

XIII. — ON SOME NEW SPECIES OF CARABIDAE FROM SUMATRA
CONTAINED IN THE COLLECTION OF THE LEYDEN MUSEUM.

BY H. E. ANDREWES.

With the kind permission of the Director of the Leiden Museum and the able assistance of Mr. H. C. BLÖTE, to whom I am much indebted for his services, some hundreds of specimens of undetermined Sumatran Carabidae have, during the past few months, been sent to me for identification. Among these I have found examples of one new genus and ten new species, which are described in the succeeding pages. Some of these species were represented only in the Leiden Museum, but of others I found specimens in the collection of the F. M. S. Museum, Kuala Lumpur, while my own collection contained examples of four of them. Some of the type specimens are in the Leiden Museum, some in the British Museum, and some in my collection, as mentioned at the close of the respective descriptions.

Tachys blötei sp. n.

Length: 2.4 mm.

Brownish red, joints 2 to 5 of antennae and disk of elytra a little darker, apex of elytra paler, joints 6 to 11 of antennae yellowish white.

Head with deep single furrows, diverging behind, eyes moderately prominent, mentum with two pores, antennae filiform, joint 2 a little longer than 3. *Prothorax* cordate, a half wider than long, sides strongly rounded, sinuate close to base, which is barely as wide as apex, hind angles sharp, slightly acute, strongly reflexed, projecting a little laterally, without carina; median line fine, basal sulcus deep, punctate, interrupted, and with a large pore at middle. *Elytra* moderately convex, with square shoulders, two fifths longer than wide, border neither dentate nor perceptibly setulose, rounded at shoulder and reaching stria 4; striae 1 and 2 fairly deep, punctate, slightly arcuate, 1 reaching apex, but barely reaching base, 2 interrupted behind, deep near apex, 3 bent inwards towards base, but only represented by a few punctures in front of the dorsal pore, 4 and 5 just traceable here and there, 8 deep behind, represented elsewhere by pores, striole long, deep and curved, ending on middle of elytron, its pore far back near apex; front dorsal pore large, on stria 4, at about a third, hind one in the hook of the striole. Microsculpture of prothorax and elytra inappreciable, but some transverse meshes

are just visible on head. Prosternum longitudinally sulcate, metasternal process bordered, venter entirely without pubescence.

In my Revision of the oriental species of the genus *Tachys* the species will come near *T. lissonotus* Andr. (vide Ann. Mus. Civ. Gen. LI, 1925, pp. 342 and 356), but it is both smaller and narrower, the apical joints of the antennae very pale, the disk of the elytra only slightly clouded, the striae less impressed, 4 almost invisible.

Manna (M. KNAPPERT), 14 ex. The type is in the Leiden Museum.

Craspedophorus mannae sp. n.

Length: 9—10 mm. Width: 3.4—4 mm.

Black, elytra with two small orange spots on each, the front one transverse, behind shoulder, from stria 4 to margin and including half the epipleuron, hind one quadrate, on intervals 5—8. Surface rather densely pubescent.

Head constricted behind eyes, frontal foveae fairly deep, eyes prominent, antennae reaching basal fourth of elytra, surface coarsely and confluent punctate, clypeus and neck smooth; labrum emarginate, the two middle setae somewhat removed from the margin, mentum wide, with rounded lobes, the sinus and tooth both small. *Prothorax* rather flat, three fourths wider than head, a fourth wider than long, rather more contracted in front than behind, widest at about a third from base, front angles adjoining neck, sides narrowly bordered, nearly straight in front and behind, sharply rounded at the widest point, slightly reflexed behind, hind angles obtuse, surmounted on each side by a minute rectangular tooth; median line slight, but visible, the foveae moderately deep, but ill defined, surface coarsely and in some places confluent punctate. *Elytra* convex, ovate, a third wider than prothorax and a half longer than wide, shoulders rather square, a slight emargination on each side before apex; punctate-striate, the striae deep, the intervals convex, the surface covered, though not densely, with fine, shallow punctures. Microsculpture of elytra distinct, formed by meshes about twice as wide as long as wide; on both head and prothorax it is very indistinct. Underside coarsely, but middle of venter finely punctate, metepisterna a half longer than wide, front margins of ventral segments crenulate where exposed. Tarsi pilose above and beneath.

Allied to *sundaicus* Oberth., and similar in size, but the elytral spots are both smaller and darker; prothorax widest at a point rather nearer base, the sides less reflexed and with hardly a trace of sinuation behind, the striae of elytra not so deep and the intervals less convex.

Manna (M. KNAPPERT), 7 ex. The type is in the Leiden Museum.

Acupalpus ustus sp. n.

Length: 3—3.2 mm.

Brown above, ferruginous beneath: head and elytra (except first interval, border, and extreme apex) piceous, palpi, antennae, and legs flavous. The elytra are slightly iridescent.

Head convex, smooth, clypeal suture and the oblique furrows on each side of it fairly deep, eyes moderately prominent, antennae extending to about basal fourth of elytra. *Prothorax* subcordate, a fourth wider than head and as much wider than long, base slightly bisinuate, as wide as apex, sides narrowly bordered, gently sinuate in front and then nearly straight to base, with only a suggestion of sinuation, the seta at apical third, the widest point, hind angles slightly reflexed, sharp, though a little obtuse; median line very fine, transverse impressions both moderately deep at middle, basal foveae deep and rounded, coarsely but not very closely punctate, the punctures hardly reaching middle of base, surface otherwise fairly smooth and impunctate. *Elytra* moderately convex, a little more than a half wider than prothorax and a little less than a half longer than wide, widest behind middle, shoulders square, apex obliquely truncate; striae moderately impressed, microscopically punctate, intervals slightly convex, more convex near apex, a short scutellary striole present, 3 with a pore at apical third, adjoining stria 2, marginal series interrupted, surface smooth. No appreciable microsculpture. Prosternum glabrous, metepisterna twice as long as wide, last three ventral segments punctate and pubescent.

The species is not much like the palaeartic representatives of the subgenus *Anthracus*, but is nearer to the Australian *brunnicolor* Sloane. Smaller than the Australian species, the colour less uniform, the antennae pale; prothorax relatively smaller, the hind angles not rounded, the basal foveae deeper, more sparsely but more coarsely punctate, the elytra a little dilated behind and with a shorter striole.

SUMATRA: Soersel, 1 ex., and Moeara Lamboe, 1 ex. BORNEO: Pontianak, 2 ex., received some years ago from Mr T. G. SLOANE. Type (Borneo) in my collection.

Trigonotoma lucida sp. n.

Length: 12—13 mm. Width: 4.1—4.5 mm.

Black, highly polished and faintly iridescent; palpi and joints 6 to 11 of the antennae ferruginous, tarsi piceous.

Head long, convex, neck dilated, a slight constriction behind eyes, frontal foveae short, deep, linear, sinuate, labrum deeply emarginate, eyes flat, mentum wide, with a short bordered tooth, last joint of labial palpi

♂ securiform, as wide as long, ♀ twice as long as wide, antennae not reaching base of prothorax, joint 1 equalling 2 to 4 taken together. *Prothorax* moderately convex, nearly two thirds wider than head, a fifth wider than long, widest at middle, extremities truncate, base a little wider than apex, sides well rounded, gently sinuate just before base, hind angles sharply rectangular, border narrow in front, widening gradually up to a little before base, front lateral pore in the channel at a third from apex, hind one just within the angle; median line fine, transverse impressions very slight, basal foveae rather short but deep, and practically parallel, surface impunctate (sometimes a few punctures in the foveae), with a few faint transverse striae. *Elytra* moderately convex, a fourth wider than prothorax, three fifths longer than wide, shoulders rather square, very slightly dilated behind, so that the widest point is rather behind middle, epipleura sulcate towards base; striae deep, finely punctate, scutellary striole short and oblique, intervals convex, much more so near apex. A microsculpture of extremely fine and closely placed transverse lines is just visible. Prosternal process longitudinally sulcate; sterna lightly, but mesepisterna and sides of venter at base more strongly punctate; metepisterna a half longer than wide; last ventral segment (♂ ♀) with a single seta on each side. Joint 1 of metatarsi externally grooved; joint 5 throughout setulose beneath.

The small size, black colour, and polished surface, together with the rectangular hind angles of the prothorax, distinguish the species from its Malay congeners.

Serdang: Tandjong Morawa, 3 ex., Toba-meer, 1 ex. (all Dr B. HAGEN — Leiden Mus.). Medan (Mjöberg — Stockholm Mus.) 1 ex. The type is in the Leiden Museum.

Colpodes circumdatus sp. n.

Length: 7.5—8.5 mm. Width: 3.2—3.5 mm.

Piceous, shiny: palpi and antennae ferruginous, reflexed margins of prothorax and elytra, with the pro- and epipleura, and legs flavous, suture of elytra brown.

Head convex, small, very faintly constricted behind, eyes prominent, hind supraorbital not far removed from eye, frontal foveae short and slight, diverging behind, antennae not reaching far beyond base of prothorax, surface impunctate. *Prothorax* convex, slightly less than a half wider than long, widest at about middle, base with its sides oblique, apex a little emarginate, slightly narrower than base, sides unbordered, reflexed, moderately in front, widely behind, evenly rounded from base to apex, front seta in the lateral channel at widest part, hind one on the angle,

hind angles obtuse and slightly rounded; median line very fine, transverse impressions moderately deep, basal foveae deep, rounded, a little removed from hind angles, surface smooth and impunctate, vaguely rugose near hind angles. *Elytra* convex, subovate, not quite two thirds wider than prothorax, a half longer than wide, widest just behind middle, shoulders rather square, sides very faintly emarginate just before middle, evidently near apex, the apices separately and rather widely rounded; striae finely to moderately impressed, with a suggestion only of fine crenulation, deeper near apex, 8 deeper near base, a scutellary striole present; intervals slightly convex, more so near apex, 3 with three conspicuous dorsal pores, surface impunctate, without depressions. The microsculpture of the elytra is very distinct, formed by moderately wide meshes; on the disk of the prothorax the meshes are similar, but much smaller and fainter; those on the head are very fine and isodiametric. Underside impunctate; metepisterna twice as long as wide; last ventral segment ♂ with one marginal seta, ♀ with two setae on each side. Meso- and metatarsal joints rather lightly bisulcate; joint 5 glabrous beneath.

This species is rather like *C. japonicus* Motch., but smaller and less elongate, the elytra piceous. The sides of the prothorax are less explanate, but more reflexed, the hind angles less rounded; the elytra are relatively shorter, less deeply striate, and without any depressions on disk.

Goenoeng Teleman (E. JACOBSON), 3 ex. Pahang: Cameron's Highlands, 4800 feet (H. M. PENDLEBURY), 20 ex., at light. The three Sumatran examples in the Leiden Museum being all ♀♀, I am making one of the ♂ specimens from Pahang the type and placing it in the British Museum.

An example in the Raffles Museum, Singapore, taken on Mount Poë, Sarawak, has deeper elytral striae than the other specimens, but, as it does not appear to differ in other respects, I am treating it as a variety.

Colpodes Knapperti sp. n.

Length: 9—9.5 mm. Width: 3.4—4 mm.

Black, moderately shiny; palpi, base and apex of joints 1 to 3 of antennae (rest fuscous), tarsi, and lateral margins of prothorax brownish, elytra blue-black.

Head convex, somewhat constricted behind eyes, which are not prominent, hind supraorbital half way between eye and neck constriction, frontal foveae small but moderately deep, antennae slender, reaching basal fourth of elytra, surface impunctate. *Prothorax* convex, two fifths wider than head, rather more than a third wider than long, widest just before middle, base evidently wider than apex, its sides oblique close to

the hind angles, sides bisetose, unbordered, reflexed, more widely behind, moderately rounded, faintly sinuate before hind angles, which are obtuse, but moderately sharp; median line and transverse impressions all rather slight, basal foveae fairly deep, continued vaguely forwards parallel with sides, surface smooth, finely rugose-punctate in the basal foveae and also very faintly in the lateral channels. *Elytra* moderately convex, ovate, two thirds wider than prothorax, three fifths longer than wide, shoulders rather square, an evident emargination on each side close to apex, where there is a re-entrant angle; striae moderately deep, slightly deeper near apex, finely and indistinctly punctate, 8 deeper than the rest, a short scutellary striole; intervals only slightly convex, but more so near apex, 3 with three rather small dorsal pores, surface impunctate, without depressions. Microsculpture of the elytra consisting of very fine transverse lines, forming very wide meshes; on the prothorax the meshes are not so fine, but somewhat fainter; on the head they are isodiametric. Under-side impunctate; metepisterna rather less than twice as long as wide; last ventral segment ♂ with one marginal seta, ♀ with two setae on each side. Meso- and metatarsal joints bisulcate; joint 5 glabrous beneath.

Not unlike *C. purpurascens* Andr., but black, only the elytra being very dark blue. Antennae much more slender; prothorax with the front angles quite inconspicuous, sides less sharply rounded and less sinuate behind, the lateral channels narrower, the hind angles obtuse; elytra more contracted in front, the striae punctate and also deeper, a re-entrant angle at apex instead of a mucro.

Manna (M. KNAPPERT), 7 ex. ♂ ♀, two of them in poor condition. The type is in the Leiden Museum.

Perigona sulcatipennis sp. n.

Length: 6—7 mm. Width: 2—2.2 mm.

Black or piceous above, shiny; underside, palpi, joint 1 of antennae, prothorax, elytral intervals 1 and 2, femora, and tibiae more or less dark red.

Head flat, frontal foveae obsolete, clypeal suture very fine, impressed at extremities, eyes moderately prominent, antennae short and stout, not reaching base of prothorax, surface minutely punctate, slightly uneven on vertex. *Prothorax* flat, subcordate, a little wider than head and about a third wider than long, extremities slightly emarginate, the base at middle, the apex from angle to angle, apex much wider than base, sides with a narrow reflexed border, gently rounded, not sinuate behind, a minute pore close to front angle and another in the hind angle (a seta visible only in the former), hind angles obtuse and a little rounded;

median line very fine, transverse impressions obsolete, basal foveae small but distinct, surface minutely punctate. *Elytra* flat, a little wider than prothorax and three fourths longer than wide, shoulders square, sides parallel; the five inner striae wide and very clearly impressed, minutely though inconspicuously punctate, the remaining striae barely indicated; intervals flat, 3 with three very small pores, at about a fourth, two thirds, and close to apex respectively, surface minutely punctate. Microsculpture of elytra and sides of prothorax formed by moderately wide meshes, that on head and disk of prothorax formed by isodiametric meshes.

The species is of the same shape as *P. vivens* Putz, but larger and darker. In the species of this genus the elytral striae are normally either very faintly impressed or obsolete, and the fact that they are here subsulcate, will, in conjunction with the comparatively large size, render these insects easily recognizable.

Sumatra: Palembang (J. BOUCHARD) 2 ex. Borneo: Brunei (J. WATERSTRADT), 1 ex. The Bornean example, which I have made the type, was presented to me some years ago by Mr. T. G. SLOANE; it is a little larger and darker than the Sumatran specimens, and in particular the prothorax is very nearly black.

Omobrus gen. nov.

The form is that of a small *Brachinus*. *Head* large, almost glabrous, clypeus bisetose, eyes not very large, distant from buccal fissure, one supraorbital seta, antennae pubescent from and including joint 3, which is hardly longer than 4, joints 1 and 2 with a few hairs, labrum transverse, sexsetose, mandibles sharp and hooked at apex, a minute seta in the scrobe, ligula truncate, with the angles rounded, bisetose, paraglossae adnate and longer than ligula, maxillae sharp and hooked at apex, maxillary palpi pubescent, the last joint longer than the penultimate, labial palpi with the last two joints equal, the penultimate inwardly bisetose, mentum with the lobes sharply pointed at apex, a fairly sharp tooth in the sinus, nearly as long as lobes. *Prothorax* narrow and cordate. *Elytra* bordered from scutellum to apex, a narrow glabrous membrane just visible beyond the apical border, 9-striate, a scutellary striole between stria 1 and suture. *Mesepimera* very narrow, a little dilated at external extremity; *metepisterna* long and narrow. Sixth ventral segment with 1 marginal seta on each side in the ♂, 2 in the ♀; ♀ with a seventh segment just showing beyond the sixth, ♂ with only six visible segments. In the protarsi the variable spur is placed at the base of the incision; the ♂ protarsal joints do not appear to be either dilated or clothed with scales beneath.

The genus presents several characters foreign to the other known genera of the Brachinini, viz. (i) labial palpi with the penultimate joint bisetose, (ii) elytra which are both fully bordered and striate, (iii) only six visible ventral segments in the ♂. Owing to the slender amount of material at my disposal I have not been able to investigate this last character as fully as I should have liked to do. For the present I treat the genus as an aberrant one in the Brachinini group.

Genotype *Omobrus praetextus* Andr.

Omobrus praetextus sp. n.

Length: 5 mm. Width: 2 mm.

Head and prothorax (above and beneath), palpi, joints 1 and 2 of antennae, with base of 3 and 4 (rest fuscous), and legs flavous; elytra dark blue; sterna and venter black (apical ventral segment sometimes ferruginous).

Elytra and venter pubescent, rest of body almost glabrous. *Head* with small but deep rounded frontal foveae joined by the clypeal suture, outwardly bounded on each side by a short longitudinal ridge, a small pore on middle of vertex, neck constricted a long way behind eyes, antennae long, reaching middle of elytra. *Prothorax* moderately convex, very slightly narrower than head, a fourth wider than long, widest at a fourth from apex, which is nearly a half wider than base, sides bordered, sharply rounded near the front angles, thence nearly straight, but sinuate at a short distance from base, a seta at apical fourth and another at base, hind angles sharp, rectangular, and projecting a little laterally; all the impressions fairly deep, the basal foveae being near the angles; surface minutely and vaguely punctate and striate, sparsely pubescent, a few setae visible chiefly along sides and near the front angles. *Elytra* rather flat, subquadrate, more than twice as wide as prothorax, rather less than a half longer than wide, widest a little behind middle, shoulders square, apex truncate and faintly bi-emarginate; striae moderately deep; and microscopically crenulate, intervals moderately convex, surface both finely punctate and minutely rugose, a slight transverse depression behind base.

In form like a small *Brachinus*, but distinguishable at once by the striate and fully bordered elytra.

Sinalu Island: Sinabang (E. JACOBSON — Leiden Mus.), 1 ex. Perak (DOHERTY — British Mus.), 1 ex. Pahang: Fraser Hill, 3500 feet, 12. VIII. 1923 (H. M. PENDLEBURY — F.M.S. Museum, Kuala Lumpur), 1 ex. Java, 1 ex. (type), presented to me some years ago by Mr. T. G. Sloane.

Holcoderus puncticeps sp. n.

Length: 7 mm. Width: 3 mm.

Black: elytra greenish blue on disk, green at sides, with a tinge of purple on each side near apex, palpi and joints 1 and 2 of antennae pale ferruginous, rest of antennae and tarsi dark ferruginous (profemora partly ferruginous in one example).

Head flat, moderately constricted behind eyes, frontal foveae rather wide and deep, bounded outwardly on each side by a smooth, slightly sinuate ridge, which extends backwards to rather beyond hind eye level, a fovea on middle of front, behind which is a small smooth area, clypeus and neck smooth, surface elsewhere fairly closely punctate, eyes fairly prominent, antennae barely reaching base of prothorax. *Prothorax* convex, subquadrate, a third wider than head and nearly as much wider than long, base produced slightly backwards at middle, wider than apex, its sides a little oblique, sides narrowly bordered, reflexed, more widely behind, well rounded in front, then nearly straight and slightly sinuate behind, both lateral pores on the border, front one at two fifths from apex, the widest point, at which it forms almost an angle, hind one on the hind angle, which is sharp, though a little obtuse, and strongly reflexed; median line wide and deep, pointed at extremities, transverse impressions obsolete, basal foveae moderately deep, diverging a little forwards, surface finely and sparsely punctate, more closely in the basal foveae and lateral channels. *Elytra* convex, ovate, four fifths wider than prothorax, nearly a half longer than wide, apex rather pointed, with a fairly deep emargination on each side; striae finely punctate, rather shallow on disk, deeper at sides, 8 deeper than the rest, a fairly long scutellary striole; intervals flat on disk, somewhat convex at sides, 3 with a small pore at about a half, adjoining stria 3, and another one close to apex, surface sparsely and microscopically punctate. The meshes of the microsculpture on the elytra are distinct and on average moderately wide; on the prothorax they are also wide but very vaguely indicated; on the head they are isodiametric to a little transverse, but obsolete on disk. Underside impunctate; metepisterna much contracted behind, twice as long as wide; ventral segments narrowly bordered, apical one ♀ with two marginal setae on each side, the two pairs distant from each other, the intervening space a little emarginate and fringed with about 20 setae, much shorter than the normal ones, ♂ with the space between the two pairs of setae a little more deeply emarginate and without accessory setae.

In this little known genus there appear to be two forms, one flat and elongate, the other convex and oval. No description of any species in the

second group has appeared yet, though one is in the press [*H. chrysomeloides* Andr. Ark. Zool. 21 A. 29. 1930, p. 9, the description of which has recently appeared]; no difficulty is likely to be found in discriminating these two species.

Palembang (M. KNAPPERT), 1 ex. Java, 1 ex. in my collection, for which I am indebted to Mr. T. G. SLOANE, and which I have made the type, as it is in better condition than the Sumatran specimen in the Leiden Museum.

Physodera diglenus, sp. n.

Length: 10.5 mm. Width: 4.75—5 mm.

Black with faint blue reflections, shiny: elytra purplish blue, apex of palpi, apex of elytra, and borders of ventral segments ferruginous, prothorax flavous, with a black vitta down the centre, occupying about a third of the area, its sides curved and convex inwards, last ventral segment flavous above, with three black spots, black beneath, with an oblique flavous spot on each side.

Head flat, frontal foveae moderately deep, subrugose in front, bounded at the sides by two or three small irregular carinae, a vague transverse depression across front, vertex smooth, sides finely punctate, labrum depressed at sides, raised in the middle, neck slightly constricted, eyes large, hemispherical, antennae stout, reaching a little beyond base of prothorax. *Prothorax* nearly flat, elliptical, a half wider than head and very nearly twice as wide as long, base rather faintly produced at middle, apex slightly emarginate, sides vaguely bordered and gently reflexed, very strongly rounded, so that all the angles have practically disappeared, a slight patch of hairs on each side on the site of the front ones, the hind ones just indicated, with the faintest possible sinuation in front of them, and with a small pore (presumably setiferous) on the border; median line fairly deep but visible in middle only, the flavous side areas slightly concave, basal foveae small but deep, base and apex rather closely punctate, a few smaller punctures along the median line. *Elytra* convex, quadrate, about a half wider than prothorax, a fourth longer than wide, shoulders square, slightly dilated behind, widest at about middle, apex nearly squarely truncate, the outer angle on each side rounded, and the truncature slightly emarginate, sides compressed at about a third, a raised elongate boss on interval 8 towards apex; the striae formed by fine but clearly marked punctures, intervals flat, two dorsal pores on 3, and one near base on 5, surface minutely punctate. No visible microsculpture. *Metepisterna* fully twice as long as wide; fourth tarsal joint bilobed, claws strongly pectinate. In one of the two specimens, which I

believe to be a ♂, the last ventral segment is narrowly excised at middle, and in both there appear to be two marginal setae on each side, but, as the surface is somewhat pilose, I am not sure of this.

The coloration is evidently very similar to that of *P. amplicolis* van de Poll, of which I have been unable to trace the type, but it appears to be both larger and wider, while the black spot on each side of the prothorax is wanting. The prothorax is only a half wider than head, and both base and apex are punctate instead of rugose; on the elytra the punctures forming the striae stand out very distinctly, contrasted with minute puncturation of the surface, whereas the author, referring to the puncturation of the surface in *amplicolis*, says "the punctures of the same size as those forming the striae, which are consequently very indistinct".

Padang bovenland (H. VEEN), 1 ex. in the Leiden Museum. F. M. S.: Selangor, Kuala Lumpur, 21st mile, Gombak Valley, Oct. 19, 1921 (H. M. PENDLEBURY), 1 ex. The latter specimen, which was in the F. M. S. Museum at Kuala Lumpur, has been made the type and placed in the British Museum.
