

New species of Largidae and Pyrrhocoridae (Heteroptera) from the Oriental region

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Abstract. The following new species are described: Largidae – *Delacampus grossepunctatus* sp. nov. (Indonesia: Sulawesi), *D. subtilepunctatus* sp. nov. (Indonesia: Sulawesi), *Iphita rubricata* sp. nov. (North-East India); Pyrrhocoridae – *Ectatops notatus* sp. nov. (Malaysia: Sarawak), *E. sulawesiensis* sp. nov. (Indonesia: Sulawesi), and *Euscopus rubens* sp. nov. (Indonesia: Sumatra).

Key words. Taxonomy, new species, Heteroptera, Largidae, Pyrrhocoridae, Oriental region, India, Indonesia

Introduction

The Pyrrhocoroidea of the Oriental region are insufficiently studied. The following authors have particularly contributed to our present knowledge: C. S. Banks, E. Bergroth, H. C. Blöte, G. Breddin, H. Burmeister, W. L. Distant, J. Ch. Fabricius, G. W. Kirkaldy, L. Lethierry, E. Schmidt, H. Schouteden, C. Stål, and H. W. Tauber. After World War II the following authors are noteworthy: I. Ahmad with co-workers, M. S. K. Ghauri, I. M. Kerzhner, C. W. Schaefer, and J. L. Stehlík. A useful aid to older literature is the catalogue of Pyrrhocoridae by HUSSEY (1929). In particular, the Pyrrhocoridae contain the economically important cotton pest genus *Dysdercus* Guérin-Ménéville, 1831. Its Oriental species were studied by FREEMAN (1947) and the Indian species by KAPUR & VAZIRANI (1960).

Material and methods

The terminology of body parts mostly follows VAN DOESBURG (1968). We have used more specific terms for the genital capsule as proposed by SCHAEFER (1977), who has, amongst others, also studied *Pyrrhocoris apterus* (Linneus, 1758).

The following codens of the collections are used:

BMNH	Natural History Museum, London, Great Britain;
HNHM	Hungarian Natural History Museum, Budapest, Hungary;
ISNB	Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium;
MMBC	Moravian Museum, Brno, Czech Republic;
PPUA	Czech University of Agriculture, Department of Plant Protection, Praha, Czech Republic;
ZJPC	Zdeněk Jindra collection, Praha, Czech Republic.

Taxonomy

LARGIDAE

Delacampius grossepunctatus sp. nov.

(Fig. 3)

Type material. HOLOTYPE: ♀, 'Sulawesi Utara, Dumoga-Bone Nat. Park, Toraut: S. Tumpah, Station 005, X.1985, Project Wallace, R. Bosmans & J. van Stalle' (ISNB).

Description. Female. Head, antennae (except last antennomere) and legs, scutellum, clavus, membrane and visible tergites black. Antennomere IV white except narrow black band on base and apex. Labium yellowish white. Pronotum brownish black, callar and pronotal lobes laterally with narrow yellow band including lateral margin. Corium yellowish with large black spot extending beyond corial cleft to costal margin, and with black band running on inner side of costal margin from this spot almost to base of corium (Fig. 3). Pronotal epipleuron, hypocostal lamina and dorsal and ventral laterotergites light yellow. Sternum and ventrites (except the above-mentioned parts) black.

Head wide, antennae strong. Labium exceeding hind coxae. Pronotum almost quadratic, lateral margin almost horizontal, rather conspicuously sinuate near midlength; callar lobe distinctly elevated, pronotal lobe flat, humeral protuberances not elevated. Scutellum with imprinting reaching approximately to its midlength. Hemelytra markedly shortened, not covering dorsal gland openings between tergites III-IV and IV-V. Apical part of corium strongly convex both from outer and inner side (distal margin bow-shaped). Membrane rudimentary, its hind margin horizontal, on inner side almost rectangularly bent towards apex of clavus. Abdomen wide, narrowing evenly towards apex.

Callar lobe laterally with pronounced puncturation. Pronotal lobe with very dense and coarse punctures, laterally rather close to lateral margin. Scutellar base with wide zone of finer punctures, apical part almost without punctures. Clavus and corium with coarse punctures. Conspicuous black punctures also present on parts of corium of light coloration, including area below lower margin of black medial spot. Pubescence of light colour on entire body, including visible mesotergites, here very dense.

Measurements (mm). Holotype female. Body length 7.67. Head: width (including eyes) 1.51, interocular width 1.00. Antenna: antennomere I 1.13, antennomere II 1.24, antennomere III 0.86, antennomere IV 1.46. Pronotum: length 1.51, width 2.54. Scutellum: length 1.19, width 1.51. Corium: length 3.05, width 1.51.

Differential diagnosis. This species resembles *Delacampius subtilepunctatus* sp. nov. but differs by a number of characters including the following: head wide and anteriorly more protruding, callar lobe more convex, humeral protruberances on pronotal lobe hardly present, corium much shorter and distally more rounded both from the outer and inner side, membrane reduced, much smaller, differently shaped and distally not covering two scent gland openings, abdomen narrowing distally at midlength laterally, puncturation on both pronotum and corium much coarser and black, labium completely pale, and medial spot exceeding corial cleft. Two other brachypterous species, *D. flavipes* (Tauber, 1927) and *D. pilosa* (Stål, 1870), can be easily distinguished from *D. grossepunctatus* sp. nov. by the amber-yellow legs (*D. flavipes*) or the colour of the corium, which lacks the round black spot and has the outer half reddish and the inner half black (*D. pilosa*). In *D. pyrrhocorides* (Bergroth, 1894), which occurs in New Guinea, all known specimens are macropterous; only one female specimen found on Solomon Islands (Guadalcanal Island, STEHLÍK 1965) is brachypterous. This species is smaller, its antennae are more slender, and it differs substantially by the bicolored laterotergites (laterotergites II-V red and VI-VII black).

Etymology. The specific epithet is composed of the Latin adjectives grossus (= coarse) and punctatus (= punctured).

Distribution. Indonesia (Sulawesi).

***Delacampius subtilepunctatus* sp. nov.**

(Fig. 4)

Type material. HOLOTYPE : ♀, 'Sulawesi Utara, Gumung Moat (1100 m a.s.l.), Station: 063, 29.X.1985, Project Wallace, R. Bosmans & J. van Stalle leg.' (ISNB).

Description. Female. Head, antennae (except last antennomere), pronotal collar, membrane, and legs black. Antennomere IV whitish, only narrow bands on its base and apex black. Labium blackish brown, last segment whitish. Pronotum pale yellow, pronotal protuberances and adjacent areas on pronotal lobe with orange tinge. Callar lobe posteromedially and posterolateromedially, and punctured part of pronotal lobe, i.e. medial and lateromedial areas, dark; medial keel connecting callar and pronotal lobes pale. Scutellum black, apex pale. Clavus black, only anal vein and claval commissure very narrowly red. Corium light red with medial oval spot not exceeding medial cleft, its inner side with black band running from spot towards base of corium, reaching level of distal third of scutellum and separated from black clavus by very thin red line. Mesotergites IV-VII black, discs partially paler reddish. Mesotergites II-III and dorsal and ventral laterotergites along entire length yellow. Pronotal epipleuron on ventral side and upper part of posterior pleural flange I yellowish to orange. Sternum and abdomen dark leathery brown, epicoxal lobes and coxae somewhat paler.

Head wide, rather short. Antennae thick. Labium reaching between middle coxae. Callar lobe weakly convex, pronotal lobe flat, humeral protuberances elevated. Lateral margin of pronotum almost horizontal, medially slightly sinuate. Callar and pronotal lobes more convex in their wide lateral zones than in their medial parts. More than half of scutellum with rather deep depression. Outer margin of corium from level of claval apex more convex; distal part of corium rounded on outer side but apex with obtuse point, distal margin rather long, inclined

towards outer side, basal two thirds straight, slightly bent outwards on its distal third. Membrane almost crescent-shaped. Hemelytra covering dorsal gland opening between tergites IV and V. Lateral margin of abdomen convex in distal part.

Callar lobe laterally almost without punctures, punctures on pronotal lobe rather small, lateral margins of pronotal lobe with broad zone without punctures. Scutellum and clavus with distinct punctures, corium with smaller and scarcer punctures in basal part (up to black spot) and on outer side up to median vein. Punctures behind median vein small and concolorous, absent towards apex of corium. Body pubescence whitish, including that on visible mesotergites.

Measurements (mm). Holotype female. Body length: 7.72. Head: width (including eyes) 1.40, interocular width 0.92. Antenna: antennomere I 1.30, antennomere II 1.16, antennomere III 0.78, antennomere IV 1.54. Pronotum: length 1.30, width 2.38. Scutellum: length 1.13, width 1.24. Corium: length 3.83, width 1.51.

Differential diagnosis. *Delacampius subtilepunctatus* sp. nov. differs from *D. grossepunctatus* sp. nov. by its narrower head, shape of the pronotum (narrower in its anterior part rather than almost quadratic, lateral margin anteriorly less conspicuous and in the middle less sinuate), less convex callar lobe, longer corium covering only the dorsal gland opening between tergites IV and V, crescent-shaped membrane (very rudimentary in *D. grossepunctatus* sp. nov.), medial spot on the corium not exceeding the medial cleft (reaching up to the costal margin in *D. grossepunctatus* sp. nov.), almost complete lack of conspicuous black puncturation bordering the lateral margin of the callar lobe, and finally by finer puncturation on the pronotal lobe, which also does not reach the lateral margin whereas the punctures in places of light coloration are concolorous and almost missing in the apical part (coarse and black in *D. grossepunctatus* sp. nov.). The new species differs from other brachypterous species of the genus by the characters given in the diagnosis of *D. grossepunctatus* sp. nov.

Etymology. The specific epithet is composed of the Latin adjectives *subtilis* (= fine) and *punctatus* (= punctured).

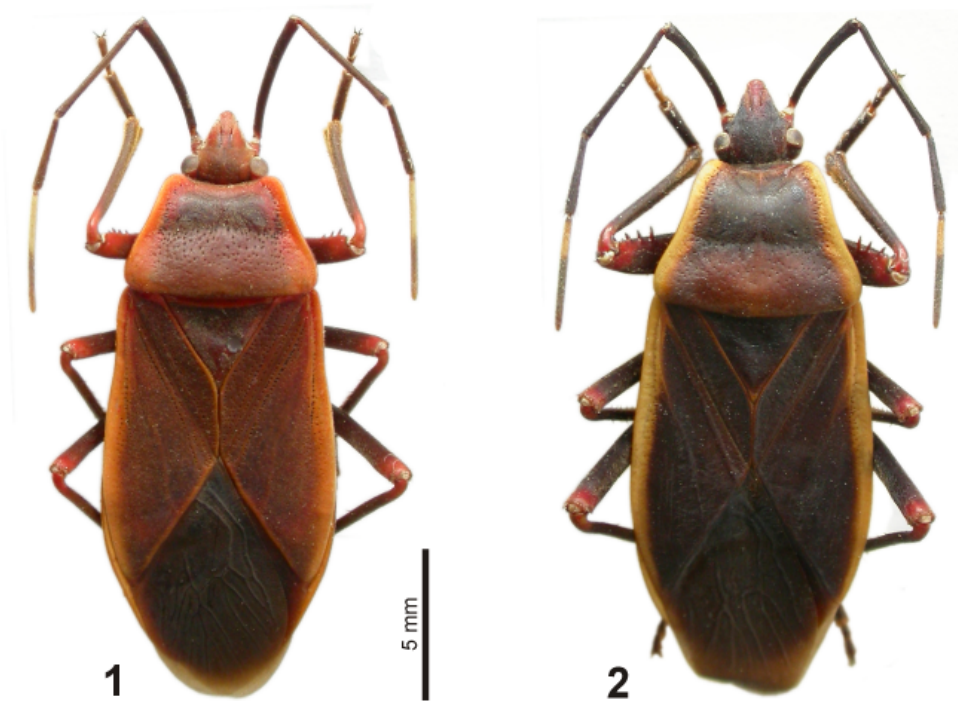
Distribution. Indonesia (Sulawesi).

Iphita rubricata sp. nov.

(Fig. 1)

Type material. HOLOTYPE: ♀, 'NE India, Meghalaya State, West Garo Hills, Bagmara, GPS 25°11.5' N; 90°38.5' E; alt. 100±50 m, 19.-21.V.1996, E. Jendek, O. Šauša leg.' (PPUA).

Description. Female. Head, labium, narrow band on base of labial segment I, pronotal collar, lateral parts of callar lobe, narrow band on margins of mesoscutellum, narrow band on inner margin of clavus, claval commissure, distal margin of corium, coxae, trochanters, and bases and apices of legs red. Base of head dorsally and laterally below eyes somewhat darker. Legs except bases and apices red ventrally and blackish dorsally (interface blurred). Lateral margins of pronotum, lateral margins of pronotal lobe in rather wide band, particularly towards base, costal margins, hypocostal lamina, dorsal and ventral laterotergites, prosternal collar and pronotal epipleuron orange. Pleura, epicoxal lobes and posterior pleural flanges red, partially very dark. Callar and pronotal lobes, except margins, and corium reddish black. Callar lobe darker than pronotal lobe. Antennae black except more than half of antennomere IV which is whitish. Membrane black except light grey apical margin. Tibiae and tarsi dark but not black. Venter black; ventrites IV-VI lateromedially with large dark red spots with



Figs. 1-2. 1 – *Iphita rubricata* sp. nov., holotype female. 2 – *I. limbata* Stål, 1870. Female.

indistinct outlines, ventrite VII red except for black spot laterally close to ventral laterotergite. External female genitalia red.

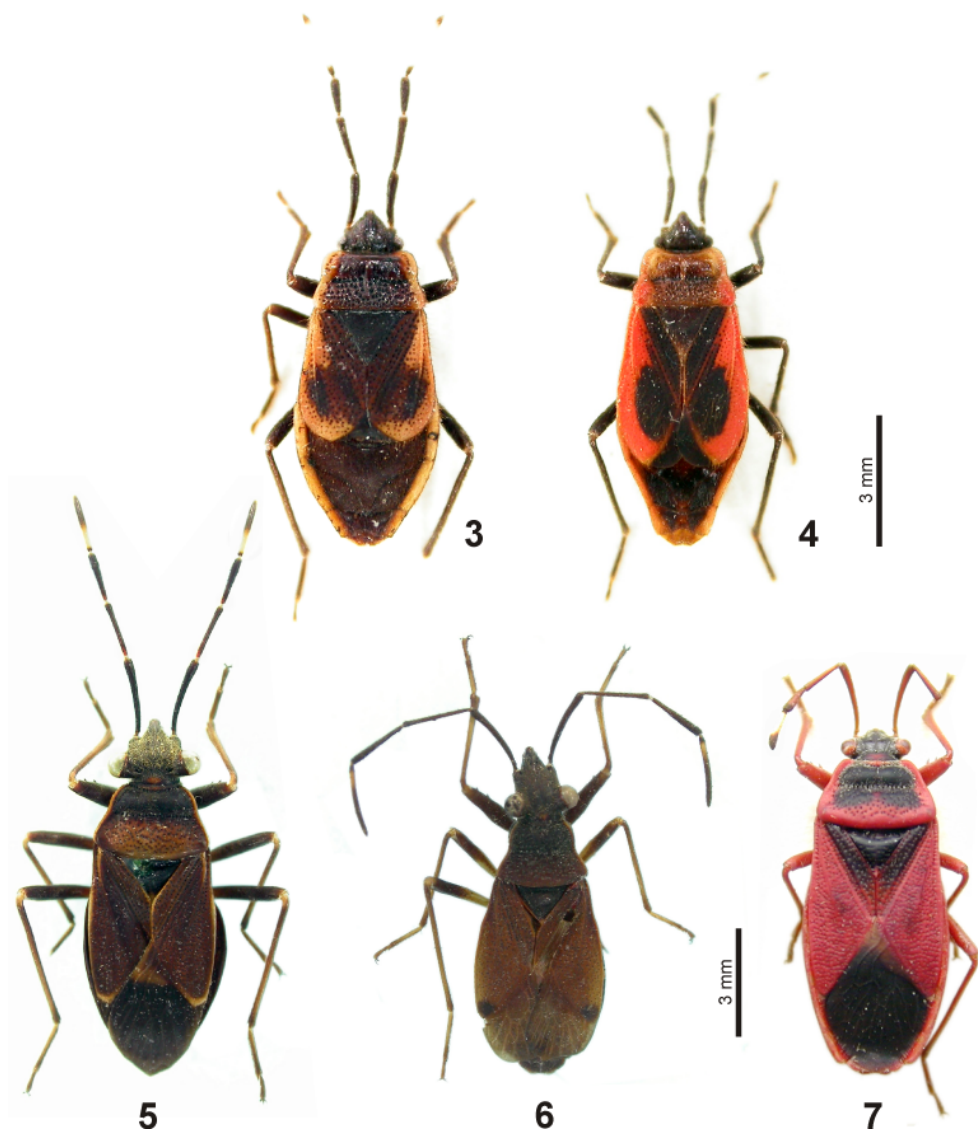
Head rather short, antennae, labium and legs slender, legs rather short. Distal part of fore femur with three small denticles and another very small subapical denticle. Antennomere I very long. Labium reaching between metacoxae. Pronotum rather short, its anterior part not narrowing; lateral margin in middle only slightly sinuate; pronotal collar narrow, weakly separated from callar lobe, not depressed; callar lobe rather short, little elevated, from its apical half towards base medially with wider furrow, becoming wider towards pronotal lobe.

Pronotum with scarce, dispersed punctures laterally on callar lobe and on pronotal lobe, fading away towards base. Lateral margins with broad zone without punctures. Conspicuous punctures on clavus and in a regular row on both sides of cubitus, subcosta and radius. Remaining surface of wing with indistinct punctures. Indented mesoscutum with fine punctures. Body covered by fine, silvery pubescence.

Measurements (mm). Holotype female. Body length 19.33. Head: width (including eyes) 2.74, interocular width 1.57, length 2.40. Antenna: antennomere I 4.05, antennomere II 3.78, antennomere III 2.16, antennomere IV 3.78. Pronotum: collar length 0.54, callar lobe length 1.08, pronotal lobe length 1.94, total length 3.51, width 5.94. Scutellum: length 2.48, width 3.19. Corium: length 9.02, width 3.51.

Differential diagnosis. This new species is similar to *I. limbata* Stål, 1870 (Fig. 2), but the latter has the head longer in front of the eyes, a thicker and much shorter antennomere I,

longer and thicker legs, much larger denticles in the apical part of the fore femur, a more elongate pronotum, particularly its anterior part, a more sinuate lateral margin, and a longer pronotal collar which is also indented, has at least a trace of a medial keel and is more distinctly separated from the callar lobe; the latter is longer, more elevated, and has a medial keel reaching to the anterior part of pronotal lobe. In addition, the overall coloration of *I. limbata*



Figs. 3-7. 3 – *Delacampus grossepunctatus* sp. nov., holotype, brachypterous female. 4 – *D. subtilepunctatus* sp. nov., holotype, brachypterous female. 5 – *Ectatops sulawesiensis* sp. nov., holotype, male. 6 – *E. notatus* sp. nov., paratype, female. 7 – *Euscopus rubens* sp. nov., holotype, female.

is distinctly black rather than reddish black, including the head, labium, pleura, and all the ventral surface including the female genitalia, the margins of the pronotum and corium are pale yellow rather than light red. Lastly, the light coloration of antennomere IV does not reach its midlength.

For comparison we give also the measurements for *I. limbata* (in mm, as means followed by ranges in parentheses). Females. Body length: 20.36 (19.28-21.22). Head: width (including eyes) 2.74 (2.65-2.86), interocular width 1.66 (1.62-1.73), length 2.68 (2.59-2.70). Antenna: antennomere I 3.48 (3.35-3.56), antennomere II 3.84 (3.67-3.94), antennomere III 2.35 (2.21-2.48), antennomere IV 3.44 (3.24-3.62). Pronotum: collar length 0.80 (0.70-0.92), callar lobe length 1.23 (1.08-1.35), pronotal lobe length 2.12 (2.00-2.21), total length 4.15 (4.00-4.27), width (5.83-6.21). Scutellum: length 2.73 (2.65-2.81), width 3.31 (3.27-3.40). Corium: length 9.56 (9.29-9.77), width 3.59 (3.46-3.75).

Etymology. The specific epithet is the Latin adjective *rubricatus* (= reddish).

Distribution. North-East India (Meghalaya state).

PYRRHOCORIDAE

Ectatops sulawesiensis sp. nov.

(Fig. 5)

Type material. HOLOTYPE: ♂, 'Indonesia, Sulawesi Utara, Dumoga-Bone Nat. Park, Hogg's Back Subcamp (660 m a.s.l.) 15.XI.1985, Station: 095, Project Wallace, leg. R. Bosmans & J. Van Stalle' (ISNB). PARATYPES: Same data as holotype, 1 ♂ 4 ♀ (ISNB); 'Indonesia, Sulawesi Utara, Dumoga-Bone N. P., January 1985, R. Ent. Soc. Lond., Project Wallace, foliage of fallen tree', 1 ♂ (BMNH); the same data, December 1975, on light, 1 ♀ (BMNH); 'Indonesia, Sulawesi Utara, Dumoga-Bone N. P., November 1985, in los house „Hoggs Back“, coll. G. B. White', 3 ♂♂ (BMNH).

Description. Head, antennae, labium, callar lobe, scutellum (except apex), femora (except bases), membrane (except base) and ventral side of body including laterotergites black. Base of head with reddish medial spot. Antennomeres II and III with narrow whitish basal band; antennomere IV with narrow black basal band followed by whitish coloration up to its midlength. Coxae, fore and middle femora narrowly pale, up to one third of hind femora and very thin band on base of tibiae also light. Tibiae and tarsi pale with tibial bases and apices dark, tarsi dark at apex. Pronotal lobe, clavus, corium, and hypocostal lamina brown to dark brown. Lateral margin of pronotum with thin yellow band (including edge but not on ventral side of pronotal epipleuron). Narrow costal margin, apex of corium and base of membrane light greyish brown. Membrane and veins concolorous, black, both of lighter colour on membrane base. Genital capsule black, yellow on ventral side, black coloration extending medially onto yellow area.

Head rather wide, elongate and diagonally inclined, eye sockets well developed, eyes directed sideways and somewhat upwards. Antennae slender, rather short, antennomere III not conspicuously widening towards apex. Labium reaching from midlength to hind margin of ventrite III. Pronotum rather wide, callar and pronotal lobes distinctly convex; lateral margin of pronotum slightly sinuate near midlength. Mesoscutum distinctly depressed, mesoscutellum distinctly elevated, apex totally straight; distal third with transverse wrinkles. Legs short; fore femora in apical part with two and one minute denticles.

Genital capsule wider than long; ventral wall with medial furrow distinctly convex in lower part; ventral rim medially depressed with infolding medially overturned, medially with small tip, the latter laterally with small indentation; laterally adjacent to the indentation wider flat outgrowth of oblique position, its outer side rounded, its inner side almost vertical, its apex thicker with black hairs; lateral rim of ventral wall sharp, sharply bent at point of contact with ventral rim, running diagonally straight to dorsal rim; ventral margin of lateral rim infolding bent with rounded indentation at apex of outgrowth on bend, outgrowth narrowing to point behind indentation.

Head with silvery pubescence denser than that on callar lobe; clavus and corium with evenly spaced coarse punctures.

Measurements (in mm, given as means followed by ranges). Males. Body length 9.74 (9.45-9.99). Head: width (including eyes) 2.57 (2.54-2.62), interocular width 1.48 (1.46-1.51). Antenna: antennomere I 2.14 (2.05-2.27), antennomere II 1.62 (1.57-1.67), antennomere III 1.39 (1.57-1.40), antennomere IV 1.63 (1.57-1.67). Pronotum: length 2.05 (2.00-2.11), width 3.21 (3.13-3.35). Scutellum: length 1.22 (1.13-1.35), width 1.82 (1.78-1.89). Corium: length 4.52 (4.48-4.59), width 1.76 (1.73-1.78).

Females. Body length 2.17 (2.11-2.27). Head: width (including eyes) 2.78 (2.75-2.81), interocular width 1.58 (1.57-1.62). Antenna: antennomere I 2.33 (2.16-2.43), antennomere II 1.73 (1.62-1.84), antennomere III 1.46 (1.35-1.48), antennomere IV 1.68 (1.51-1.84). Pronotum: length 2.30 (2.24-2.32), width 3.75 (3.62-3.83). Scutellum: length 1.52 (1.46-1.59), width 2.08 (2.00-2.21). Corium: length 5.24 (5.18-5.35), width 2.17 (2.11-2.17).

Differential diagnosis. The morphology and measurements of this new species are very similar to *E. subjectus* Walker, 1873, also from Sulawesi. However, the coloration of the new species is very constant while that of *E. subjectus* is very variable: pronotum, clavus, and corium range from almost black to pale reddish brown; the callar lobe is black and always darker than the pronotal lobe, which is usually less dark on disc (reddish) than laterally (almost black) and is uniformly light brown in the type specimen; lateral margins of the pronotum are usually red (orange in the type) as are the costal margin of corium (not necessarily reaching the apex of corium in very dark specimens), claval commissure and apex of corium; the reddish coloration of the apex of corium extends partly or entirely to the distal margin of corium. The corium is unicolored in pale specimens (including the type). The body of *E. subjectus* is black in ventral view, only the longitudinal protrusion and bases of middle and hind femora are red. In the type specimen the laterotergites, apex of abdomen and femora are dark reddish.

Males of both species are best distinguished by the shape of the dorsal rim of the genital capsule. In *E. subjectus* the dorsal rim bears mediolaterally a pair of stick-like outgrowths with a narrow base and pale apical hairs. The new species has a lateromedial pair of outgrowths on the ventral rim; the outgrowths are wide, laterally depressed, not high, of inclined position, and with rounded apices with black hairs.

Etymology. Patronymic.

Distribution. Indonesia (Sulawesi).

Ectatops notatus sp. nov.

(Fig. 6)

Type material. HOLOTYPE: ♂, 'Sarawak, Mt. Dulit, Dulit Trail, primitive forest, 1,000 ft, 26.VIII.1932, Oxford Univ. Exped., B. M. Hobby & A. W. Moore' (BMNH). PARATYPES: the same locality, 25.VIII.1932, 1 ♀; 'Sarawak, foot of Mt. Dulit, junction of rivers, old secondary forest. Native collected: Tinjar & Lelek', 1 ♀ (BMNH); 'Borneo [Sarawak], Matang, Xanthus [leg.]', 3 ♂♂ 6 ♀♀ (HNHM, 1 ♀ MMBC); 'Sarawak, Xanthus [leg.]', no further data, 1 ♂ (HNMN); without locality, 3 ♀♀ (HNHM).

Description. Body mainly black-brown. Head, antennomeres I-III, narrow band on base and two distal thirds of antennomere IV, callar lobe, scutellum, large rounded spot on apex of corium, sternum and zygosternum black. Pronotal lobe, clavus and corium brown, costal margin of lighter colour, membrane greyish brown with pale veins, secondary cell darker than rest of membrane. Small median spot on base of head, lateral margin of pronotum, apex of scutellum, and labium yellow. Labial segment I somewhat darker. Proximal third of antennomere IV (except its base) whitish. Femora black. Distal part of fore coxae and trochanters yellowish. Basal half of middle and hind femora with narrow apical yellowish band, bases of middle and hind tibiae also yellowish. Tibiae darker yellowish, their bases (behind a light annulus) and apices and tarsomeres I and III towards apex reddish. Dorsal and ventral laterotergites black, base of each laterotergite on outer side with white spot. Ventral wall of genital capsule black, atrium genitale light, yellowish.

Head large, narrow, in front of eyes very much protruding, of almost horizontal position; eyes large, strongly convex, eye sockets short, distinctly bend upwards. Sides of head from eyes to antenniferous tubercles long, straight and parallel. Medial longitudinal furrow distinct. Antennae slender, long, antennomere III long, only slightly widening towards apex. Labium approximately reaching first third of ventrite VI in males and first third of ventrite V in females. Pronotum narrow, a little wider towards base. Callar lobe strongly convex whereas pronotal lobe almost flat, pronotum thus horizontal. Lateral margin of pronotum very thin, scutellum medially strongly convex (in rare cases hardly convex at all), in males sometimes pointed. Body pear-shaped (particularly in females), widest in distal half of abdomen.

Genital capsule. Ventral wall rather low with bow-shaped furrow. Ventral rim medially with triangle-shaped point, its sides with two distinct rounded protuberances. Ventral rim infolding distally elevated, forming septum to which parameres adhere. Distinct outgrowth placed lateral to parameres (on proximal part of lateral rim infolding), bowl-like deepened on its apex and touched by another outgrowth shaped like a donkey's ear. Lateral rim infolding distally evenly deepened.

Measurements (in mm, given as means followed by ranges in parentheses). Males. Body length: 9.14 (8.69-9.34). Head: width (including eyes) 2.23 (2.16-2.32), interocular width 1.09 (1.03-1.13). Antenna: antennomere I 2.28 (2.19-2.32), antennomere II 1.93 (1.92-1.94), antennomere III 1.73, antennomere IV 2.05 (2.00-2.11). Pronotum: length 1.93 (1.89-2.11), width 2.54 (2.48-2.65). Scutellum: length 1.09 (1.05-1.13), width 1.39 (1.35-1.40). Corium: length 4.13 (3.89-4.27), width 1.55 (1.51-1.62).

Females. Body length: 12.05 (11.34-12.58). Head: width (including eyes) 2.56 (2.54-2.59), interocular width 1.28 (1.24-1.35). Antenna: antennomere I 2.62 (2.54-2.70), antennomere II

2.29 (2.19-2.35), antennomere III 2.16 (2.11-2.21); antennomere IV 2.39 (2.32-2.48). Pronotum: length 2.28 (2.21-2.32), width 3.17 (3.13-3.24). Scutellum: length 1.35 (1.24-1.43), width 1.76 (1.65-1.84). Corium: length 5.20 (5.02-5.24), width 1.93 (1.89-2.00).

Differential diagnosis. This new species can be easily distinguished from *E. nervosus* Bredin, 1901, which also occurs on Kalimantan, as it bears a whitish spot on the base of each outer side of each laterotergite, whereas in *E. nervosus* the laterotergites are completely black. In *E. nervosus* the head is more inclined and wider than in the new species, the antennae are shorter, and the pronotum is shorter and wider, particularly in its anterior part. Moreover, the corium is completely dark brown with a large round black apical spot in *E. notatus* sp. nov., while it is light brown in some specimens of *E. nervosus*. In the holotype of *E. nervosus* ('Banguay [= Baggi Isl.] bei Borneo') and some other available specimens, only the clavus, the corium from the claval suture to the cubitus, the corial clefts and the distal margin and apex of the corium are dark brown. In others the corium has a somewhat paler area between cubitus and media and not reaching the mesoscutellar apex, and a similarly pale but rounded distal spot between media and radius. The light coloration is more conspicuous in some specimens and the marks merge, forming the shape of a broad inclined letter L. However, the apex of corium is distinctly black in all specimens of *E. nervosus*.

Etymology. The specific epithet is the Latin adjective *notatus* (= marked), evoking the white spots on laterotergites.

Distribution. Malaysia: Kalimantan: Sarawak State.

Euscopus rubens sp. nov.

(Fig. 7)

Type material. HOLOTYPE: ♀, 'North Sumatra, Brestagi, 76 km from Medan, 30.III.-1.IV.1996, S. Bečvář leg.' (PPUA).

Description. Body mainly red. Head, pronotal collar, callar and pronotal lobe, membrane (except base), sternum and zygosternites, extreme apex of antennomere III, extreme base and distal third of antennomere IV and tarsi black. Trichobothrial areas velvet black. Median spot on vertex and pronotal collar, antennomeres I-III, labium, lateral margin of pronotum, basal third of pronotum (medially prolonged towards callar lobe), pronotal epipleuron, apex of scutellum, claval suture, apex of clavus, entire corium including hypocostal lamina, legs (including coxae) and dorsal outer and ventral laterotergites red. Base of membrane grey, antennomere IV (except base and apical part) whitish.

Head rather wide; medial longitudinal furrow on frons less apparent. Pronotum rather narrow, towards base only slightly widening; lateral margin of pronotum on level of median furrow, very slightly sinuate, in lateral view its edge rounded rather than sharp. Fore femora with small denticle at midlength, apex with one large and one small denticle. Sides of corium almost parallel, scarcely widening at level of claval apex.

Head, pronotal collar, furrow around callar lobe, sternum and ventrites with silvery pubescence, pubescence on ventral surface of body larger and denser. Pronotal lobe, mesoscutum, mesoscutellum (except top), clavus, and corium (except costal margin) with black punctures.

Measurements (mm). Holotype female. Body length 9.50. Head: width (including eyes) 1.97, interocular width 1.10. Antenna: antennomere I 1.90, antennomere II 1.90, antennomere III 0.84, antennomere IV 1.15. Pronotum: length 2.00, width 3.21. Scutellum: length 1.5, width 1.97. Corium: length 4.97, width 1.78.

Differential diagnosis. *Euscopus rubens* sp. nov. differs from other species of the genus with a red corium (i.e., *E. rufipes* Stål, 1870, *E. vittiventris* Walker, 1872, *E. chinensis* Blöte, 1931, *E. major* Stehlík & Jindra, 2003, and *E. parvimacula* Stehlík, 2004) by lacking a medial black spot on the corium (as well as a spot on its apex) and by having red rather than black antennomeres I-III (except base of antennomere III). In *E. parvimacula*, whose antennomeres I-III are also red, the forewing membrane is grey with a black base rather than the opposite in *E. rubens* sp. nov.

Etymology. The specific epithet is the Latin adjective *rubens* (= reddish).

Distribution. Indonesia: Sumatra.

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References

- DOESBURG P. H. VAN JR. 1968: A revision of New World species of *Dysdercus* Guérin Méneville (Heteroptera, Pyrrhocoridae). *Zoologische Verhandelingen* **97**: 1-215.
- FREEMAN P. 1947: A revision of the genus *Dysdercus* Boisduval (Hemiptera, Pyrrhocoridae). *Transactions of the Royal Entomological Society of London* **98**: 373-424.
- HUSSEY R. F. 1929: Fasc. III. Pyrrhocoridae. In: HORVÁTH G. & PARSHLEY H. M.: *General Catalogue of the Hemiptera*. Smith College, Northampton, 144 pp.
- KAPUR A. P. & VAZIRANI T. G. 1960: The identity and geographical distribution of the Indian species of the genus *Dysdercus* Boisduval (Hemiptera, Pyrrhocoridae). *Records of the Indian Museum (Calcutta)* **54** (1956): 107-150.
- SCHAEFER C. W. 1977: Genital capsule of the trichophoran male (Hemiptera: Heteroptera: Geocorisae). *International Journal of Insect Morphology and Embryology* **6**: 277-301.
- STEHLÍK J. L. 1965: Pyrrhocoridae and Largidae collected by E. S. Brown on Solomon Islands (Heteroptera). *Acta Musei Moraviae, Scientiae Naturales* **50**: 253-292.