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NEW CARABIDAE FROM THE MALAY ARCHIPELAGO

by

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Hilversum

I have to thank Dr. H. C. Blöte of the Leiden Museum of Natural History for his kindness to entrust me with a number of Carabidae from Indonesia for identification. A few species appear to be new to science; the descriptions follow below. One genus, *Horniulus* Jedl., is new to the whole of the Malay Archipelago, and another, *Bembidion* Latr., is new to Sumatra. Of the latter genus there are already a couple of species known from Java.

I am much obliged to Mr. E. B. Britton of the British Museum, who carefully compared a few species with specimens in the collections of the British Museum and in Andrewes' collections.

The type specimens are in the Leiden Museum.

Oxygnathopsis gen. nov. (fig. 1 f)

(Andrewes (1938, p. 196) described *Oxygnathus javanus* upon a single specimen from Java. With regard to the proper genus Andrewes was not absolutely sure because of a number of important differences, but before introducing a new genus he preferred to wait till more material was available. In the sending of the Leiden Museum I found a second specimen, which shows the same characteristics as the specimen described by Andrewes, so that in my opinion a new genus is desirable.

The two genera are to be distinguished as follows:

- 1 (2) Head with the clypeus bisetose, two setae on each side over the eyes, facial carinae and sulci present; prothorax with two lateral setae on each side. Range: Assam and Burma *Oxygnathus* Dej.
- 2 (1) Clypeus without setae, one supra-orbital seta, the front seta is wanting, no facial

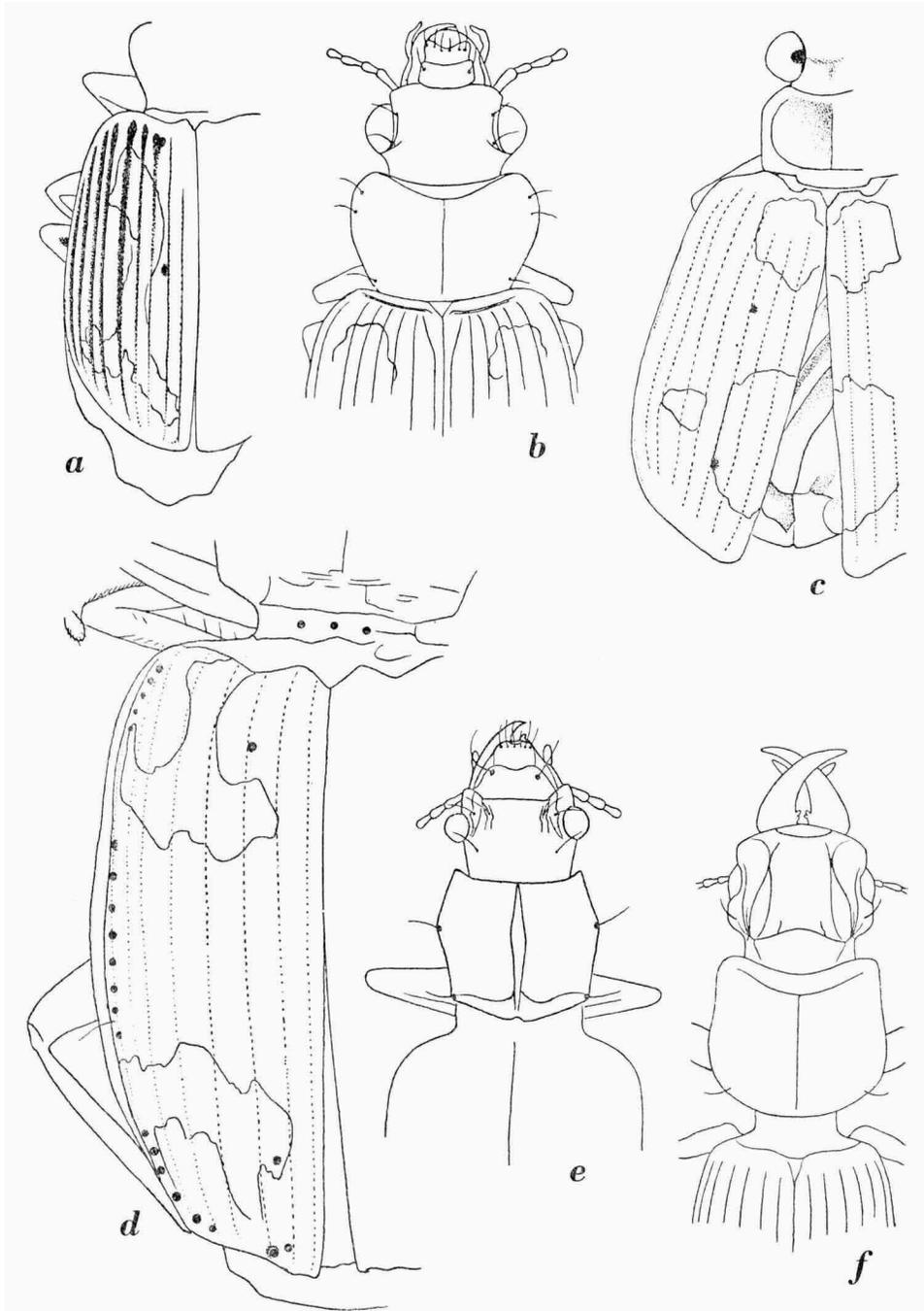


Fig. 1. a, *Coptodera flavipes* sp. n., left elytron; b, *Horniulus quadrimaculatus* sp. n., head and pronotum; c, *Lebia darlingtoni* sp. n., left elytron; d, *Lioptera blötei* sp. n., left elytron; e, *Holcoderus ophthalmicus* sp. n., head and pronotum; f, *Oxygnathopsis javanus* Andr., head and pronotum. $\times 8\frac{4}{5}$.

carinae and sulci present, only on each side of head a groove, which connects the frontal foveae with the groove adjoining the eye and genae; prothorax with one lateral seta, the hind seta present. Range: Java

Oxygnathopsis gen. nov.

Genotype: *Oxygnathopsis javanus* Andr.

***Bembidion sumatrensis* sp. n.**

Length: 2.75 mm.

Shiny black, elytra with a metallic blue reflection; ferruginous: a small spot on each elytron, covering intervals 5 to 7 at about one fourth from apex, extreme apex to some extent, the legs, and, a little darker, the antennae.

Head a little narrower than prothorax, with large, moderately prominent eyes, the frontal lines are moderately deep, extending to clypeus and diverging behind, antennae filiform, reaching basal third of elytra, surface smooth. Prothorax convex, one half wider than long, widest at about middle, the base distinctly wider than the apex, the former arcuately produced backwards with distinctly bordered, faintly arcuate sides, the latter truncate, the sides a little more contracted in front than behind, not sinuate before the hind angles, which are feebly rounded and a little obtuse and with a very distinct carina, which forms a nearly right angle with the sides of base, front angles obsolete, median line extremely fine, a little deeper near apex, base distinctly depressed, basal foveae large and deep, surface impunctate, finely, transversely wrinkled. Elytra not fully two thirds longer than wide and about one third wider than prothorax, the sides nearly parallel, shoulders squarely rounded, basal border short, reaching to a point between striae 5 and 6, suture raised, striae 1 and 2 deeply impressed throughout, though 2 a little less deep near apex, 3 to 6 moderately deep on basal half, finely engraved behind and at sides, 7 nearly obsolete, 8 impressed from about apical fourth to apex, apical striole deep, joining 7, the striae strongly punctate on basal half, the punctures diminishing in size and number and disappearing at about apical third, scutellary striole long, intervals flat, the third interval with two dorsal pores, practically adjoining stria 3. Microsculpture of head isodiametric, the meshes on the prothorax vary from isodiametric in front and in the basal foveae to moderately transverse at sides and strongly transverse on disk, the elytra are finely striate. Underside: prosternal process without border, broad at apex with rounded angles, metasternal process not distinctly bordered, last ventral segment of ♂ bisetose at apex, surface glabrous and without punctures.

Sumatra: Manna, M. Knappert, 1902, 1 ♂ specimen.

This is the first record of a *Bembidion* from Sumatra. It belongs to the subgenus *Philochtus* Steph.

Coptodera flavipes sp. n. (fig. 1 a)

Length: 7 mm. Width: 3 mm.

Piceous, buccal organs, antennae, clypeus partly, lateral margins of prothorax and elytra, gula, the sterna, coxae, trochanters and legs yellow, each elytron with a yellow pattern as shown in the accompanying illustration. Shiny, the prothorax somewhat shagreened. Glabrous, only the ventral segments, except 6, with a few scattered, minute setiferous punctures.

Head little convex, nearly as wide as prothorax, the eyes large, occupying almost the whole side of head, strongly prominent, genae very short, obliquely running to neck constriction, frontal foveae large and shallow with an uneven surface, an undeep impression on each side between the eyes, antennae reaching basal third of elytra, surface finely and moderately densely punctate. Prothorax little convex, transverse, not fully one half wider than long, widest at about one fourth from apex, where there is a seta, a little distant from the margin, both the extremities of about equal width, truncate, the sides of base a little oblique, the side margins microscopically setulose, not distinctly dentate or serrate, finely bordered, narrowly explanate and practically not reflexed, from widest point gently contracted in front, nearly straight behind, feebly sinuate before the hind angles, which are nearly rectangular, the hind seta on the margin, just before the angle, anterior angles obsolete, basal foveae small and shallow, front transverse impression and median line finely engraved, the latter not reaching base and apex, hind transverse impression moderately deep, a slight, transverse furrow close to base, surface impunctate, finely, transversely wrinkled. Elytra rather flat, ovate, twice as wide as prothorax, about one half longer than wide, slightly dilated behind, the lateral border microscopically setulose, basal border entire, sinuate, shoulders squarely rounded, apex a little oblique and faintly sinuate, the striae extremely finely and indistinctly punctate, 1 to 5 moderately deep, 5 deeper near base, 6 and 7 much deeper impressed, 6, and to some extent 7 too, forming almost a furrow at basal third, the inner intervals a little convex, 6 and 7 subcostate, 8 very narrow close to apex, the third interval with 2 conspicuous dorsal pores, the front pore close to base, adjoining stria 3, the second pore, a little behind middle, adjoining stria 2, disk depressed behind shoulder around stria 6. Microsculpture very conspicuous, of head and prothorax isodiametric, of elytra moderately transverse. Under-

side: prosternal process unbordered and with a few minute setae at apex, last ventral segment of ♂ slightly carinate in the centre behind and with two setae on each side of apex.

Sumatra: Pajakumbo, H. Royer, 1 ♂ specimen.

Lioptera blötei sp. n. (fig. 1 d)

Length: 14.5 mm. Width: almost 6.5 mm.

Piceous-black, each elytron with two narrow, irregular, transverse spots of a reddish yellow colour, the front spot from and including stria 3 to side margins with two projections in front, the inner projection reaches the basal border on interval 5, the outer one, on interval 8, is much smaller, also two small projections behind on intervals 4 and 6, the hind spot is prolonged behind on intervals 4 and 8 and a little in front on interval 5.

Head over the eyes not fully one third wider than apex of prothorax, with large, prominent eyes, frontal foveae large and deep, outwardly bounded by a more or less rounded ridge, the foveae uneven at bottom, surface between the eyes and side of head with oblique, longitudinal striae, for the rest finely wrinkled, practically impunctate, antennae reaching basal third of elytra. Prothorax transverse, two thirds wider than long, widest before middle, from there strongly rounded in front, the anterior angles little distinct, nearly rounded away, much less and in an oblique, straight line contracted behind, not sinuate before the slightly obtuse hind angles, each angle with a fine ridge, nearly parallel with and about as long as the width of the marginal channel, the base very feebly bisinuate with oblique sides, nearly one third wider than the truncate apex, the bordered lateral margins are bisetose, widely explanate, reflexed behind, the transverse impressions deep, the median line moderately impressed, basal foveae small and deep, gradually passing into the marginal channels, surface irregularly, transversely striate and extremely finely punctate, the punctures larger in the basal foveae and along the sides. Elytra subquadrate, not fully twice as wide as prothorax and about one half longer than wide, the shoulders squarely rounded, basal border bisinuate, apex truncate and slightly obliquely emarginate, extreme apex with a small, re-entrant angle and a small blunt tooth, the outer angles very minutely and sharply dentate, the striae indicated by rows of very fine punctures and just visible, intervals flat and very finely and moderately densely punctate, the third interval with 3 dorsal pores, the front pore adjoining stria 3, the two other pores touch stria 2, the pore nearest to apex just in front of the umbilicate apical pore. Microsculpture very distinct and on an average isodiametric. Last ventral segment with two distant pores on each side of apex, claw joint setulose beneath.

Sumatra: Manna, M. Knappert, 1 ♀ specimen.

Of the two other described species of the Malay Archipelago *Lioptera pluto* Bates from Borneo has the prothorax three fifths wider than long, the sutural interval prolonged in a short, sharp tooth, etc. *Lioptera louwerensi* Andr. from Celebes has the prothorax relatively wider (more than twice as wide as long), much larger spots on the elytra, the striae much more distinctly indicated, the sutural interval prolonged in a spine, 4 dorsal pores instead of 3, etc. In the key to the species of *Lioptera* by Heller (1903, p. 241) it comes perhaps nearest to *L. erotyloides* Bates from Tonkin and Japan.

Horniulus quadrimaculatus sp. n. (fig. 1 b)

Length: 8 mm. Width: about 3 mm.

Piceous, elytra darker, palpi, antennae, labrum, clypeus, head (partly), sides of prothorax and legs more or less red-brown, each elytron with two nearly round, red spots, the front spot near base, covering intervals 4 and 5 and partly 3 and 6, the hind spot near apex, covering intervals 1 to 3 and partly 4. Shiny.

Head little convex, broad, as wide as apex of prothorax, labrum moderately transverse, 6-setose, clypeus transverse with rounded front angles, 2-setose, both emarginate in front, eyes large and prominent, two supra-orbital setae, frontal grooves moderately deep, parallel, faintly converging behind, antennae short, reaching a little beyond base of elytra, surface with a few, extremely fine punctures; ligula truncate at apex, 4-setose, the outer setae longer than the inner ones, paraglossae adnate, membranous, somewhat swollen, slightly triangular, bluntly pointed at apex, sparsely and finely pubescent, reaching far beyond apex of ligula, labial palpi with the penultimate joint bisetose, mentum with a small, rounded tooth in the emargination, submentum with a single seta on each side. Prothorax little convex, cordate, three fifths wider than long, widest before middle, the moderately explanate, little reflexed and very finely bordered sides bear three setae, two at apical half and one seta on the hind angle, from the front seta gently contracted to the rather strongly rounded, little distinct anterior angles, nearly straight between apical setae 1 and 2 and finally in an oblique, nearly right line contracted behind, slightly sinuate before the slightly obtuse posterior angles, the base, which is one sixth narrower than the apex, straight with slightly oblique sides, the apex a little emarginate, both the transverse impressions very finely engraved, the median line a little deeper, the basal foveae large and shallow with a few transverse scratches at bottom, the

surface sparsely punctate, the punctures on an average very fine with a few larger ones among them. Elytra little convex, subquadrate, a little more than a half wider than prothorax and about one fourth longer than wide, wholly bordered, shoulders rounded, apex truncate and very feebly sinuate, the striae finely impressed and finely punctate, stria 7 interrupted close to apex, the impunctate intervals flat, third interval with two large dorsal pores, the front pore, adjoining stria 3, a little before middle, the hind one, close to apex, adjoining stria 2. No visible microsculpture on head and prothorax, the elytra have conspicuous, moderately transverse meshes. Underside: metepisterna twice as long as wide, last ventral segment sparsely, microscopically pubescent, quadrisetose at apex, the tarsi not distinctly sulcate down the centre, claw joint setulose beneath.

Sumatra: Tandjong Serdang, Morawa, B. Hagen, 1 specimen.

In many of its generic characters the new species agrees with the genus *Horniulus* Jedlička, of which the only other described species, *Horniulus andrewesi* Jedl., occurs at Formosa. The labrum is moderately transverse, leaving a tolerable part of the mandibles visible, there is a small, obtuse tooth in the emargination of the mentum, the prothorax is about three fifths wider than long instead of twice as wide as long, and the tarsi are not distinctly grooved. It is not impossible that a new genus is required for the Sumatran species, but with a single specimen before me it seems preferable to await further material for examination.

***Holcoderus ophthalmicus* sp. n. (fig. 1e)**

Length: 8.5 mm. Width: 3.2 mm.

Black, shiny, elytra somewhat sericeous, dark purple, greenish at sides, palpi, antennae and tarsi brown, femora and tibiae piceous.

Head convex, over the eyes a little more than one fifth wider than apex of prothorax, labrum a little emarginate, clypeal suture well marked, frontal foveae moderately large, shallow, separated from eye by 2 to 3 longitudinal ridges, eyes small and hemispherical, very strongly standing out from head, two supra-orbital setae on each side, the front seta a little in front of mid-eye level, the hind one placed far back, half way between hind-eye level and neck constriction, antennae short, hardly reaching base of elytra, the surface uneven in front, with the exception of vertex sparsely rugose-punctate, a small depression in the centre between the eyes. Prothorax convex, more or less flat on disk, hexagonal, fully one fourth wider than long, widest a little before middle, the base a little more than one fifth wider than the apex, finely bordered, the base faintly arcuate and with oblique

sides, the apex a little emarginate, front angles distinct, obtusely pointed and advanced, hind angles, which are reflexed, sharp and a little acute, the sides more contracted in front than behind, bisetose, the front lateral seta on the margin at widest point, which is projecting a little laterally, the hind seta on the angle, touching the margin, the front angles 3- to 4-setulose, the bordered median line deep and wide, widest at middle, tapering in front and behind with pointed extremities, basal foveae moderately large, deep, front transverse impression very shallow, hind one nearly obsolete, surface very finely and sparsely punctate, the punctures larger in the marginal channels and along the base, disk finely transversely wrinkled. Elytra convex, a little more than a half longer than wide and as much wider than prothorax, a little compressed before middle, wholly bordered, the basal border narrow, shoulders squarely rounded, the sides nearly parallel, widely and deeply sinuate before apex of each elytron, which is shortly, obtusely produced backwards, scutellary striole fairly long, the striae finely impressed and finely punctate, more distinctly near base and in the outer striae, intervals a little convex, very finely and sparsely punctate, the third intervals without dorsal pores. Microsculpture of head faintly isodiametric, the meshes on the prothorax and the elytra are moderately transverse, very distinct on the latter. Underside practically impunctate, metepisterna longer than wide, narrow behind, last ventral segment bisetose on each side of apex.

Java: Priangan, P. F. Sijthoff, 3 specimens.

Readily distinguishable by the strongly protruding eyes and the absence of dorsal pores in the third interval of the elytra.

***Lebia darlingtoni* sp. n. (fig. 1 c)**

Length: 7.5 mm. Width: 3.5 mm.

Pale flavous, head and prothorax rufous, the latter flavous at sides, the elytra with two common, black spots: a basal spot, covering 4 inner intervals of each elytron, straight in front, oblique behind with a small, common, rounded projection on intervals 1 and 2; a much larger spot from a little behind middle to about a sixth from apex, covering 3 inner intervals of each elytron, somewhat irregularly shaped anteriorly, obliquely rounded posteriorly, each elytron has, apart from the common spots, a small spot on intervals 5 to 7, about opposite the middle of the longest side of the hind spot, somewhat triangularly shaped, the small, blackish top on the inner side of interval 7. Shiny. Glabrous.

Head convex, about a tenth narrower than prothorax with large, strongly prominent eyes, clypeal suture clearly marked with a small, round pore on

each side, frontal foveae short and shallow, parallel, ocular grooves deep, reaching front supra-orbital pore, palpi short and not slender, antennae reaching basal fourth of elytra, surface slightly rugose in front and between the eyes, otherwise smooth. Prothorax convex, transverse, at widest point — at about one fourth from apex — not quite one half wider than long, between its hind angles very little narrower than at widest point, wholly and finely bordered, moderately explanate in front, widely behind, moderately reflexed, the side margins from widest point strongly rounded and contracted in front, so that the front angles are rounded away, in a practically right, slightly sinuate line contracted to the obtusely rounded, though faintly sharp posterior angles, the front lateral seta, distant from margin, at about one fourth from apex, the hind seta on the border in front of the hind angle, apex straight, base produced at middle, but not strongly and with a distinct obtuse angle on each side, both the transverse impressions and the small, basal foveae deep, the median line moderately so, surface transversely rugose striate and wrinkled. Elytra little convex, ovate, three fourths wider than prothorax and not quite one half longer than wide, widest a little behind middle, shoulders squarely rounded, basal border reaching a point opposite stria 3, apex truncate and faintly emarginate with rounded outer angles, striae moderately deep and finely punctate, 1 entire, the other striae not reaching base and apex, 3 inner intervals nearly flat, the rest a little convex, 2 dorsal pores in the third interval at one fourth and three fourths from base respectively. Microsculpture on sides of head extremely fine, isodiametric, none on the prothorax, the elytra have distinct, nearly isodiametric meshes. Venter very finely punctate and very finely pubescent, fourth tarsal segment bilobed, claws with 5 denticulations on each side, mesotibiae of ♂ with a nick on inner side near apex.

Java: no locality and date, W. E. J. Hekmeyer, 1 specimen.

Named for Mr. P. J. Darlington Jr. (Museum of Comparative Zoölogy, Harvard College, Cambridge, Mass.), to whom I am much obliged for his valuable assistance.

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