

Panstronhygia, a new genus of Colpurini from Sulawesi, with a description of two new species (Hemiptera: Coreidae)

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Abstract One new genus, *Panstronhygia*, and two new species, *Panstronhygia delectabilis* and *Panstronhygia faceta*, collected in Sulawesi, Indonesia, are described in the tribe Colpurini (Coreidae). Dorsal habitus illustrations and drawings of the male and female genitalia are provided. A key to the known genera of Colpurini from Sulawesi is presented.

Key words *Panstronhygia*, Colpurini, Sulawesi, Indonesia.

INTRODUCTION

The tribe Colpurini (Hemiptera: Heteroptera: Coreidae) constitutes one of the dominant elements in the coreoid fauna of the Indo-Pacific. The known distribution extends from Fiji and Australia, to India and the eastern Palaearctic region, with the greatest diversity in Malaysia, Indonesia and Papua New Guinea. The tribe is represented by 43 genera. Species are usually black or dark-coloured, with a striking diversity of structures in the male genital capsule and in the female genital plate. Species commonly occur along forest edges and in forest habitats, although several species have radiated into other ecological niches (Brailovsky 1990).

In the Sulawesi (Celebes) region, the tribe Colpurini is represented by three genera and eight species. The genus *Homalocolpura* Breddin includes one species, *Homalocolpura bibax* Breddin (1900a). The genus *Hygia* Uhler has two subgenera: (i) *Caracolpura* Breddin, with one species: *Hygia (Caracolpura) planiceps* (Breddin 1900a); and (ii) *Sphinctocolpura* Breddin with five species: *Hygia (Sphinctocolpura) conspersipes* (Breddin 1901), *Hygia (Sphinctocolpura) forsteniana* Blote (1936), *Hygia (Sphinctocolpura) guttatipes* (Breddin 1901), *Hygia (Sphinctocolpura) minahassae* Blote (1936) and *Hygia (Sphinctocolpura) roratipes* (Breddin 1901). The genus *Typhlocolpura* has one species: *Typhlocolpura decoratula* Breddin (1900b).

The present paper adds two new species and a new genus to the tribe Colpurini; the new genus is closely related to the Australian genus *Woodwardhygia* Brailovsky. The striking features of this new genus include that: its head is much longer than it is wide; well-developed ocelli; femora ventrally armed with two subdistal short spines; scutellum longer than they are wide; and in the female, abdominal sternite VII with fissura and without plica. Drawings of the male and female genitalia (Figs 1–6) and a dorsal habitus illustration are provided (Fig. 7) in the present paper.

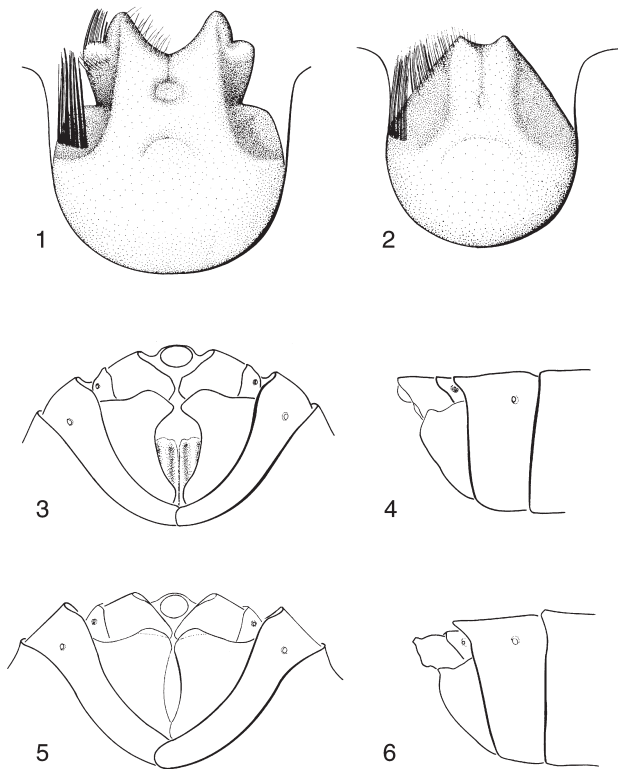
Abbreviations used are: UNAM, Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México, Mexico; ZMB, Museum der Humboldt Universität zu Berlin, Germany; ZSM, Zoologische Staatssammlung München, Germany. All measurements are in mm.

TAXONOMY

Key to the genera of Colpurini from Sulawesi

- 1 Body surface shiny; ventral surface of femora armed with two rows of acute spines (Fig. 12); rostrum remarkably long, extending to apex of last abdominal segment or beyond the abdomen; buccula rounded without a sharp anterior projection; dorsal surface of head convex in lateral view (Fig. 9).....
.....*Homalocolpura* Breddin
- Body surface rather dull; ventral surface of femora with two subdistal short spines and a few more spines scattered along surface (Fig. 13); rostrum shorter, not reaching the apex of last abdominal sternite; buccula rounded with a sharp anterior projection; dorsal surface of head almost flat in lateral view (Fig. 8).....2
- 2(1) Corium and clavus fused (Fig. 10); claval suture absent; hemelytral membrane reduced, reaching anterior border of abdominal segment IV or V.....
.....*Typhlocolpura* Breddin
- Corium and clavus separated by claval suture (Fig. 11); hemelytral membrane well developed, covering the abdomen.....3
- 3(2) Head much longer than wide (length: 2.75–2.80; width: 2.20–2.45); abdominal sternite VII of female with fissura but without plica.....
.....*Panstronhygia* gen. n.
- Head wider than long (length: 1.28–1.36; width 1.52–1.58); abdominal sternite VII of female with plica and fissura*Hygia* Uhler

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Figs 1–6. *Panstronhygia* spp. (1,3,4) *Panstronhygia delectabilis*: (1) male genital capsule in caudal view; (3) female genital plates in caudal view; (4) female genital plates in lateral view. (2,5,6) *Panstronhygia faceta*: (2) male genital capsule in caudal view; (5) female genital plates in caudal view; (6) female genital plates in lateral view.

***Panstronhygia* gen. n.**

Type species. *Panstronhygia delectabilis* sp. n.

Description. **Head.** Pentagonal, longer than wide and dorsally almost flat; tylus unarmed, apically globose, extending anteriorly to and laterally higher than juga; juga unarmed, thickened, shorter than tylus; antenniferous tubercles unarmed; side of head in front of eyes unarmed, slightly curved; antennal segment I broader than remaining segments and curved outward, longer than maximum length of head; segments II and III cylindrical, slender, segment IV fusiform; antennal segment II the longest, IV the shortest and III longer than I; ocelli conspicuously evident; preocellar pit deep and elongate; eyes hemispherical and exposed; postocular tubercle moderately protuberant; bucculae rounded, elevated, not projecting beyond antenniferous tubercles, with sharp spiny anterior projection; rostrum reaching medial third of abdominal sternite VI or VII; rostral segment IV longest, I shortest, and III longer or subequal to II; genae unarmed; mandibular plate unarmed. **Thorax.** Pronotum wider than long, trapeziform and non-declivent; anterior lobe shorter than posterior lobe, both with lateral margins moderately reflexed; collar evident; frontal angles produced forward as rounded teeth; humeral angles rounded, not exposed; anterolateral margins obliquely straight; posterolateral

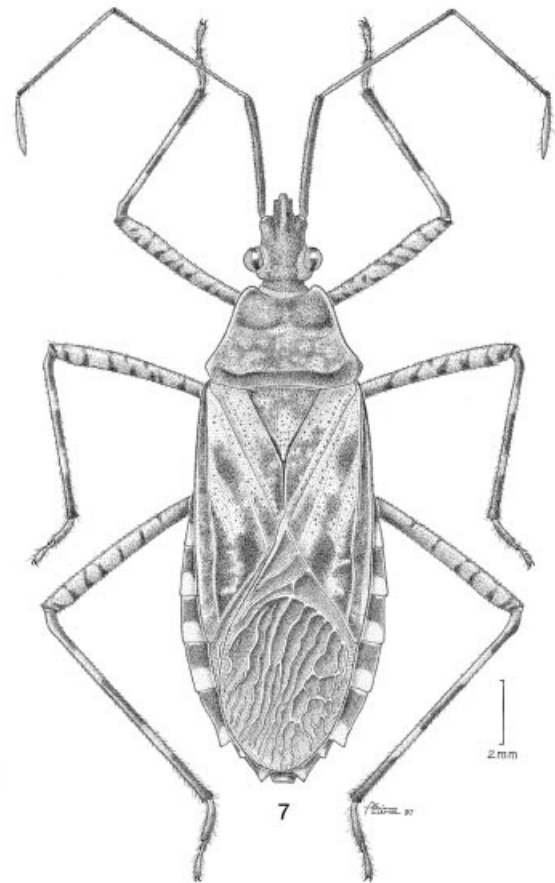
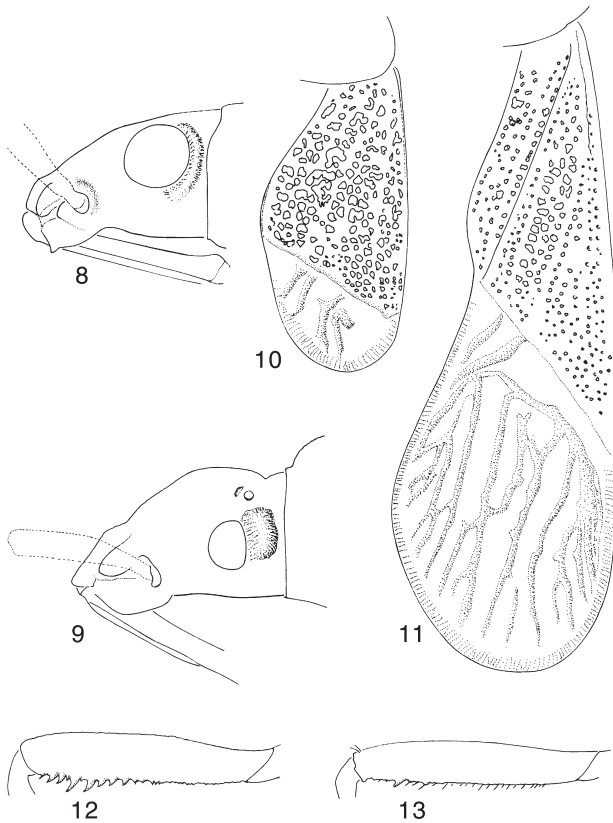


Fig. 7. Dorsal view of *Panstronhygia delectabilis*.

margins straight; posterior margin concave; callar region flat; anterior lobe of metathoracic peritreme reniform, posterior lobe sharp, small. **Legs.** Femora ventrally armed with two subdistal short spines; tibiae sulcated. **Scutellum.** Triangular, flat, longer than wide; apex subacute. **Hemelytra.** Macropterous, reaching posterior margin of last abdominal segment. **Abdomen.** Connexival segments higher than terga; posterior angles complete, not extending on a short spine; abdominal sterna with medial furrow reaching the posterior margin of sternite V. **Male genitalia.** Pygophore has posteroventral border with a pronounced U-shaped concavity, is enclosed by two large, robust and bifid arms (Fig. 1), or is shallowly notched, with lateral lobes short and not bifid (Fig. 2). **Female genitalia.** Abdominal sternite VII with fissure clearly overlapping; plica obsolete; gonocoxae I enlarged dorsoventrally, in caudal view opened, with the space remarkably broad (Figs 3–4) or narrow and elongate (Figs 5–6), in each condition with upper and inner face touching; paratergite VIII small, triangular, with spiracle visible; paratergite IX squarish, longer than VIII. **Integument.** Body surface rather dull, almost glabrous, with short decumbent silvery bristle-like setae; posterior lobe of pronotal disc, scutellum, clavus, corium, thorax, abdominal sterna and gonocoxae I strongly



Figs 8–13. (8,10) *Typhlocolpura decoratula* Breddin: (8) head in lateral view; (10) hemelytra. (9,12) *Homalocolpura bibax* Breddin: (9) head in lateral view; (12) fore femur. (11,13) *Hygia (Sphinctocolpura) guttatipes* (Breddin): (11) hemelytra; (13) fore femur.

punctate; head dorsally, anterior lobe of pronotal disc, connexival segments and paratergite VIII and IX impunctate; head ventrally and pygophore minutely granulate.

Remarks. *Panstronhygia* gen. n. most closely resembles *Woodwardhygia* Brailovsky (1993), which is known only from Australia. Both genera have unarmed antenniferous tubercles, bucculae with sharp, spiny anterior projections, armed femora, connexival segments with complete posterior angles (not extending on a short spine), and, in females, abdominal sternite VII with a fissure. In *Panstronhygia*, the head is longer than it is wide, antennal segment I is conspicuously longer than the maximum length of the head, the rostrum reaches the medial third of abdominal sternite VI or VII, rostral segments IV and I are, respectively, the longest and shortest segments, the tylus is apically globose, and the gonocoxae I in caudal view are opened. In *Woodwardhygia*, the head is wider than it is long, antennal segment I is equal to or slightly shorter than the maximum length of the head, the rostrum reaches the medial third of abdominal sternite IV, rostral segments II and III are, respectively, the longest and shortest segments, the tylus is apically bifid, and the gonocoxae I in caudal view are closed.

The new genus also resembles *Hygia* Uhler, sharing with it the following characters: tylus unarmed, apically globose;

antennal segment I longer than the maximum length of the head; buccula with sharp spiny anterior projections; rostrum not extending beyond the middle third of abdominal sternite VII; macropterous or submacropterous; and body surface rather dull. In *Panstronhygia* the head is longer than it is wide, and, in females, abdominal sternite VII has a fissure and lacks a plica. In *Hygia* the head is wider than it is long and the abdominal sternite VII of females has both a fissure and plica. *Typhlocolpura* Breddin, also recorded from Sulawesi, has the abdominal sternite VII of females with both a fissure and plica. In addition, the clavus and corium are always fused, the claval suture is absent, the hemelytral membrane is reduced, and the ocelli are usually obsolete. In *Panstronhygia* the claval suture is present, the hemelytral membrane is well developed and the ocelli are clearly evident. *Homalocolpura* Breddin, the other known genus from Sulawesi, is easily recognisable in having the body surface mostly shiny, the head dorsally convex in lateral view (Fig. 9), the ventral surface of femora with two rows of sharp spines (Fig. 12), the rostrum remarkably long, extending until the apex of the last abdominal sternite or beyond the abdomen, and abdominal sternite VII of females with a plica and fissure.

Etymology. *Panstronhygia* is named for its superficial resemblance to the genus *Panstrongylus* Berg (Hemiptera: Reduviidae).

Key to species of *Panstronhygia* Brailovsky and Barrera

- 1 Posteroventral border of pygophore with a pronounced U-shaped concavity, enclosed by two large, robust, bifid arms (Fig. 1); gonocoxae I in caudal view opened with the space remarkably broad (Figs 3–4) *delectabilis* Brailovsky and Barrera
- Posteroventral border of pygophore with a shallow notch, with lateral lobes short, not bifid (Fig. 2); gonocoxae I in caudal view opened, with the space narrow and elongate (Figs 5–6) *faceta* Brailovsky and Barrera

Panstronhygia delectabilis sp. n. (Figs 1, 3, 4, 7)

Types. **Indonesia.** *Central Sulawesi.* Holotype male, Palu Palolo, Lindu National Park, 25–27.viii.1990, A. Riedel (ZSM); paratypes: one male, three females, same data as holotype (UNAM, ZSM). *South-eastern Sulawesi.* One female, Mengkoko Geb Wawo, 16–30.i.1932, G. Heinrich (ZMB).

Description. **Male.** **Coloration.** Overall colour light yellow-brown, with dark brown or black pattern elements on various body parts. **Dorsal coloration.** Head: black with narrow yellow longitudinal stripe between antenniferous tubercles and neck, comprising space between eye and ocellus and upper face of postocular tubercle; antennal segments I–III reddish brown, with basal joint or basal third yellow; antennal segment IV yellow with basal joint reddish brown. Pronotum: anterior lobe black, with light yellow anterolateral margins;

posterior lobe light yellow with punctures, irregular lateral spots and light brown humeral angles. Scutellum: light yellow, with punctures and black to brown irregular spots; apex creamy yellow. Hemelytra: clavus light yellow with punctures and irregular spot near light brown claval commissure; corium light yellow with the following areas light brown to black: punctures, longitudinal stripe near costal margin, elongate to wide irregular markings through apical cells, basal endocorium, apical angle and irregular discoidal spot near claval commissure; hemelytral membrane light brown with veins yellow. Abdomen: connexival segments with the anterior half brown and the posterior half and the anterior border yellow; dorsal abdominal segments I–IV bright orange, segment V black with lateral margins bright orange and segment VI–VII black to reddish orange-brown with the posterior margin of segment VII yellow. **Ventral coloration.** Head: black with yellow spot near eye; rostral segments I–II yellow, segment III chestnut orange and segment IV reddish brown with basal joint chestnut orange. Thorax: prothorax yellow with punctures, elongate spot above acetabulae, longitudinal stripe near anterolateral margins and prosternum reddish brown; mesothorax and metathorax black with acetabulae, elongate spot near upper margin and anterior and posterior lobe of metathoracic peritreme yellow. Legs: coxae yellow with upper margin reddish brown; trochanters yellow; femora yellow with apical margin and 7–9 irregular rings reddish brown; tibiae reddish brown with two complete yellow rings (one near the basal third, the other near the middle third); tarsi reddish brown to chestnut orange. Abdomen: black with irregular dark orange-yellow spots lateral to midline; yellow pleural margins of segments II–VI (including the area near the abdominal spiracle); reddish brown pleural margin of segment VII and upper margin; yellow inner margin (including the area near the abdominal spiracle); genital capsule black with the apical third of the lateral arms yellow. **Genitalia.** Pygophore: posteroventral border with a pronounced U-shaped concavity enclosed by two large, robust and bifid arms (Fig. 1). **Female. Coloration.** Similar to male. Abdomen: connexival segments VIII and IX with reddish brown anterior half and yellow posterior half; dorsal abdominal segments VIII and IX reddish brown to black. Genital plates: gonocoxae I dirty yellow with inner face, reddish brown to black upper border and elongate stripe near upper margin; paratergite VIII yellow with anterior angle close to spiracle reddish brown; yellow paratergite IX with reddish brown to black anterior third. **Genital plates.** Gonocoxae I enlarged dorsoventrally, opened in caudal view, with the space remarkably broad (Figs 3–4).

Variation. The type material has some variation in colour. First, the scutellum can be black with a yellow median longitudinal stripe running from base to apex. Second, abdominal sterna III–VII can be light yellow and densely scattered with black spots. Third, the pleural abdominal sterna V–VI can be yellow with a light brown upper margin near the anterior half or the pleural abdominal sterna II–VII can be reddish brown with an orange-yellow posterior margin and area around the

abdominal spiracle. Fourth, the gonocoxae I and paratergite VIII can be brown.

Measurements. Measurements (mm) are given male first, female second. Head length: 2.75, 2.80; width across eyes: 2.20, 2.42; interocular space: 1.17, 1.25; interocellar space: 0.60, 0.64; preocular distance: 1.62, 1.72; length of antennal segments: I, 3.70, 3.90; II, 5.40, 5.30; III, 4.10, 4.20; IV, 2.10, 2.15; length of rostral segments: I, 3.35, 3.40; II, 3.70, 3.90; III, 3.80, 3.80; IV, 3.95, 4.00. Pronotum: total length: 2.90, 2.95; maximum width of anterior lobe: 2.90, 3.35; maximum width of posterior lobe: 4.30, 4.90. Scutellar length: 2.20, 2.60; width: 1.95, 2.35. Total body length: 16.63, 18.25.

Etymology. From the Latin *delectabilis*, delightful, agreeable.

***Panstronhygia faceta* sp. n. (Figs 2, 5, 6)**

Types. Indonesia. Northern Sulawesi. Holotype male, Kalabat, 250 m, iii.1931, G. Heinrich (ZMB); paratypes: two females, same data as holotype (UNAM, ZMB). **Central Sulawesi.** One female, Lake Poso, Pendolo, 21.viii.1990, A. Riedel (ZSM).

Description. Male. Coloration. Dorsally and ventrally similar to *P. delectabilis*. **Genitalia.** Pygophore posteroventral border shallowly notched, with lateral lobes short and not bifid (Fig. 2). **Female. Coloration.** Dorsally and ventrally similar to *P. delectabilis*. **Genital plates.** Gonocoxae I enlarged dorsoventrally, in caudal view opened, with the space narrow and elongate (Figs 5,6).

Measurements. Measurements (mm) are given male first, female second. Head length: 2.75, 2.80; width across eyes: 2.40, 2.45; interocular space: 1.30, 1.35; interocellar space: 0.58, 0.60; preocular distance: 1.75, 1.80; length of antennal segments: I, 3.90, 4.00; II, 5.90, 6.00; III, 4.35, 4.45; IV, 2.05, 2.15; length of rostral segments: I, 3.30, 3.35; II, 3.85, 4.23; III, 4.05, 4.40; IV, 4.45, 4.70. Pronotum: total length: 3.05, 3.30; maximum width of anterior lobe: 2.85, 3.35; maximum width of posterior lobe: 4.35, 4.90. Scutellar length: 2.25, 2.55; width: 1.85, 2.35. Total body length: 17.20, 19.47.

Etymology. From the Latin *facetus*, elegant, fine.

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