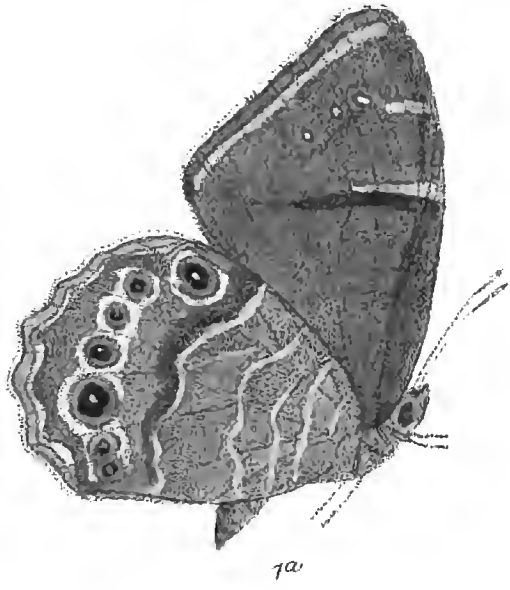
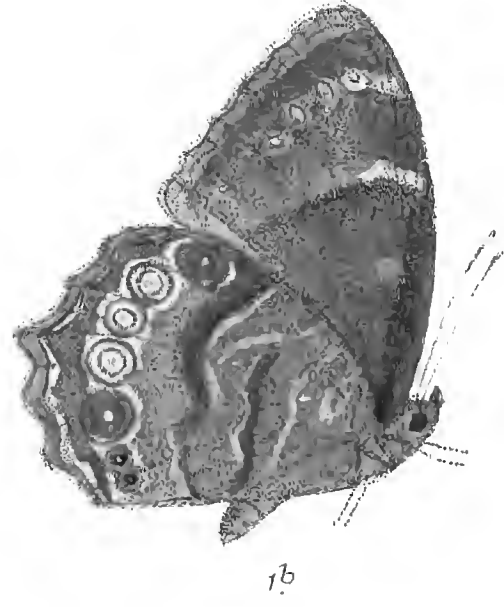
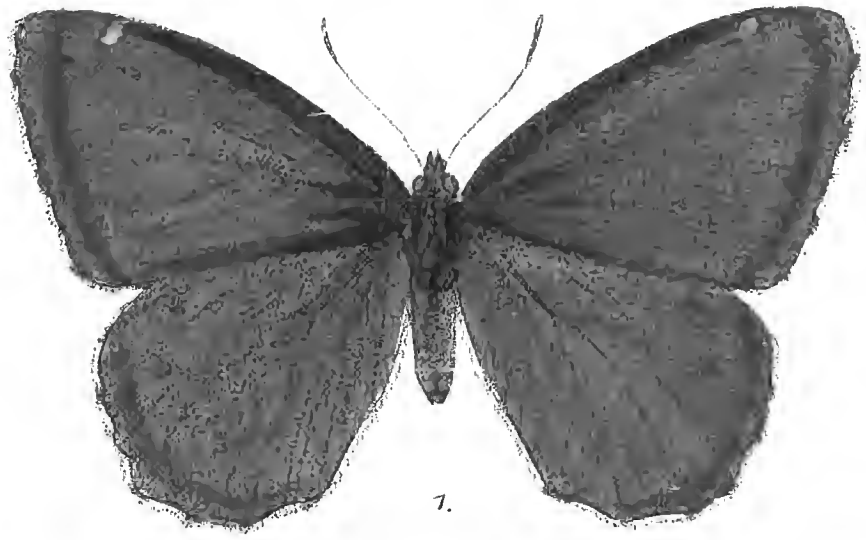
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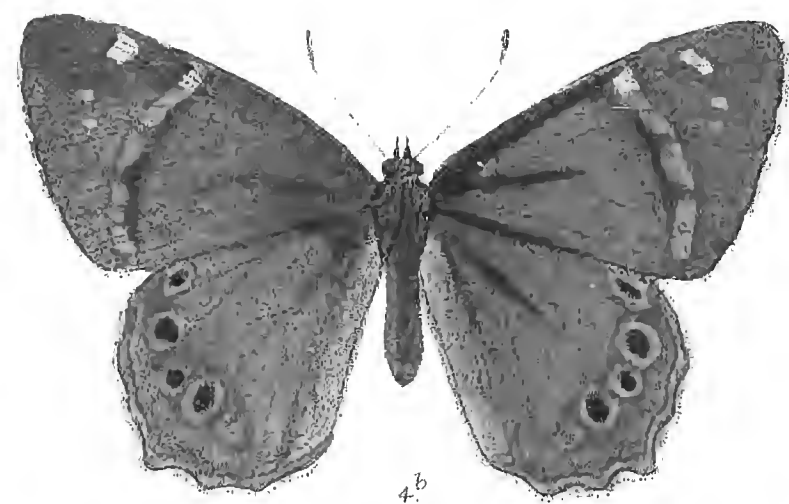
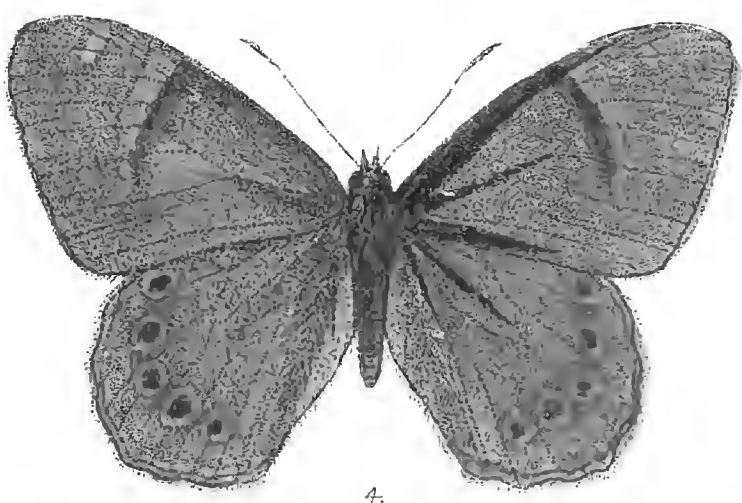
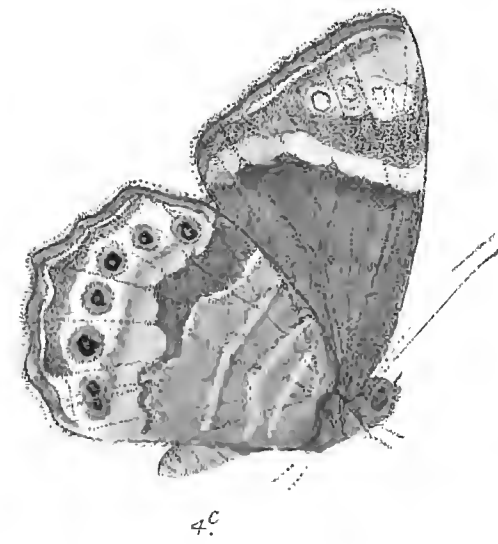
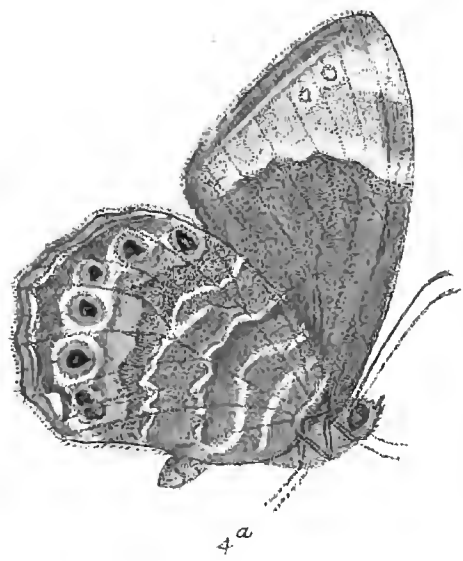
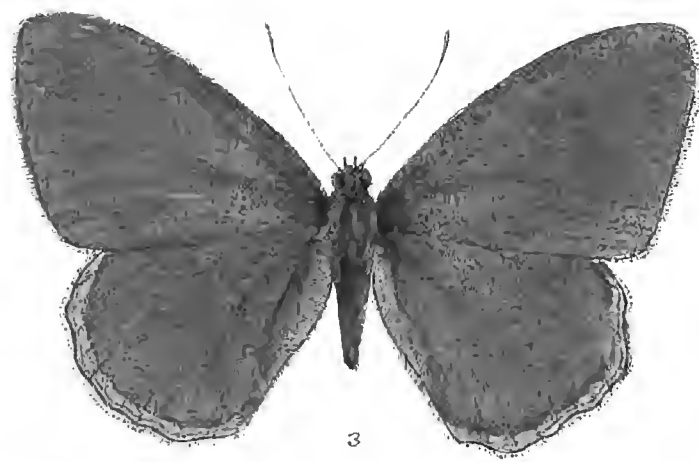
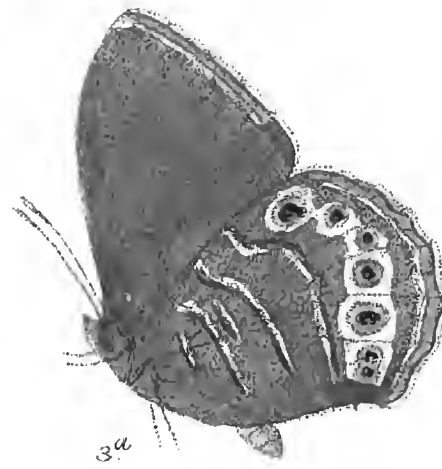
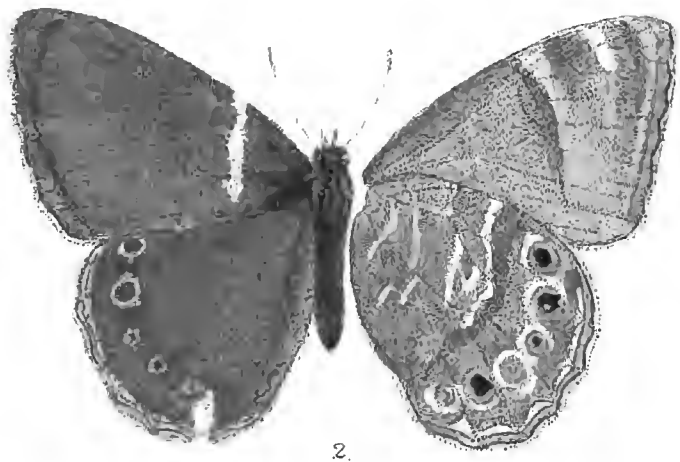
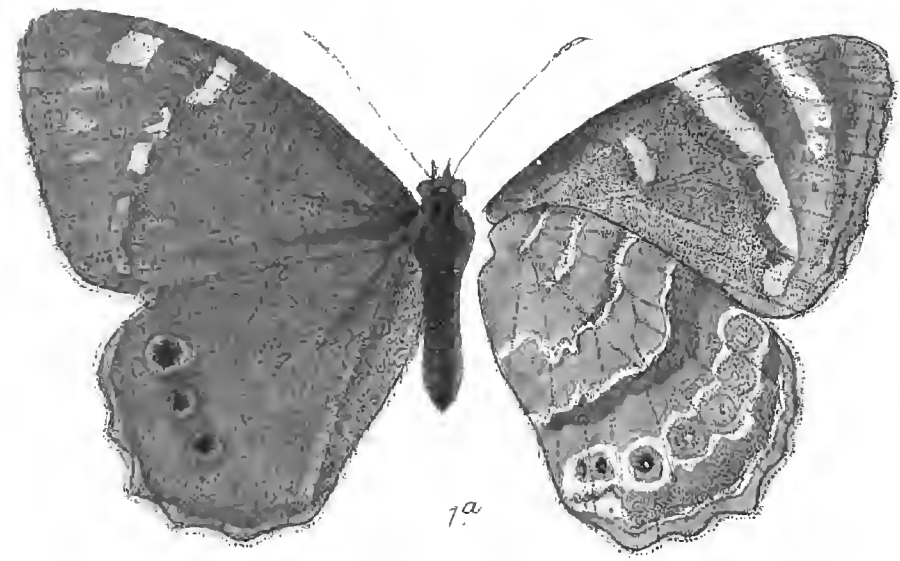
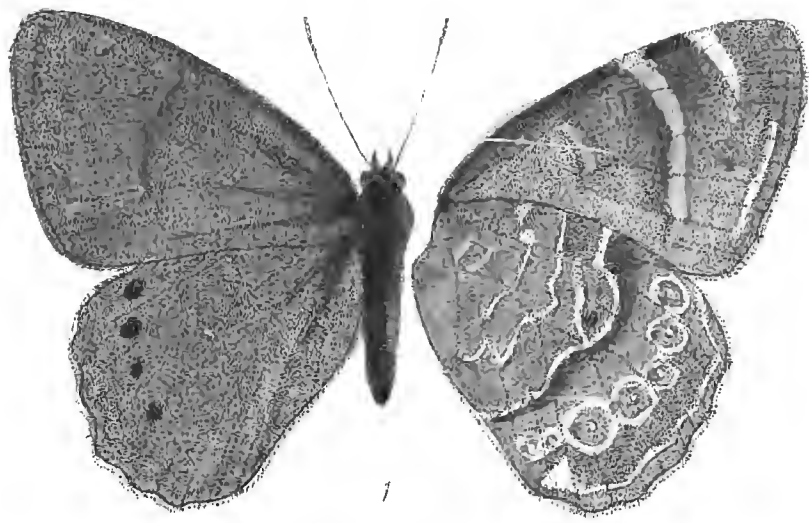
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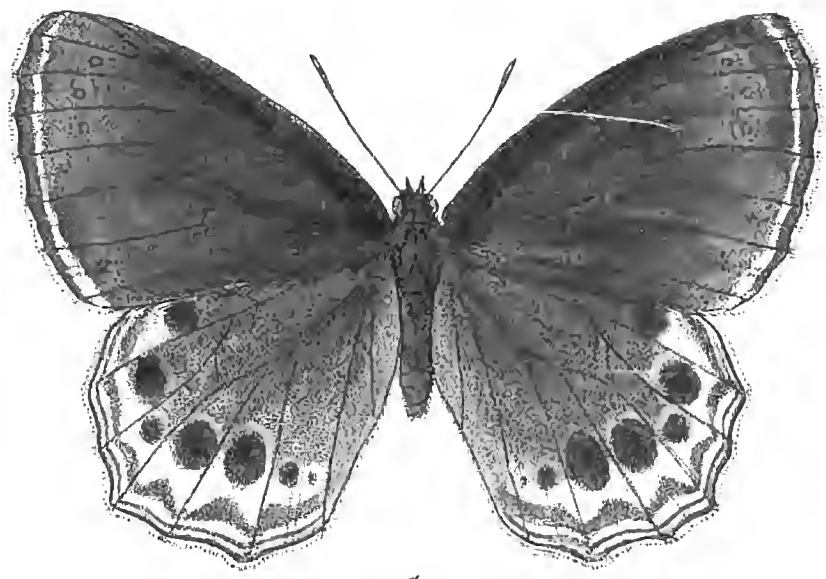
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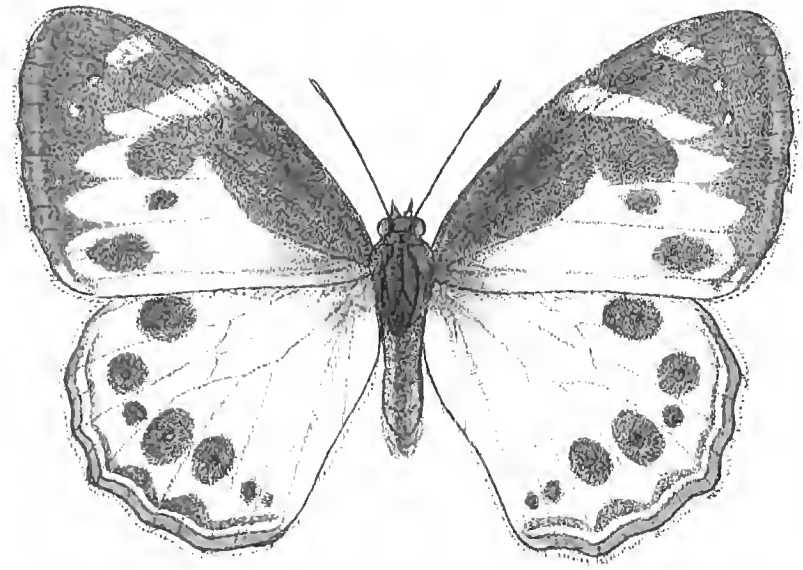
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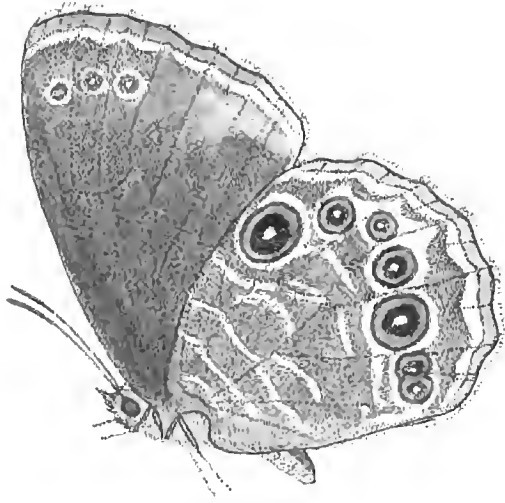




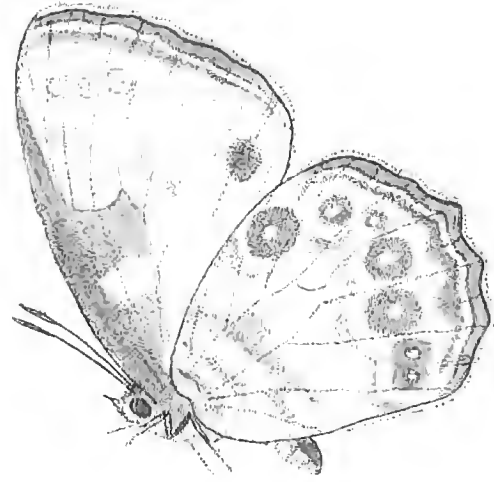
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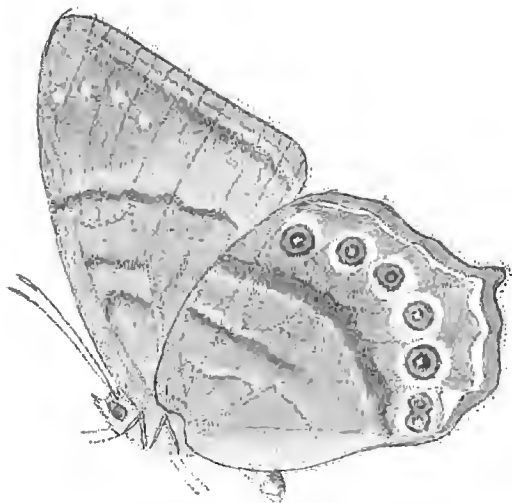
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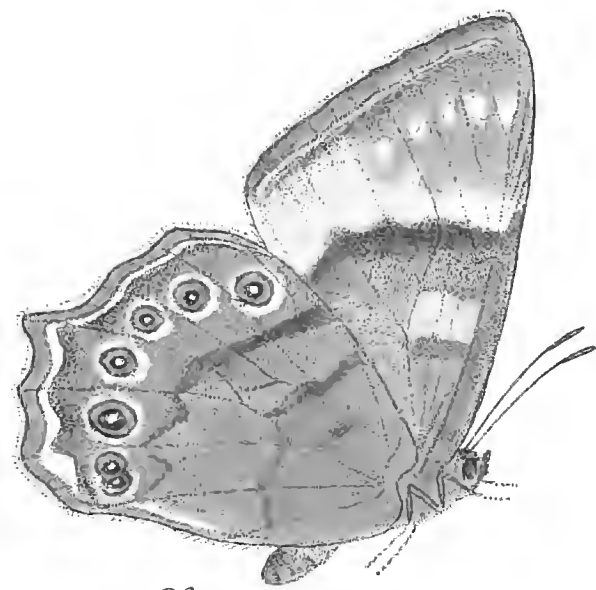
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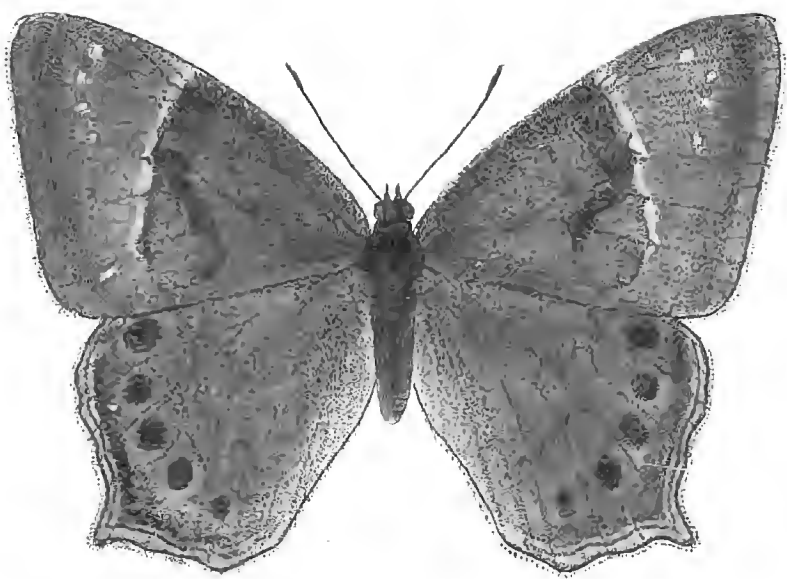
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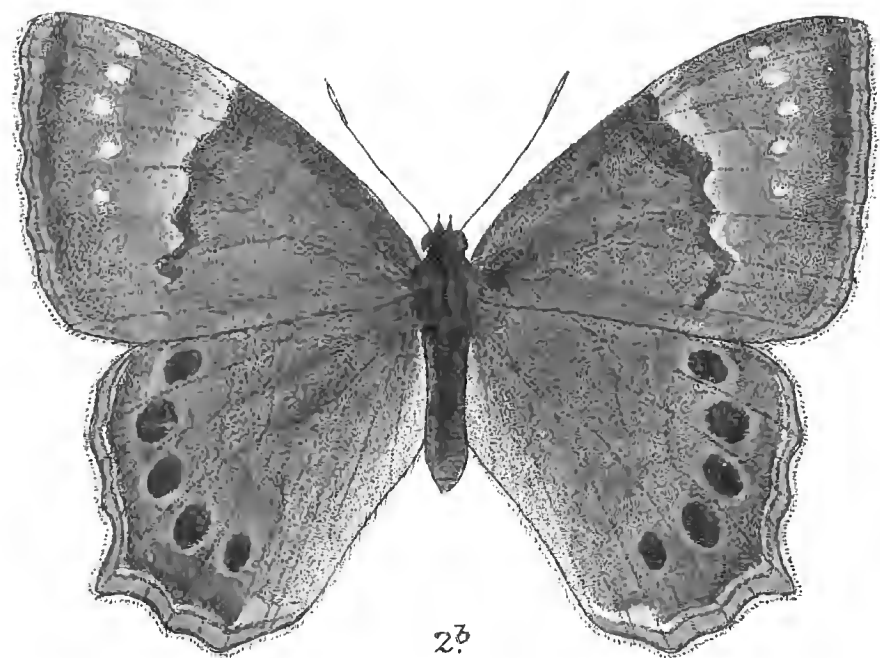
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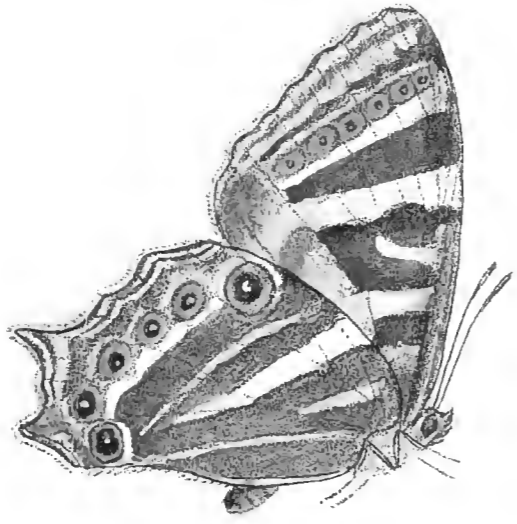


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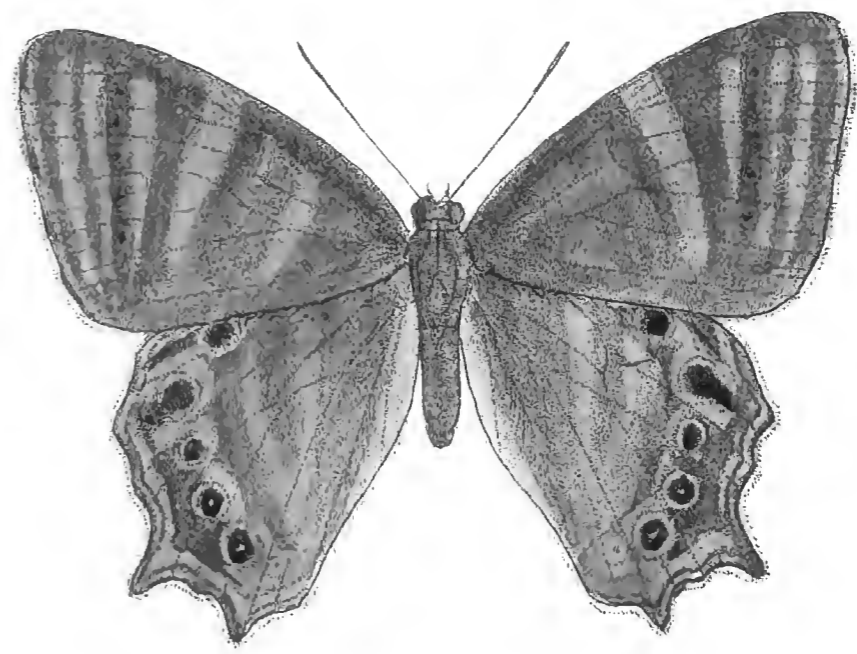
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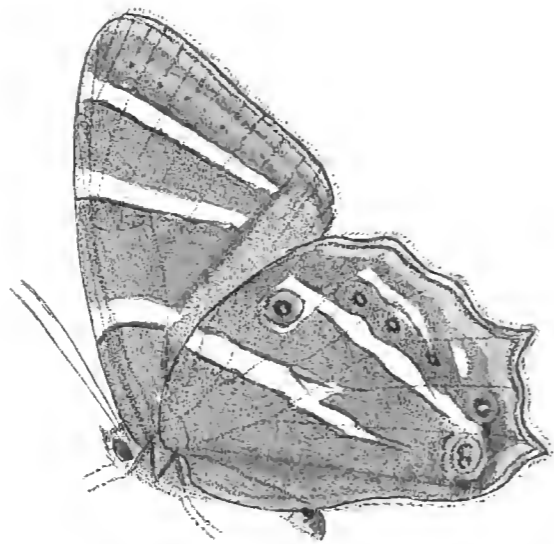
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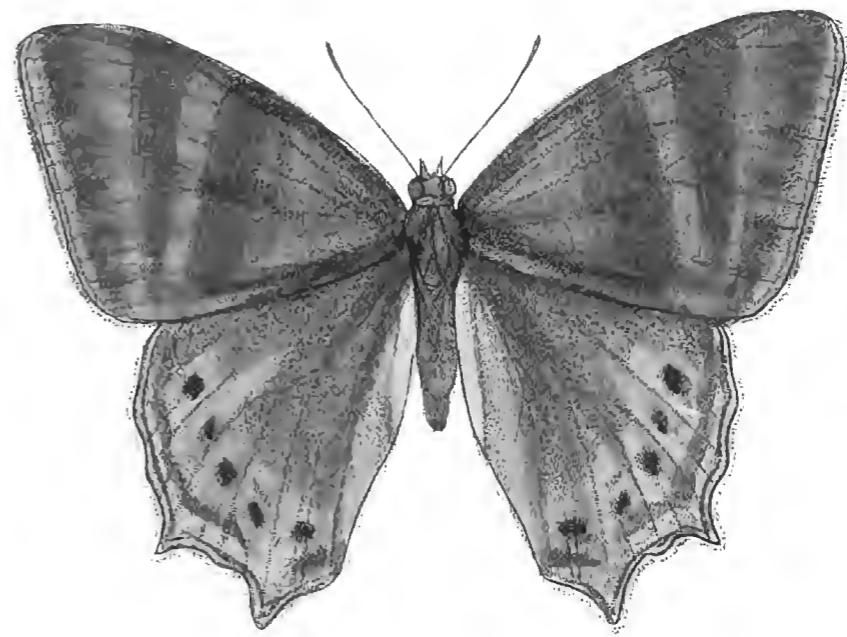
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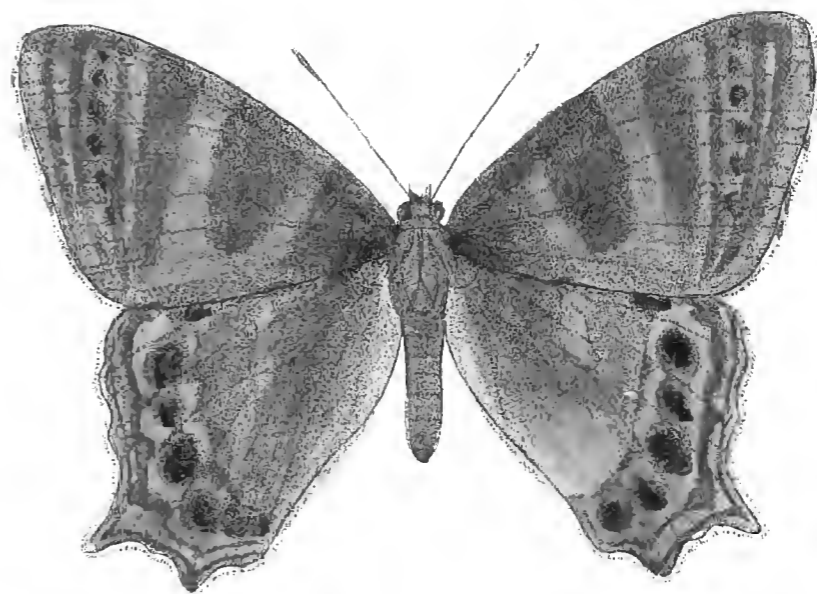
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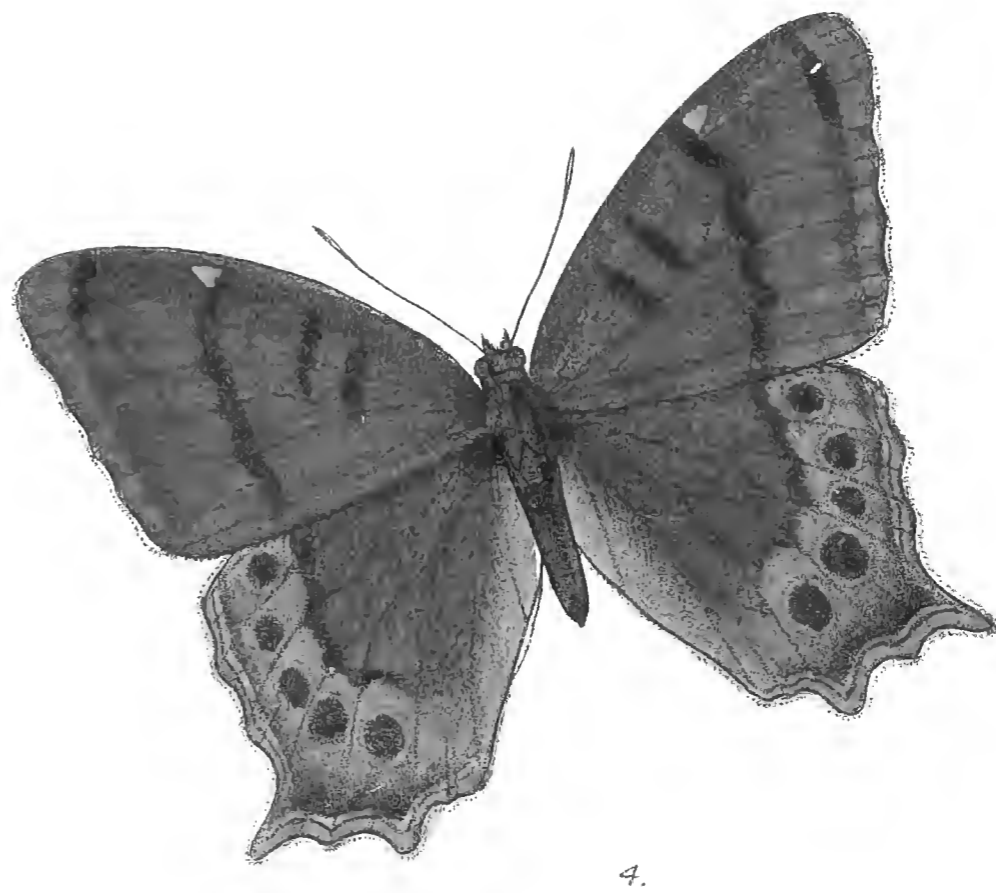
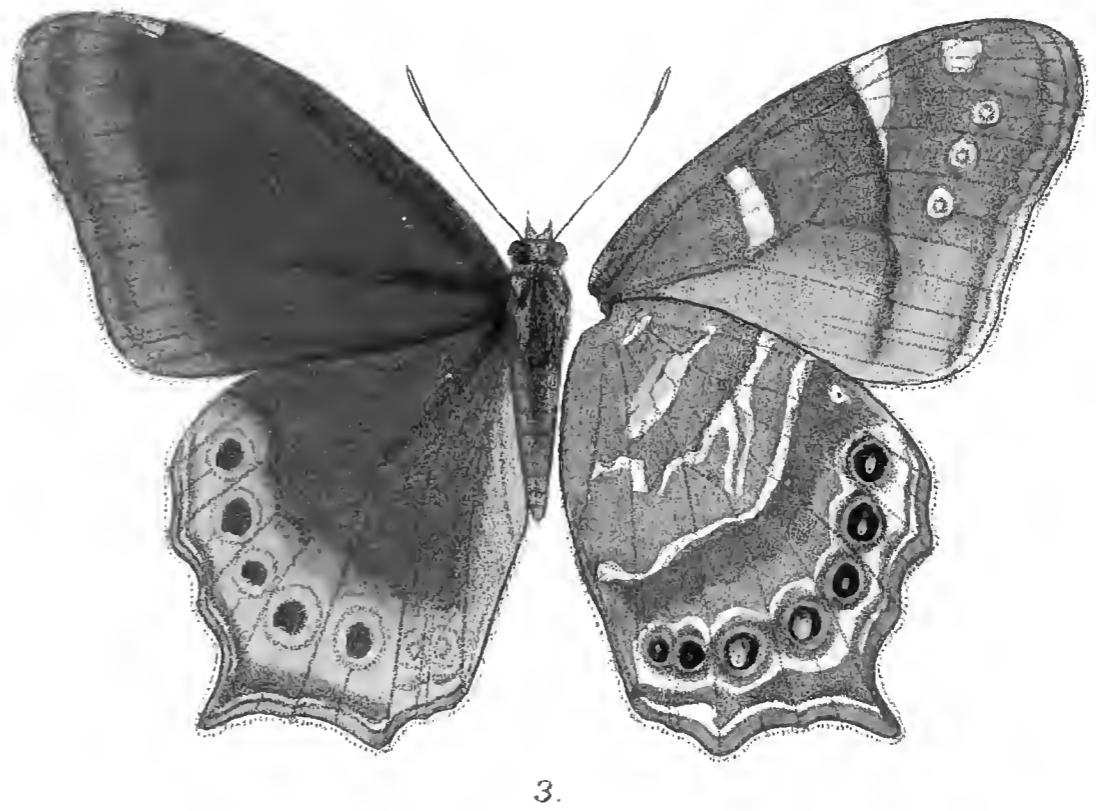
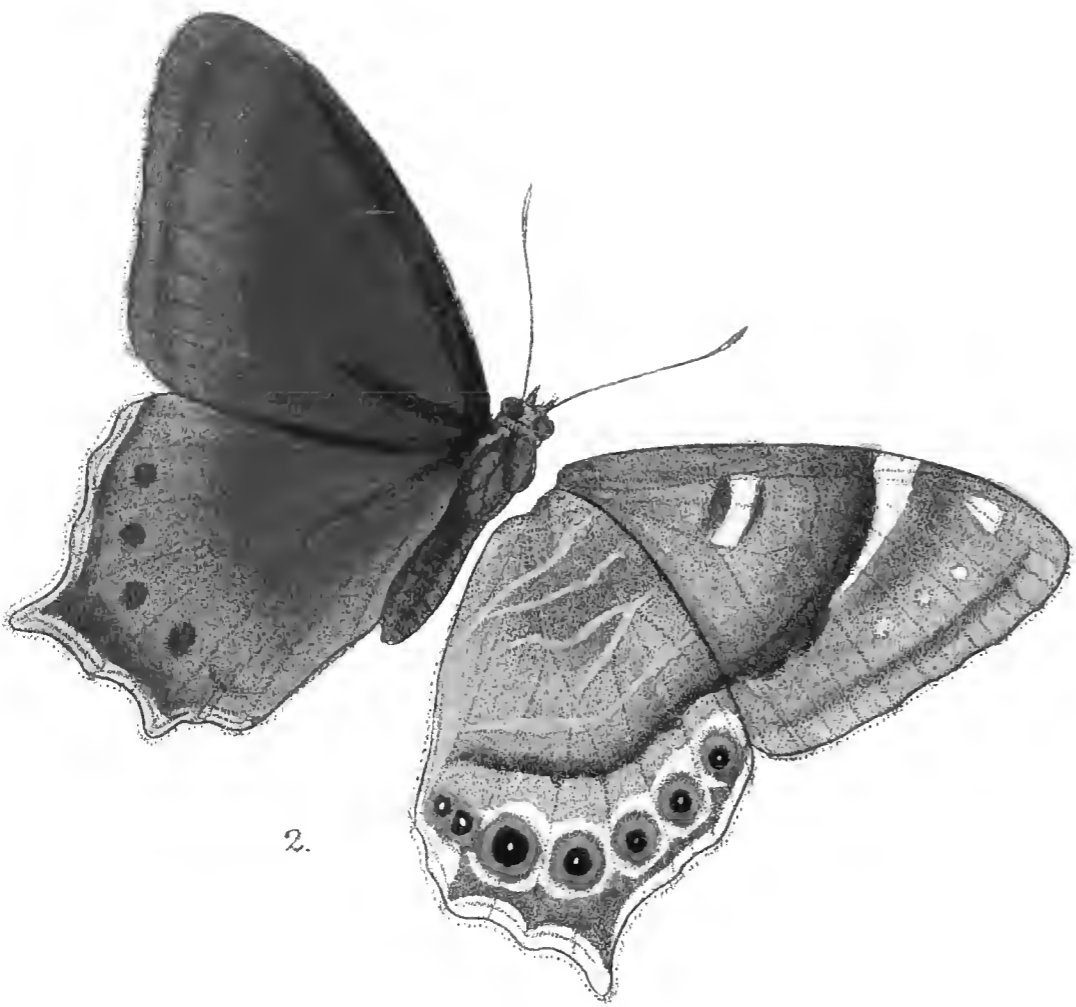
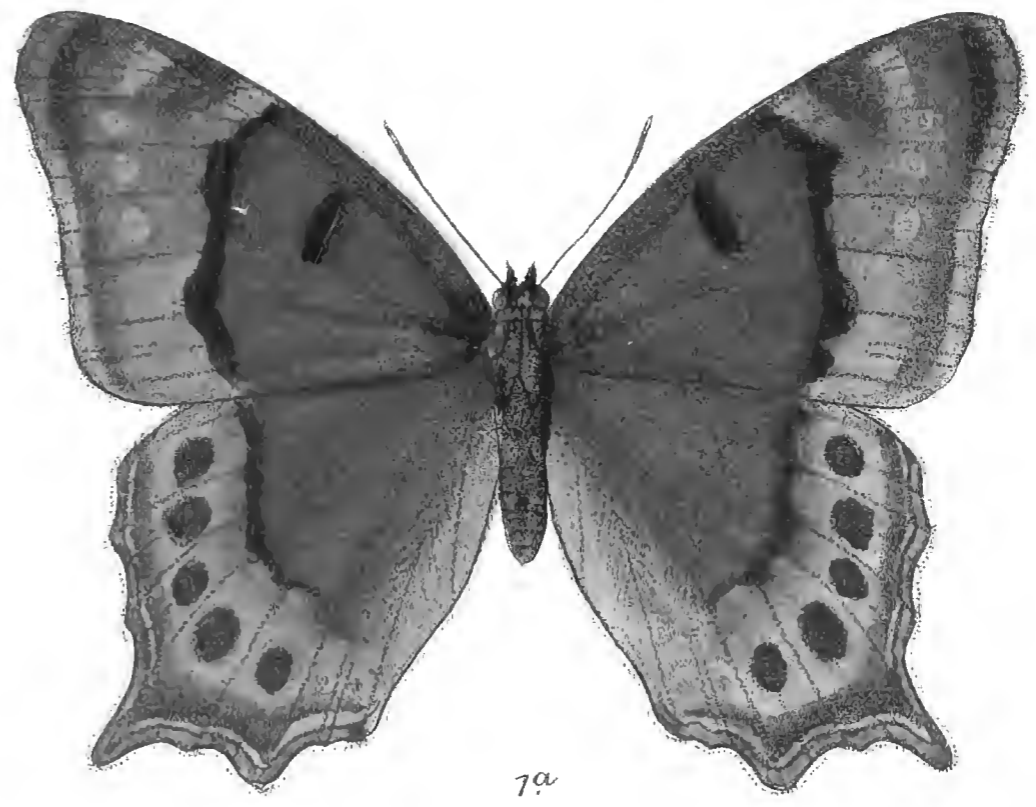
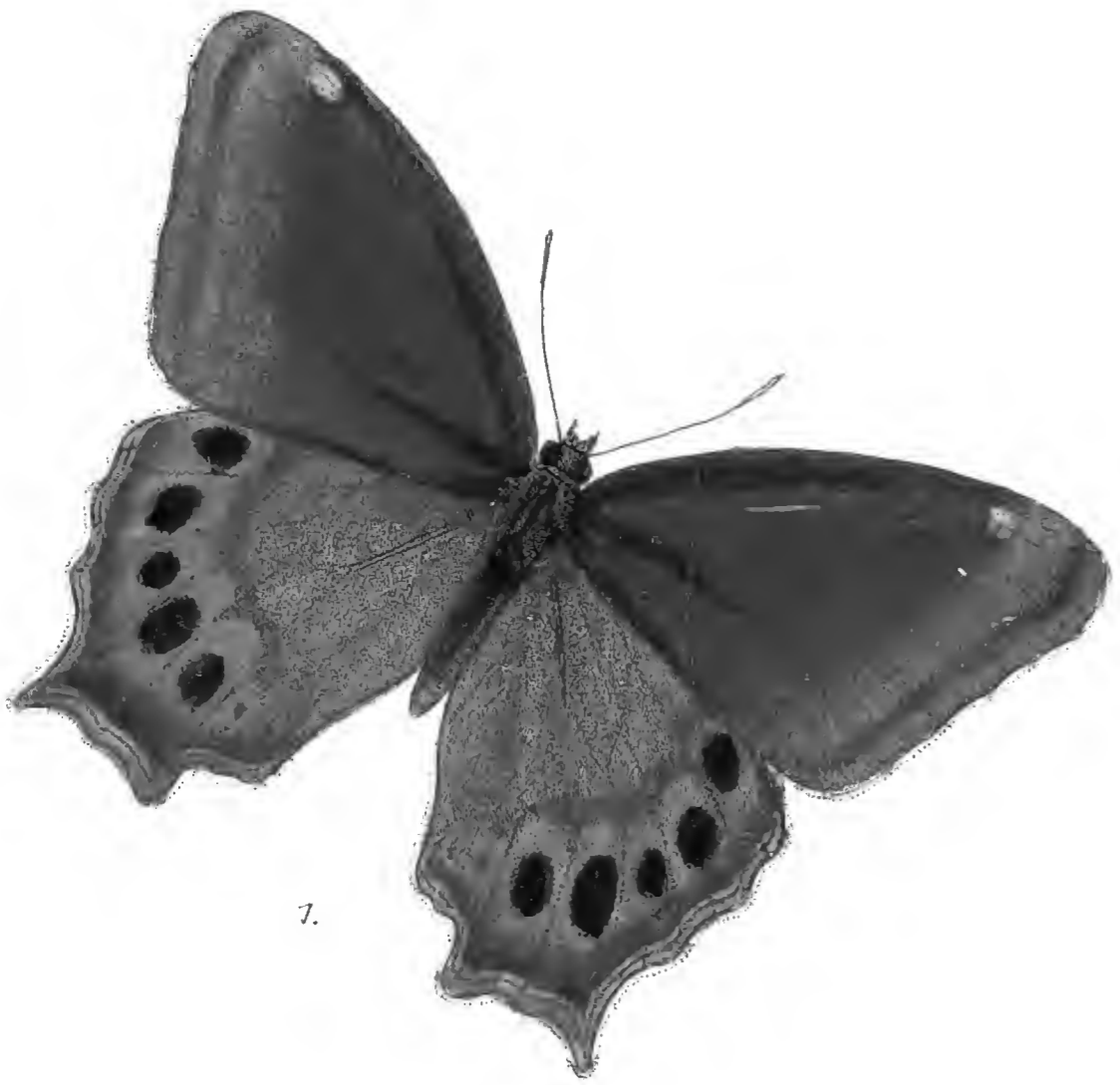
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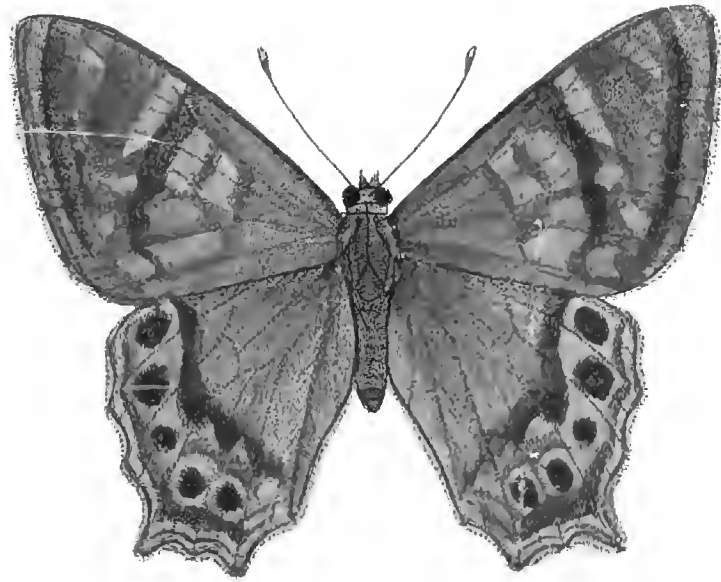
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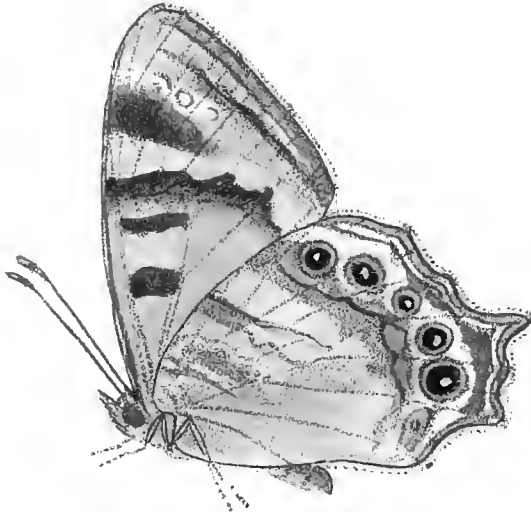
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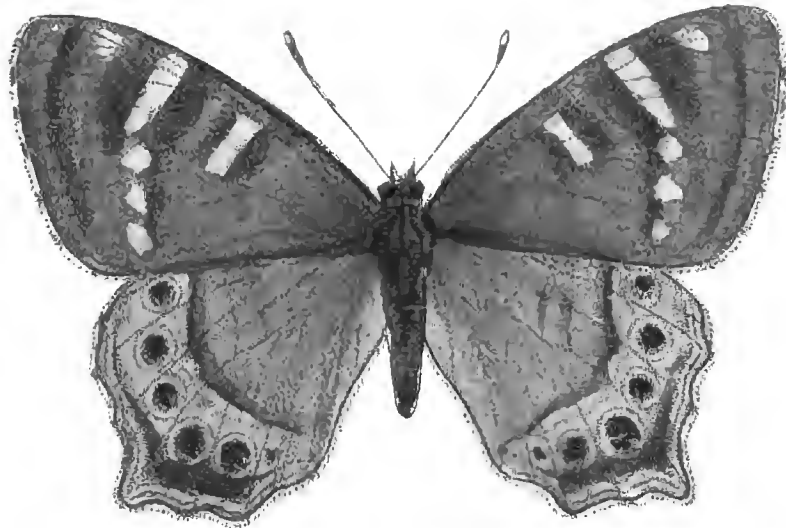
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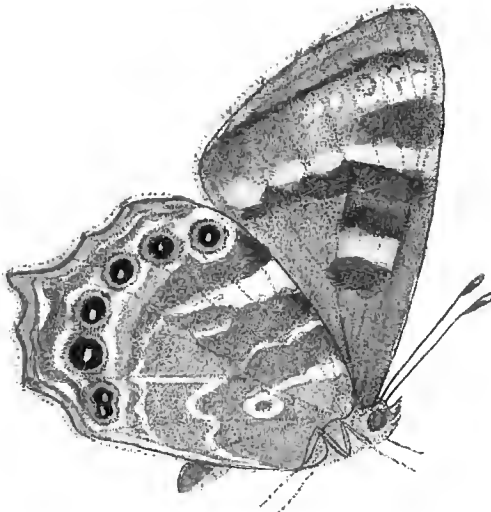
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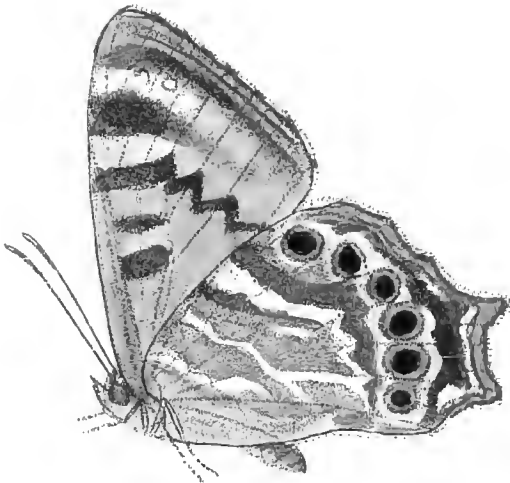
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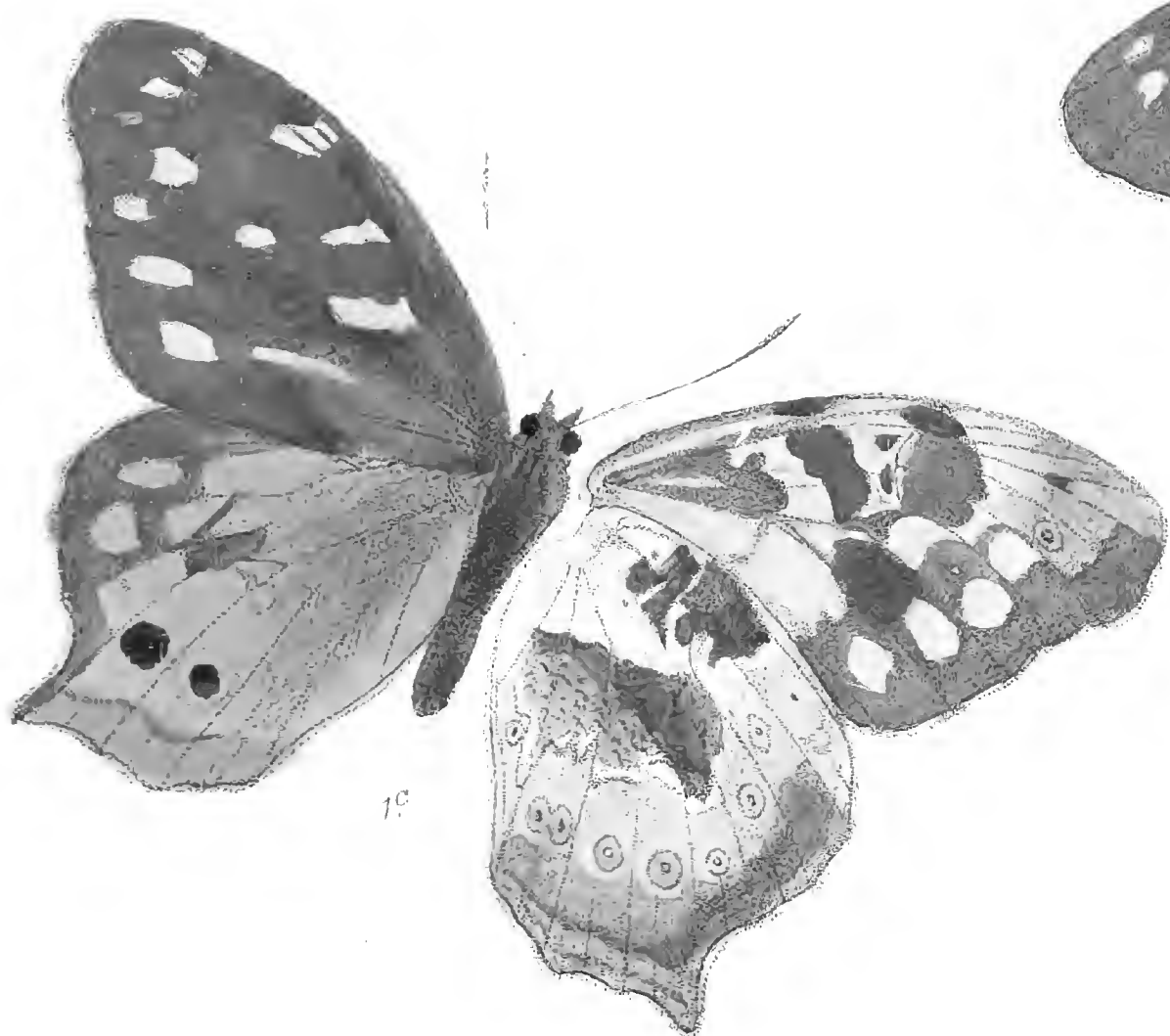
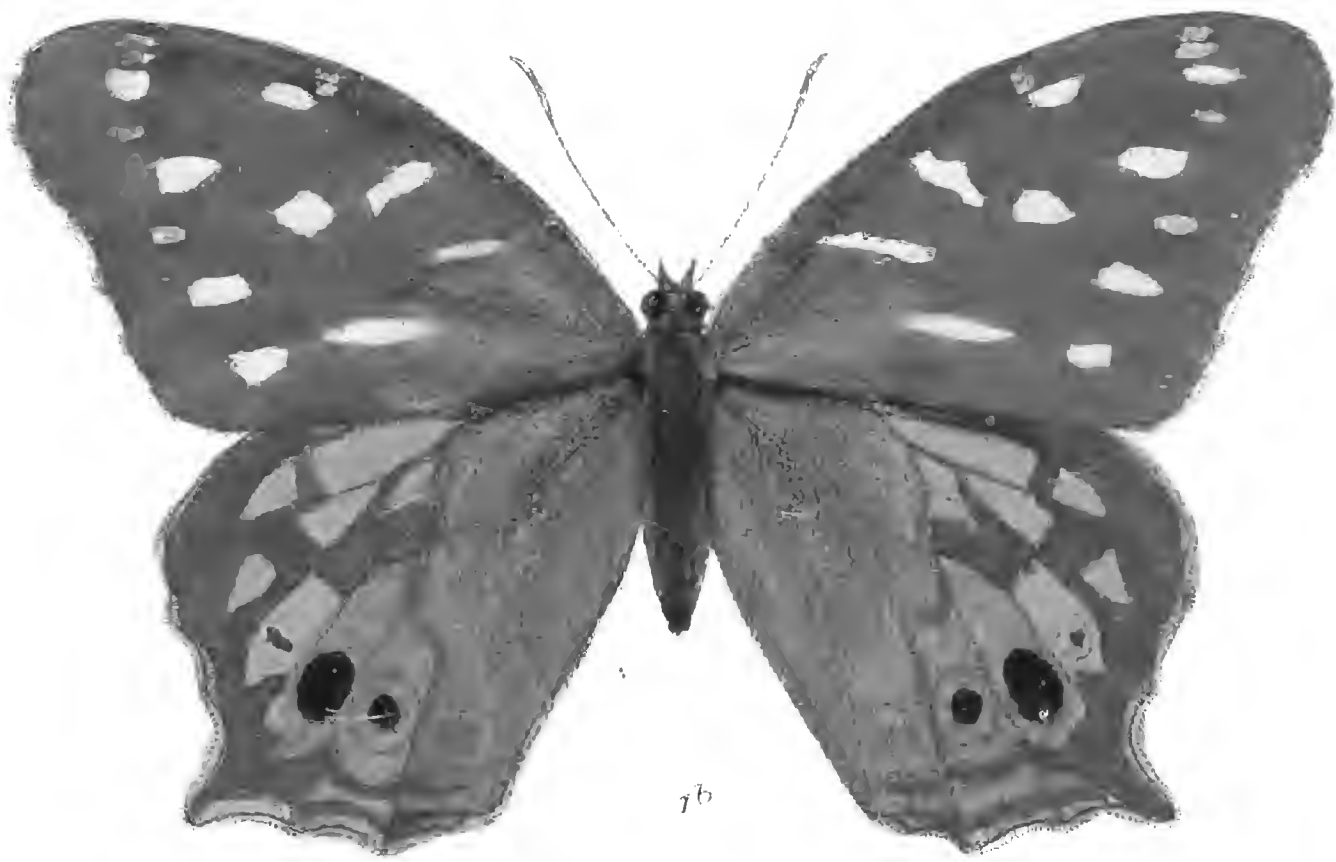
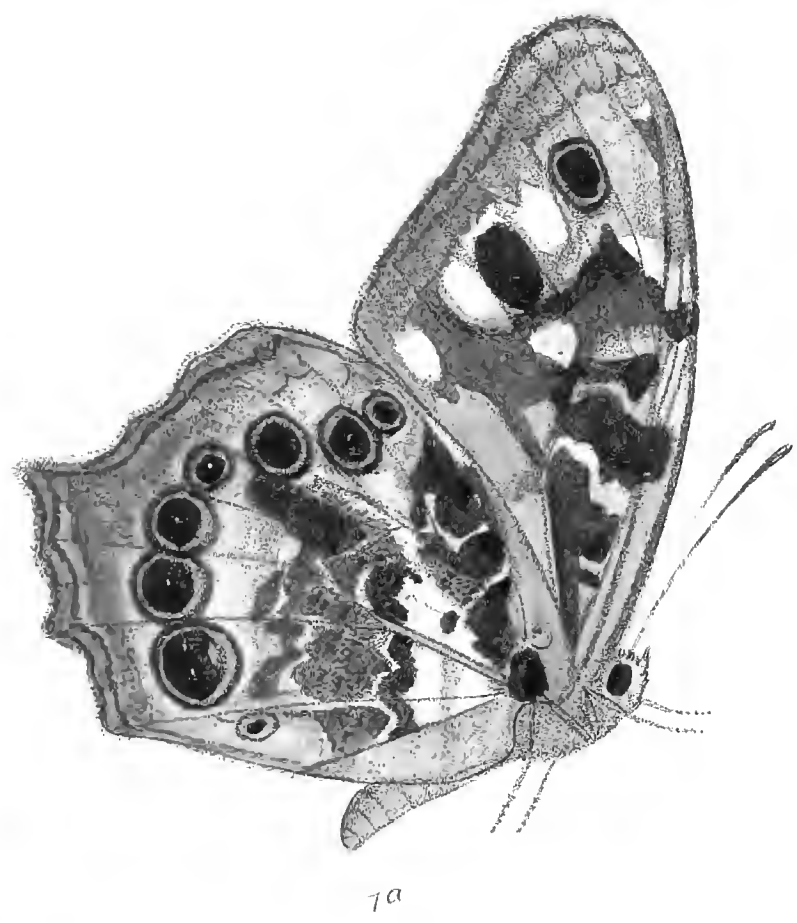
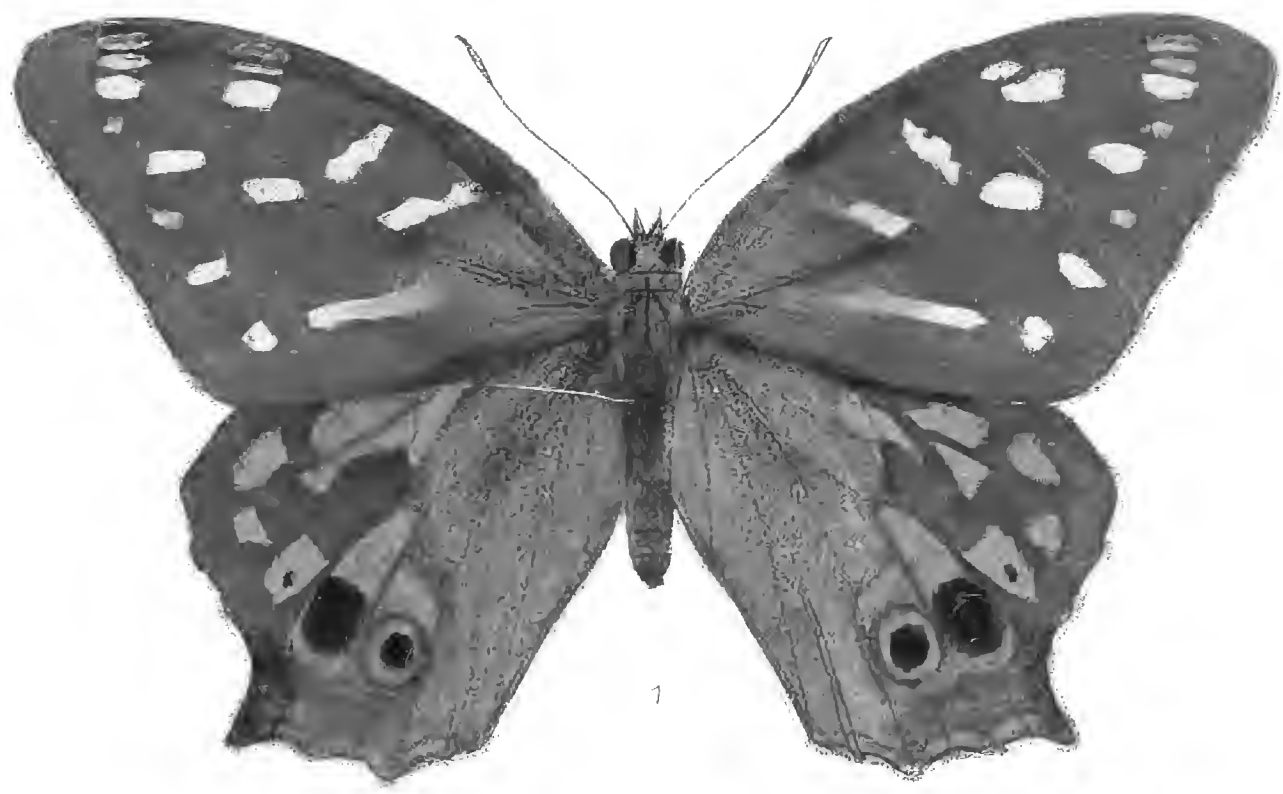


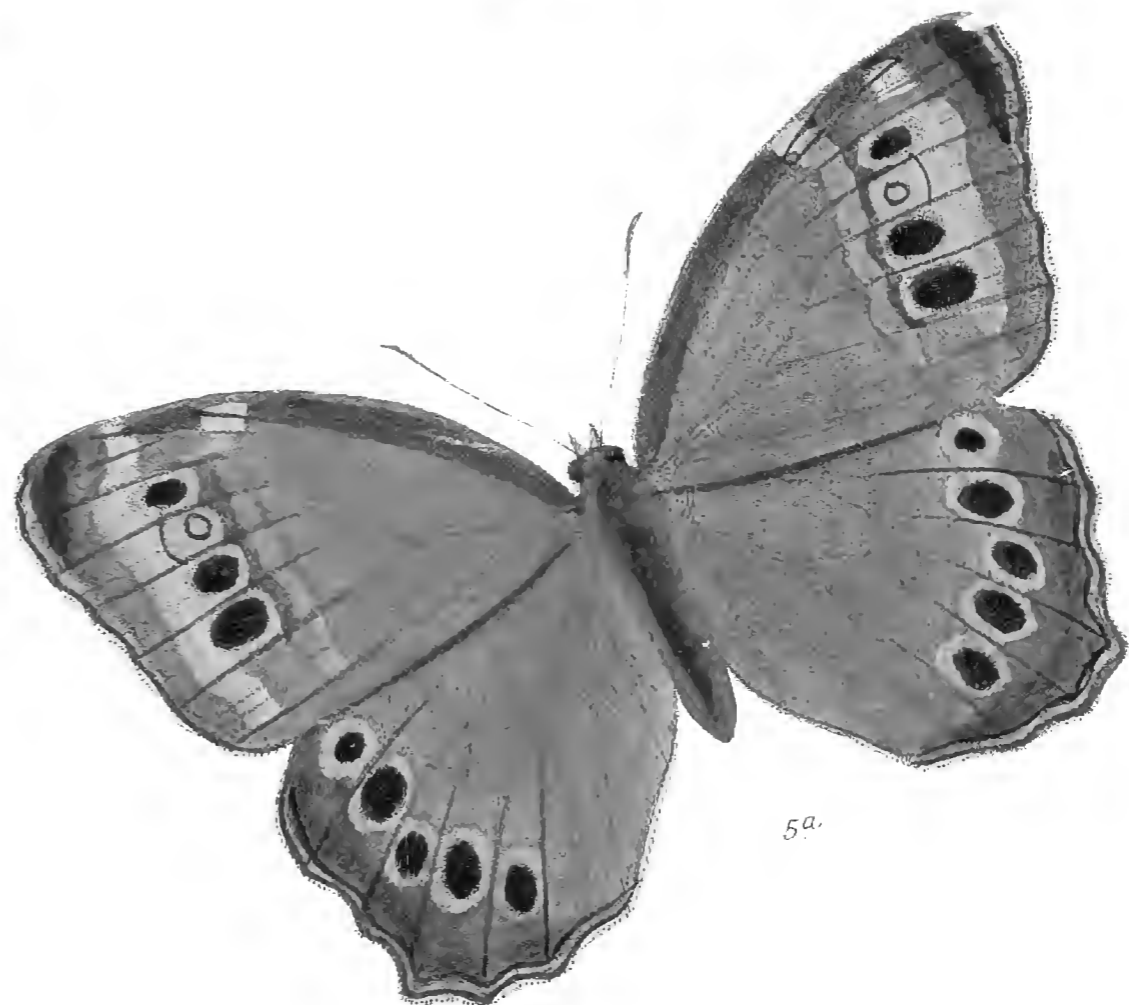
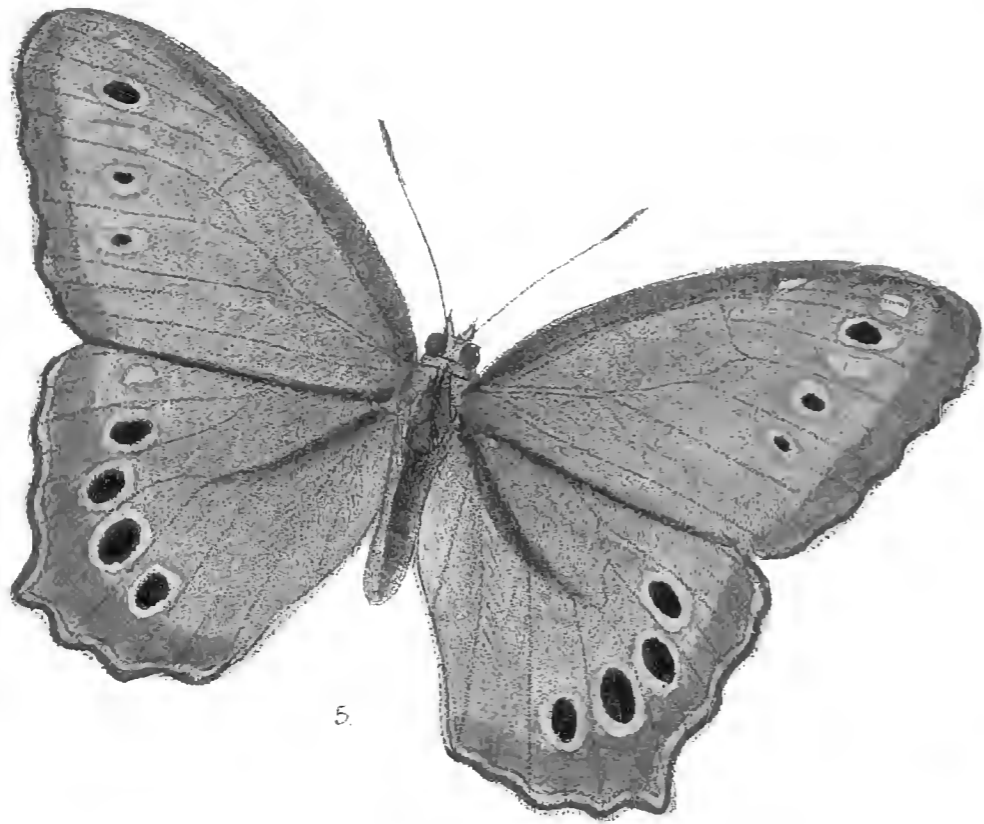
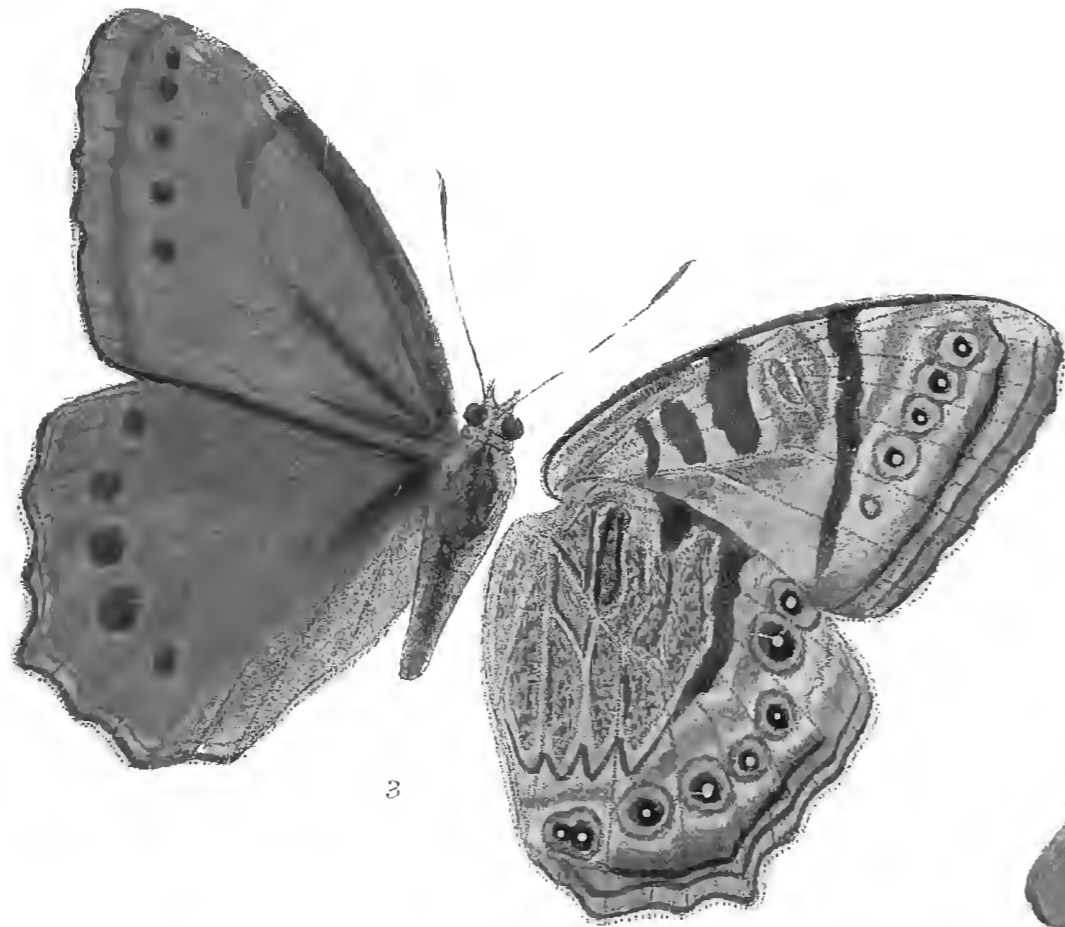
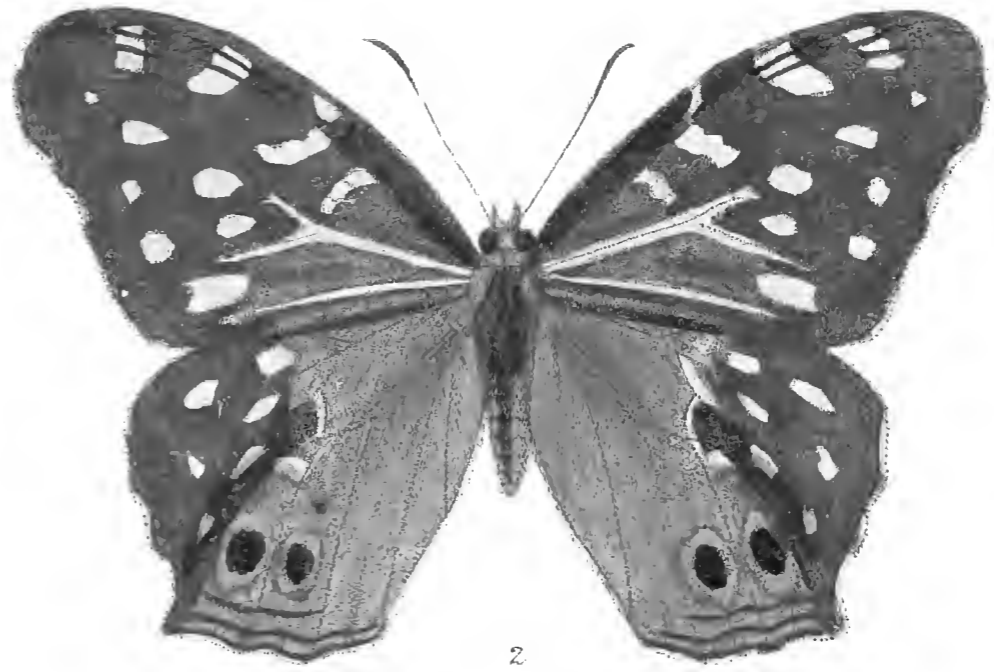
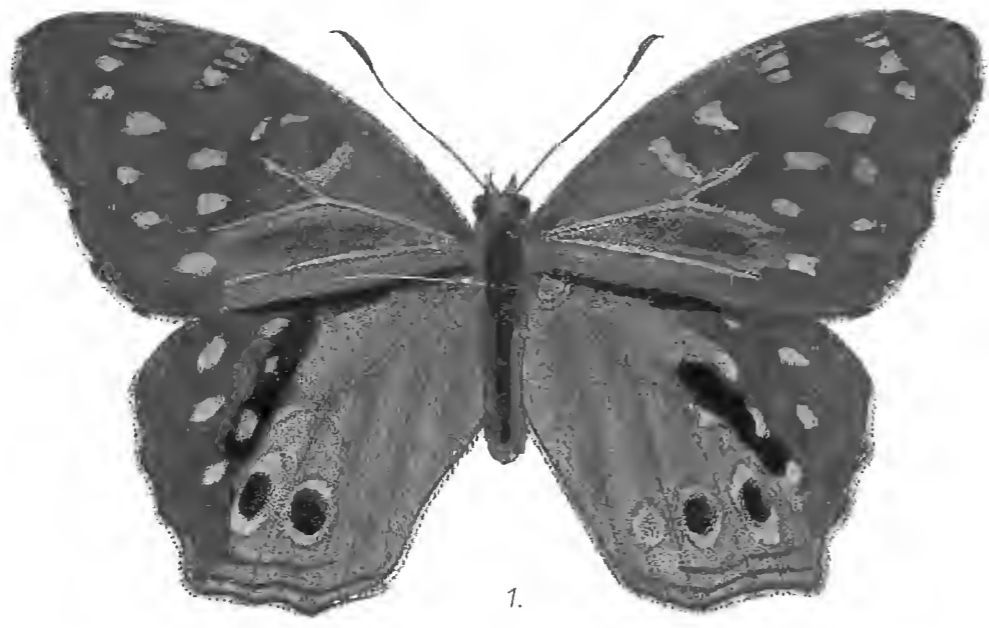
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