

of the epidermis and cortical substance, produced either by too great dryness or, especially, by too much moisture.

A closer investigation of feathers would perhaps explain the geographical distribution of colours modified by climatic influences, the formation of local varieties, or the parallel effects, often so curious, of captivity upon coloration.

XLIII.—*Contributions to an Insect Fauna of the Amazons Valley.*

COLEOPTERA: LONGICORNES. By H. W. BATES, Esq.

[Continued from p. 303.]

Group *Astatheinae*.

Genus PHÆA, Newman.

Newman, Entomologist, p. 13.

Syn. *Lamprocleptes*, Thomson, Arch. Entom. i. 377.

The chief character which distinguishes this genus from *Tetraopes* (the chief American representative of the group *Astatheinae*) is the form of the tooth of the claws. The tooth in *Tetraopes* is long and acute, running parallel to the claw itself, but much shorter; in *Phæa* it is very broad and short, adhering only to the base of the claw, as in the *Callianæ*. The eyes, as in the rest of the *Astatheinae*, are completely divided. The body is more or less elongate and linear.

Phæa coccinea, n. sp.

P. linearis, *brevis*, *coccinea*, *pube pallida sericea vestita*; *femoribus apice, tibiis, tarsis et antennis (basi exceptis) nigris*. Long. $3\frac{1}{2}$ lin.

Head as broad as the middle part of the thorax, bright red; eyes moderately prominent, black. Antennæ about as long as the body, filiform, hirsute, black, basal half of the first joint red. Thorax constricted near the front and hind margins, surface strongly elevated and smooth in the middle, clothed with long erect hairs; bright red. Elytra linear, bright red, clothed with fine pale silky pubescence (visible only in certain lights), and with erect hairs, strongly punctate-striate, the punctures fainter and more confused towards the apex. Body beneath and thighs yellowish red; apex of thighs, tibiæ, and tarsi black.

Santarem.

Group *Amphionychinae*.

[The *Amphionychinae* are distinguished from the *Phytœciinae* (both having bifid claws) by the sides of the elytra having a longitudinal carina extending from the shoulders.]

Genus LYCIDOLA, Thomson.

Thomson, Systema Cerambyc. p. 125.

The proposer of this genus has omitted to state the essential characters which distinguish it from *Spathoptera* and *Hemilophus*. These are furnished by the peculiar width of the sterna, especially of the prosternum, which is as broad as, or a little broader than, the mesosternum. The prosternum in *Spathoptera* is much narrower than the metasternum, and in *Hemilophus* it is reduced to a mere thread, almost concealed by the large coxæ. *Lycidola* is moreover distinguished from *Spathoptera* by the dilatation of the elytra commencing almost from the shoulders, by the breadth and shortness of the head, and the transverse thorax. The genus is founded on *Saperda palliata*, Klug (Entom. Bras. Specimen alterum, pl. 42. f. 11).

Lycidola simulatrix, n. sp.

L. nigra, breviter setosa; capite et thorace vitta laterali communi fulva; elytris apud medium fascia alba diaphana, apice singulatim rotundatis; femoribus basi flavo-testaceis. Long. 5-6 lin.

Head short and broad, the face extending a short distance below the eyes, and not dilated; black, face reddish; occiput on each side with an oblique fulvous stripe. Antennæ black; third joint one-fourth longer than the fourth, cylindrical; the fourth a little dilated; both densely hairy; the remaining joints shorter than the third and fourth taken together, and sparingly setose. Thorax considerably broader than long, coarsely punctured, except on the disk, which is smooth, deep black; sides each with a fulvous stripe. Scutellum black. Elytra dilated almost from the shoulders, and quite abruptly, at the apex singly rounded; disk punctured, and having on each three longitudinal carinæ, the two outer of which are united before the apex, and the inner one abbreviated; expanded sides shagreened and traversed by a flexuous carina; colour wholly deep black with a violet tinge, except a white diaphanous belt across the middle, interrupted at the suture. Body beneath and legs black; basal part of thighs testaceous yellow.

Var. Base of each elytron with a small fulvous spot in continuation of the thoracic stripe; lateral edge of the elytron also fulvous near the base (approaching *L. palliata*, Klug). Tapajos.

The typical form not uncommon at Ega, on leaves. The var. found only on the banks of the Tapajos.

Genus SPATHOPTERA, Serville.

Serville, Ann. Soc. Ent. Fr. 1835, p. 50.

Body elongated, dilated behind; facies of the genus *Lycus*.

Head somewhat prolonged on the vertex; face elongated and dilated below the eyes. Thorax short, a little narrower than the head. Elytra dilated from beyond the middle, apex briefly emarginated. Legs short; claws bifid. Prosternum narrower than the mesosternum. Antennæ about the length of the body, or a little shorter; basal joint greatly elongated, gradually and slightly thickened from base to apex, ciliated; third and fourth joints greatly elongated, hairy and ciliated beneath, sometimes very thickly ciliated; following joints short and sparingly setose. The lateral carina of the elytra is thick and prominent, and extends from the shoulder to the apex.

1. *Spathoptera capillacea*, n. sp.

S. elongata, postice dilatata, nigra; capite thoraceque vitta laterali fulva, fronte rufescente; elytris macula angulari humerali fasciaque lata pone medium fulvis; antennis articulis tertio et quarto haud dilatatis, infra pilis longis densissimis nigris vestitis. Long. 6 lin.

Head coarsely punctured; vertex elongated, shining black, with a fulvous vitta on each side behind the eye; face dull reddish, clothed with scant tawny pile. Antennæ a little shorter than the body, black; fifth and sixth joints reddish; third and fourth joints greatly elongated, neither of them thickened, but furnished on their under surface with a dense fringe of long thick hairs. Thorax coarsely punctured, shining black, with a fulvous stripe on each side. Elytra with their dilatation commencing a little before the middle, at first very gradual, at about two-thirds their length abruptly dilated; apex of each rounded, and offering a small triangular emargination; surface finely setose; disk closely punctured, and with two very fine raised lines, united before the apex (where alone they are distinct); dilated margins (outside the strong lateral carina) shagreened and traversed, to the apex, by a nearly straight carina; colour black, with a basal spot on each shoulder bent towards the suture, and a broad fascia beyond the middle, fulvous; the edges both of the humeral mark and the fascia irregular. Body beneath and legs black; coxæ and thighs beneath pale testaceous.

Ega.

2. *Spathoptera mimica*, n. sp.

S. elongata, postice dilatata, fulva, capite vitta laterali nigra, thorace lateribus maculaque triangulari dorsali nigris; elytris nigris, macula humerali angulata fasciaque lata pone medium fulvis; antennis breviter hirsutis, nigris, articulis quinto et sexto testaceis, quarto incrassato. Long. 6-7½ lin.

Head fulvo-testaceous, punctured; sides behind the eyes with a black stripe; vertex elongated, convex. Antennæ wholly clothed with shortish hairs, black; fifth and sixth joints pale

testaceous; fourth joint dilated. Thorax with a few large punctures and an elevated dorsal line fulvous; deflexed sides, and a triangular dorsal spot with the apex scarcely reaching the anterior margin, black. Elytra elongated, the dilatation commencing very gradually before the middle, and at two-thirds the length more abrupt; at the apex singly rounded and faintly emarginated; surface finely setose, closely punctured, and with two indistinct raised lines united before the apex; dilated margins (outside the lateral carina) shagreened, and traversed by a raised line from base to apex; colour black, with a basal spot on each shoulder (bending towards the suture), and a broad fascia beyond the middle, fulvous; the edges both of the humeral spot and the fascia jagged. Body beneath fulvo-testaceous; sides of breast black, and abdomen with two rows of brown spots. Legs black; coxæ and inside of femora testaceous.

Eggs; found only on leaves of trees in the deep forest.

Genus *HEMILOPHUS*, Serville.

Serville, Ann. Soc. Ent. Fr. 1835, p. 50.

The chief difference existing between this genus and *Amphionycha* resides in the antennæ, which in *Hemilophus* are formed almost the same as in *Spathoptera* and *Lycidola*: that is to say, the third and fourth joints are disproportionately elongated, occupying together, in some species, nearly one-half the total length of these organs; they are, besides, thickened and densely hirsute, sometimes ciliated. Both genera have a strongly elevated lateral carina, bifid claws, and very narrow prosternum. The elytra in *Hemilophus* are sometimes a little dilated before the apex, but in *Amphionycha* never show any trace of dilatation.

Hemilophus fasciatus, n. sp.

H. elongatus, sublinearis, ante apicem paulo ampliatus; capite fulvo, vitta laterali maculaque triangulari occipitali nigris; thorace nigro, vitta utrinque laterali fulva; elytris nigris, macula cuneiformi humerali fasciaque recta mediana fulvis; antennis nigris, articulo quinto basi rufo, articulis quarto et quinto paulo incrassatis, dense breviter setosis. Long. 5 lin. ♂.

Head tawny yellow, with a triangular spot on the occiput and a stripe behind each eye black; forehead convex and marked with a deeply impressed line. Antennæ a little longer than the body (♂); black, with the base of the fifth joint reddish; basal joint clothed with longish hairs; third and fourth joints together longer than the whole of the following joints, thickened, linear, densely clothed with short hairs; remaining joints clothed sparingly with very short hairs. Thorax coarsely punctured, leav-

ing smooth spaces on the disk, and having a deep transverse impression behind; black, with a fulvous vitta on each side of the upper surface. Elytra nearly linear, being very slightly dilated a little before the apex, the latter, on each elytron, presenting a very shallow emargination with a short spine at its outer side; surface densely punctured, partly in lines, and with several interstices slightly raised, black; a straight humeral spot, pointed behind, the basal part of the lateral edges, and a straight fascia about the middle fulvous. Body beneath tawny yellow; sides of thorax and breast and middle of the abdominal segments black. Legs black, base of thighs yellow.

Ega.

Genus TYRINTHIA, nov. gen.

This genus includes a number of species which agree with *Hemilophus* in the great length and dense clothing of the third and fourth (or, at least, the third) antennal joints, but differ in the absence of a distinct continuous lateral carina from the elytra. The vertically deflexed sides of the elytra form with the disk, in section, a distinct angle; but the carina is not apparent, except for a short distance from the shoulders.

I have adopted the name that the group bears in the rich collection of Mr. Alexander Fry.

1. *Tyrinthia capillata*, n. sp.

T. elongata, setosa, nigra; capite fulvo-flavo, supra nigro, vitta laterali fulvo-flava, inter antennis profunde indentato; thorace utrinque vitta laterali fulva; elytris elongatis, juxta apicem angustatis, apice singulatim rotundatis et brevissime emarginatis, supra punctato-striatis, macula humerali cuneiformi vittaque lata mediana fulvis; antennis nigris, ultra medium annulo lato flavo, articulo tertio longissimo, ciliato. Long. 5 lin. ♂.

Head coarsely punctured, forehead convex, mouth projecting, vertex deeply depressed between the bases of the antennæ, tawny yellow, the crown and occiput and a stripe behind each eye black. Antennæ as long as the body, black, with the apical half of the fourth, the whole of the fifth, and the base of the sixth joints yellow; basal joint elongate, gradually thickened and fringed with very long, fine hairs; third joint nearly as long as the whole of the succeeding joints taken together, not thickened, but furnished beneath with a continuous fringe of very long hairs; fourth joint not much longer than the fifth, and destitute of fringe. Thorax coarsely punctured, leaving smooth spaces on the disk, behind deeply impressed; fulvous, with a broad central and lateral vittæ black. Elytra linear, except very near the apex, where they are narrowed, the apex itself being

narrow and apparently entire, but showing, on close examination, a very shallow emargination and minute tooth; disk regularly and rather deeply punctate-striate, black, a wedge-shaped basal spot and a broad median vitta fulvous. Body beneath black; sterna and centre of the breast bright testaceous yellow. Legs black, base of thighs testaceous yellow.

S. Paulo, Upper Amazons.

2. *Tyrinthia scissifrons*, n. sp.

T. elongata, linearis, setosa, fuliginoso-nigra; fronte, vitta laterali thoracis lineolaque laterali elytrorum fulvo-testaceis; femoribus basi articuloque quinto antennarum rufo-testaceis; antennis articulis tertio et quarto biciliatis; fronte (maris) tumida, conica, apice fissâ. Long. 4 lin. ♂.

Head testaceous yellow, vertex and occiput black; upper part of the forehead (♂) conically produced and cleft at the apex, and antenniferous tubercles armed on the inner side with a conical prominence. Antennæ as long as the body, black, with the fifth joint reddish; basal joint on its upper side abruptly thickened, hairy; third and fourth joints together longer than the whole of the remaining joints, slightly thickened and furnished beneath with two fringes of long and fine hairs. Thorax coarsely punctured, and with a smooth dorsal line, black, a narrow stripe on each side pale testaceous. Elytra linear, singly rounded and entire at the apex; surface very closely punctured and furnished with three obtuse costæ, dull black; lateral edge and carina near the base dull testaceous. Body beneath dull black; base of thighs reddish testaceous.

Banks of the Tapajos and Ega, Upper Amazons. Mr. Fry informs me that the peculiar bilobed prominence of the head is found in the males of some Rio Janeiro species. *Hemilophus frontalis* of Guérin-Ménéville (Ins. rec. par Osculati, n. 265) belongs to this genus.

Genus ISOMERIDA, nov. gen.

This new genus is distinguished from *Hemilophus* by the antennal joints decreasing in length in regular proportion from the third joint to the apex, and by the fringe of hairs on their under surface existing in uniform density on all the joints. The only difference between *Isomerida* and *Amphionycha* lies in the shortness of the antennæ, which are not longer than the body, even in the males, and decrease greatly in thickness from the third joint to the apex.

I have adopted the name under which the genus stands in the collection of Mr. Alexander Fry.

1. *Isomerida albicollis*, Castelnau.

Hemilophus albicollis, Laporte de Castelnau, Animaux articulés, ii. p. 488.

I. elongata, linearis, postice paulo angustata, tenuiter setosa; capite thoraceque rufo-testaceis, cano interdum dense tomentosus; elytris punctatis, interstitiis duobus elevatis, apice truncatis, rufo-testaceis plus minusve fuliginosis, vel totis nigris; abdomine nigro, segmentis tertio et quarto dense cano tomentosus; antennis nigris, articulis basi testaceis. Long. $4\frac{1}{2}$ – $5\frac{1}{2}$ lin. ♂ ♀.

This common species is very variable in its coloration, and there is only a small proportion of examples which exhibit the white hue of the thorax, and these only in the dried state; in life, the thorax is always red. The truncature of the elytra is straight and offers a short tooth at the exterior angles.

It is found on the leaves of trees, and is a common and generally distributed insect throughout the Amazonian forests.

2. *Isomerida ruficornis*, n. sp.

I. robustior, elongata, linearis, postice haud angustata, tenuiter setosa, nigra; capite, thorace, antennis (apice exceptis) et pedibus (femoribus supra exceptis) rufis; elytris apice truncatis, angulis externis dentatis; abdomine segmentis tertio et quarto dense cano tomentosus. Long. 6 lin. ♂.

Head entirely red, depressed between the eyes. Antennæ stout, as long as the body, finely fringed beneath; third joint one-third longer than the fourth, the following becoming very gradually shorter; red, with the three apical joints tinged in the middle with dusky. Thorax thinly clothed with pale silky tomentum, visible only in certain lights; red, prosternum and circuit of the acetabula blackish. Scutellum black. Elytra slightly dilated a little before the apex, the latter straightly truncated, with the outer angles slightly produced; surface punctured and marked with one faintly raised line besides the lateral carina; deep black, shining. Breast and abdomen black; third and fourth ventral segments densely clothed with pale silky tomentum. Legs red, upper side of femora black.

Fonte Boa, Upper Amazons.

[To be continued.]

BIBLIOGRAPHICAL NOTICE.

Our Reptiles: a plain and easy Account of the Lizards, Snakes, Newts, Toads, Frogs, and Tortoises indigenous to Great Britain.
By M. C. COOKE. 12mo. London: Hardwicke, 1865.

ALTHOUGH the number of our British reptiles, even if we include the Batrachia among them, is very small, there is perhaps no other class of animals so generally misunderstood by the public at large.



Bates, Henry Walter. 1866. "XLIII. Contributions to an Insect Fauna of the Amazons Valley. Coleoptera : Longicornes." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 367–373.

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