

when I have examined more material I shall be able to detect some structural difference.

The following table of species may be useful :—

Table of Species of Apachys.

1. Pronotum ellipticum, lateribus convexis, antice angustatum.	
2. Processus analis ♂ haud rotundatus; ♀ lanceolatus vel rotundatus, angulis externis acutis.	
3. Processus analis ♂ lateribus emarginatus; ♀ margine postico rotundato.	1. <i>beccarii</i> , Dubr.
3.3. Processus analis ♂ lateribus parallelis; ♀ lanceolatus	2. <i>javanus</i> , Verh.
2.2. Processus analis ♂ subrotundus; ♀ acuminatus.	
3. Processus analis ♂ rotundato-pentagonalis; ♀ lanceolatus. (Statura maxima, 46-50 mm.)	3. <i>feæ</i> , Borm.
3.3. Processus analis ♂ rotundatus, ♀ subrotundus, medio subacutus.	
4. Elytra testacea, fusco-limbata. (Species Africana.)	4. <i>depressus</i> , P.-B.
4.4. Elytra unicoloria fusca.	
5. Pronotum fuscum. (Species Africana.)	5. <i>murrayi</i> , Dohrn.
5.5. Pronotum testaceum. (Species Sundai.)	6. <i>chartaceus</i> , Haan.
1.1. Pronotum fere quadratum	7. <i>corticinus</i> , n.

A. pascoei, Kirb. Journ. Linn. Soc., Zool. xxv. p. 521, pl. xx. fig. 1, ♂ (1896), = *A. feæ*, Borm. (1894).

A. reichardi, Karsch, Berl. ent. Zeit. xxx. p. 85, pl. iii. fig. 3, ♂ (1886), = *A. murrayi*, Dohrn (1863).

VII.—*Description of some new Species of Tabanidæ, with Notes on some Hæmatopota.* By GERTRUDE RICARDO.

Pangonia elongata, ♀, sp. n.

A new species from Kilimanjaro (*Hannington*), 85. 60.

Type (female) and another female.

This species belongs to the group of South African *Pangoniæ* (*Rondani*) with white bands on the abdomen, and is nearly related to *P. sexfasciata*, Wlk., from which it may

be distinguished by the narrower abdomen and by the presence on the underside of four narrow white bands, whereas in the Walker species there are only two white bands; the palpi are slenderer and tapering to a longer point and the wings have a dark apex. From *P. conjuncta*, Wlk., it may be distinguished by the narrower abdomen and by the greater number of white bands.

Black. Abdomen with four white bands. Wings brownish, yellow on the fore border, the first posterior cell closed, pedunculated, with an appendix on the fork of the third longitudinal vein.

Face dull black, covered with grey tomentum, the cheeks shining black, the tomentum is, however, continued to the base of the eyes as a narrow yellowish border, the few hairs on the face are white; forehead covered with yellowish tomentum above the antennæ, posteriorly to the vertex deep black, furrowed, with some whitish pubescence which becomes yellow on the vertex; ocelli present. Antennæ and palpi black, the latter long and slender, the second joint tapering to a long point. Beard abundant, white; hairs round the head white. Proboscis shorter than the thorax. Eyes bare. Thorax black, somewhat shining, with very short yellow pubescence and some grey tomentum on the sides; scutellum more densely covered with the yellow pubescence, the breast-sides brown with dull yellowish hairs. Abdomen long and rather narrow; the first segment with some faint yellowish pubescence on the posterior border; the white band on the second segment entire, broader than the others, with its greatest width at the sides; on the third, fourth, and fifth it is entire but much narrower and the same width throughout; on the sixth segment there is a narrow border of yellow pubescence, and on the sides of the fifth and sixth some yellow hairs; the pubescence on the dark-coloured part of the abdomen is black; the underside is black, with four narrow white bands. Legs blackish brown, some yellow pubescence on the middle and posterior femora and tibiæ and orange hairs on the underside of the first joint of the posterior tarsi. Wings with the yellow fore border only continuing as far as the stigma and to the base of the discal cell; veins yellow on fore border, elsewhere brown.

Length 16 mm.

Corizoneura distincta, ♀, sp. n.

A new species from Voi, British East Africa, 15. iv. to 13. v. 97 (*C. S. Betton*), 98. 12.

Type (female) and three other females.

This species is distinct in colouring from any species of *Pangonia* from Africa known to me as yet.

Blackish-brown species, with dull yellowish-grey bands on the abdomen; palpi and antennæ reddish.

Face short, shining, black, with a centre band of grey tomentum, which also covers the cheeks and lower part of the face, so that the shining black portion appears as a large oval spot on each side. Forehead long, obscurely black, covered with dense yellowish tomentum, which, however, is more or less absent in the middle of the forehead and at the vertex. Antennæ bright reddish yellow, the first two joints duller in colour, with a few yellowish hairs. Palpi reddish yellow, long and slender, the first joint longer than the second, which is wide at base, curved, and tapering to a moderately long point, furrowed on the upper surface, with some black pubescence. Proboscis nearly as long as body. Eyes bare. Beard white. Thorax brown, densely covered with short fulvous pubescence; sides and breast with yellowish hairs, the scutellum the same. Abdomen blackish; the first segment slightly red at the sides, densely covered with dull dirty grey tomentum, with some scattered whitish hairs; on all the remaining segments a narrow band of the same-coloured tomentum is present on the posterior borders, extending in the middle as a triangular spot, which last is most distinct on the second segment, where the band is slightly broader; the pubescence at the sides is whitish, on the grey bands are a few scattered white hairs; underside blackish, with short grey pubescence, the extreme side-borders of the sixth and seventh segments are reddish. Legs light reddish, hind legs brownish. Wings hyaline, veins reddish brown, the first posterior cell narrowed but open; a long appendix on the fork of the third vein.

Length 17 mm.

Corizoneura obscura, ♀, sp. n.

A new species from Blantyre, British Central Africa, Nov. 1904 (*Dr. J. E. S. Old*).

Type (female).

This species is probably related to *P. chrysopila*, Macq., and *P. nobilis*, Wied., both authors apparently describing one and the same species, in which case Macquart's name must be merged as a synonym of *P. nobilis*, Wied. Both descriptions speak of the face and forehead as being reddish,

whereas in this species the face and forehead are both black and the gold bands on the abdomen are absent.

A black species with brownish wings, some golden pubescence on the thorax and on the sides of the abdomen. Legs yellow, femora black.

Face black, shining, the cheeks dull black, the pubescence black, a few yellow hairs being intermixed. Forehead black, obscurely red near the antennæ, with light half-moon circles round their base; from the base of the frontal heart-shaped callus proceed three short furrows on each side, from its apex spring the beginnings of four raised lines which resolve themselves at once into the broad shining frontal stripe; on the vertex is a large red, oblong, ocelligerous tubercle. Antennæ dull red; palpi red, large, the second joint twice as long as the first, broad at its base, tapering gradually to a point, with a furrow on its basal half. Proboscis as long as the thorax, which is dull black with golden pubescence on the shoulders, on the sides of the suture extending halfway across the dorsum and on the posterior border, and a tuft at base of wings; the scutellum has traces of similar pubescence on its posterior border. Abdomen black, somewhat shining, very obscurely red on the sides of the second segment, with yellowish-white pubescence on the sides of the first and second segments and traces of similar pubescence on the third and fourth; the fifth, sixth, and seventh are red on their extreme lateral margins; the dorsum of the abdomen is finely punctuate, apparently devoid of pubescence; the underside is black, shining, with fine white hairs on the sides of the segments, most noticeable on the second one. Legs yellowish, the femora reddish brown, the apices of the tibiæ and tarsi dull red. Wings hyaline, brown at the apex; veins red on the fore border and at base, elsewhere brown, with an appendix; the first posterior cell is open, but very narrow where it attains the border.

Length 18 mm.

Hæmatopota cilipes, ♀, Bigot, Nouv. Archiv. Mus. Hist. Nat. Paris, 1890, vol. ii. p. 205.

The type came from Laos, a district of Siam, and was seen by me in the Paris Museum after my paper on *Hæmatopota* had gone to the printers.

It should go in the table published on p. 114 of the Ann. & Mag. Nat. Hist. (7) xviii. (August 1906), under the heading "15" preceding *H. lata*, Ricardo, thus:—"Black

species, with all the tibiae densely fringed and the posterior femora with white hairs on their lower border." The hind tibiae have a very thick black fringe, and with the white-haired femora should easily distinguish the species. The antennae are long, the first joint being longer than the second and third together and is a little incrassate; the second is very small, the third rather long and slender. The wings are of the ordinary type and have three distinct rosettes, the apical band reaching across the apex; the appendix is long. The frontal callus is large, reddish, with the black paired spots above.

Haematopota singularis, ♀, sp. n.

Type (female) from Nhatrang, Annam, 22. x. 1905 (Dr. Vassal).

This species I had placed under *H. cilipes*, Bigot, in my paper on *Haematopota* in Ann. & Mag. Nat. Hist. (7) xviii. (August 1906) p. 126; but since that was published I have had the opportunity of examining the type of *H. cilipes* in the Paris Museum, and find this is quite a different species, not previously described; it is related to *H. rubida*, Ricardo, from Burmah, in the wings and also in the fringed incrassate hind tibiae, but differs from it in having all the femora and tibiae fringed, in this resembling *H. cilipes*, Bigot, and *H. lata*, Ricardo, with which it should be placed in the table on p. 114. It is a handsome small black species with densely hairy legs, and is immediately noticeable by the pale streak across the brown wings, which have no rosettes apparent, thus differing with *H. rubida* considerably from the other described species of *Haematopota* from the Oriental Region. In the shape of the antennae it resembles *H. rubida*, with the long incrassate first joint, the very small second joint, and the broad basal division of the third joint, the last division being small and short.

Face grey, the whole upper part deep black, the lower half grey, with white hairs; the beard and underpart of head also with white hairs. Palpi yellow, with short black pubescence and some longer white hairs. Frontal callus black, shining, narrow, almost reaching the eyes; forehead brownish, with grey markings surrounding the two black spots and continued across the forehead; there is a tuft of white hairs on each side of the forehead on the outer border of the black spot and reaching the frontal callus; on each side of the forehead bordering the eyes there is a narrow grey border of tomentum. Antennae yellow, in shape as described above, with long black

pubescence on the first and second joints; the third is bare. Thorax black, with three short grey stripes, the centre one shortest, none reaching the posterior border; the sides grey; the posterior border of thorax is fringed with white hairs; the pubescence on the dorsum black, short, with some white pubescence on the stripes and on the sides; above the root of the wings there is a black tuft of hairs, with some long white hairs below. Scutellum appears yellowish, bordered with a fringe of white pubescence. Abdomen deep black, the second, third, and fourth segments with white segmentations; the pubescence black, with white hairs on the sides of the dorsum of second segment, on the white segmentations, and on the sides of the first segment, on the sides of the other segments chiefly black; underside the same, but more hairy. Legs all with fringes of black hairs, which are least thick on the middle femora; they are brown in colour, with two yellow rings on the middle and posterior tibiæ, and the base of the fore tibiæ is yellow; the middle and posterior femora are largely yellow; the fore tibiæ and femora with wholly black fringes, long on each border of the femora, long on the outer border and short on the inner border of the tibiæ; the middle femora with whitish pubescence forming a scanty fringe on their lower borders, with some thick black hairs at apex; the middle tibiæ with a fringe of coarse black hairs on each border and white and black pubescence on the dorsum; hind femora with very thick black and white pubescence; the hind tibiæ broad, flat, with fringes of short black hairs on their borders and black and white pubescence on the dorsum; tarsi with short black pubescence; the middle and posterior tarsi are almost wholly yellow. Wings dark brown, the pale streak is continuous from the round pale spot above the stigma to beyond the apical cell; the pale markings of the apex and the external border are so placed that, viewed by the naked eye, a second pale streak is seen divided from the first by a brown parallel band, with a few brown markings on it, but no rosettes are apparent.

Length 8 mm.

Hæmatopota pachycera, ♀, Bigot.

This type from Cambodia (the description gives Laos) is also in the Paris Museum.

This species would come under heading "15" in my table of Indian and Ceylon species next to *H. lata*, Ricardo, from which it is distinguished by the hind tibiæ not being fringed, and the third joint of the antennæ is wider and shorter. It

resembles *H. rubida*, Ricardo, in the antennæ. Bigot seems to have overlooked the second joint, which is very small, and described the third joint as the second one; the first joint is long, cylindrical, and the third joint very wide, the basal division being large and swollen, the remaining divisions very small. The abdomen is black, with the segmentations grey; the two rows of spots mentioned by Bigot are hardly noticeable. The legs have two rings of light colour on the middle and posterior tibiæ, and the base of the fore tibiæ is yellowish. The wings have two indistinct rosettes.

VIII.—*New Eastern Lepidoptera.*

By Colonel C. SWINHOE, M.A., F.L.S., &c.

Family Satyridæ.

Genus LYELA, nov.

Fore wing triangular; costa arched, apex somewhat rounded, hinder angle much rounded, lower margin straight: hind wing with the costa and outer margin evenly curved; venation of both wings as in typical *Cænonympha*. Palpi very hairy, third joint long, with the long hairs of the other joints extending beyond the tips; antennæ slender, about half the length of the costa, the club large, oval, spatulate, and very flat. No secondary sexual characters.

Type *L. macmahoni*, nov.

Erebia myops, Staud., belongs to this genus and has similar antennæ and shape. Dr. T. A. Chapman, in his "Review of the Genus *Erebia*," based on the examination of the male appendages, in Trans. Ent. Soc. 1898, p. 233, states that he places *myops* by itself.

Lyela macmahoni, nov.

♂ ♀. Palpi blackish brown above, white beneath; antennæ above black, with broad white rings, below white, with narrow black rings, the club white beneath; head and body black above and below; eyes black, white beneath, with a white spot behind; legs blackish brown above, greyish ochreous white beneath. Wings of a uniform blackish brown, nearly black in some males, always darker below than above: fore wings with a large, blackish, subapical, round spot, with a broad dull orange ring round it; in two examples (a male



Ricardo, Gertrude. 1908. "VII.—Description of some new species of Tabanidæ, with notes on some Hæmatopota." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 54–60.

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