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NEW GENERA AND NEW SPECIES OF COLPURINI (HETEROPTERA: COREIDAE) FROM IRIAN JAYA AND PAPUA NEW GUINEA

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ABSTRACT

Two new genera and two new species from Irian Jaya and Papua New Guinea are described and illustrated. These taxa are discussed in relation to others in the tribe Colpurini.

Key Words: Insecta, Heteroptera, Coreidae, Colpurini, new genera, new species, New Guinea.

RESUMEN

Dos nuevos géneros y dos nuevas especies provenientes de Irian Jaya, y Papua Nueva Guinea son descritos e ilustrados. Cada taxa es discutido en relación con otros incluidos en la tribu Colpurini.

Translation provided by the author.

The tribe Colpurini is represented in the South Pacific Islands by a number of species that show various bizarre morphological specializations. The most striking features are the development of the head including the eyes, the remarkable reduction of the hemelytra, the great diversity in the male genital capsule and in the female genital plates, and the high degree of endemicity.

The knowledge of the tribe Colpurini, which includes 47 genera, has been summarized by Brailovsky (2003). Since completing that work, the author has accumulated additional material, including two new genera and two new species collected in Indonesia (Irian Jaya) and Papua New Guinea.

Based on the morphology of abdominal sternite VII in females, these genera are included in the group lacking a plica and fissura, and therefore abdominal sternite VII is entire (Brailovsky 2003). This paper is a contribution to the continuing effort to revise the tribe Colpurini to make identifications possible, and to stimulate the study of their biology in a wide sense.

All measurements are given in millimeters. Acronyms used are BMNH (The Natural History Museum, London, England); RNHL (Rijksmuseum van Natuurlijke Histoire, Leiden, Netherlands); SMTD (Staatliches Museum fur Tierkunde, Dresden, Germany); UNAM (Instituto de Biología, Universidad Nacional Autónoma de México); ZMHB (Zoologisches Museum, Humboldt Universitat, Berlin, Germany); ZSMC (Zoologische Staatsammlung Munchen, Germany).

Cephalohygia Brailovsky **NEW GENUS**

Type species: *Cephalohygia decorata* Brailovsky, monobasic.

Description. Head longer than wide, pentagonal, and dorsally flat; tylus unarmed, apically globose, extending anteriorly to and laterally higher than juga; juga unarmed, thickened, and apically rounded; antenniferous tubercles unarmed, with apices truncated; antennal segment I moderately robust, thickest, slightly curved outward, and shorter than maximal length of head; segments II and III cylindrical and slender, segment IV fusiform; antennal segment II longest, III shortest, and IV longer than I; ocelli well developed; preocellar pit deep; eyes spherical; postocular tubercles protuberant; buccula elongate, barely raised, short, not extending beyond antenniferous tubercles, without sharp spiny projection; rostrum extending beyond the apex of the last abdominal sternite; mandibular plate and genae unarmed (Fig. 1). Thorax: Pronotum wider than long, trapeziform, bilobed, and declivant; collar wide; frontal angles projected forward as tiny lobe; humeral angles rounded, not exposed; anterolateral borders sinuate, smooth; posterolateral and posterior borders straight, smooth; calli weakly convex; anterior lobe of metathoracic peritreme reniform, and posterior lobe sharp, small. Legs unarmed; tibiae sulcate. Scutellum triangular, longer than wide, with apex subacute to rounded, and weakly raised. Hemelytra macropterous, almost reaching the apex of the last abdominal segment; costal margin emarginate; apical margin obliquely straight; clavus and corium densely punctate; apical margin of endocorium almost impunctate. Abdomen: Connexivum higher than terga, with posterior angle of each segment entire, not projected into a spine. Male genitalia: Posteroventral edge of genital capsule with a pronounced U-shaped concavity expanded at middle third as small plate, laterally enclosed by two large and relatively slender arms (Figs. 2-3). Female genitalia: Abdominal sternite VII without plica or fissura, and with posterior margin of the plate projected as a triangular broad expansion; gono-

coxae I broad, enlarged antero-posteriorly, in caudal view with the concave mesial margins closed, in lateral view with upper third conspicuously convex and exposed, and lower third with apical angle protruding into small lobes; paratergite VIII short, square, with visible spiracle; paratergite IX squarish, longer than paratergite VIII (Figs. 7-8).

Integument. Body surface rather dull, almost glabrous.

Discussion. *Cephalohygia* New Genus, is similar to *Acarihygia* Brailovsky (1993) and *Monasavuhygia* Brailovsky (1996). The three genera share the following characters: head remarkably elongate, longer than wide, length of antennal segment I shorter than maximal length of head, tylus apically globose, antenniferous tubercles unarmed, buccula short without sharp spiny projection, legs unarmed, and abdominal sternite VII of female without plica or fissura.

Acarihygia and *Monasavuhygia*, described from the Fiji Islands, differ from *Cephalohygia* in possessing the following characters: micropterous, ocelli absent, abdominal segments IV to VI strongly convex, scutellum wider than long, antennal segment III the shortest or I, III and IV subequal, and rostrum reaching middle third of abdominal sternite V or apex of the last abdominal sternite. *Cephalohygia*, known from Irian Jaya (Indonesia), is macropterous, with ocelli well developed, scutellum longer than wide, antennal segment IV the shortest, rostrum remarkably elongate, extending beyond the apex of the last abdominal sternite, and abdominal segments IV to VI are not strongly convex.

Etymology. Referring to the appearance of the head.

Cephalohygia decorata Brailovsky, **NEW SPECIES**
Figs. 1-3, 7-8

Description. Holotype male. Dorsal coloration: head dark brown with longitudinal stripe adjacent to eyes, dorsal aspect of postocular tubercles, tylus and jugum yellow to pale brownish-orange; antennal segments I and II orange yellow, III brown with basal joint yellow, and IV pale yellow with basal joint brown; pronotum brownish-orange with irregular creamy white marks at middle third, and the area between calli and middle line of collar reddish brown; scutellum brownish-orange, with apex creamy yellow; clavus and corium brownish-orange with punctures reddish brown; hemelytral membrane dark ambarine with veins mostly brown; connexivum brown with posterior margin yellow; dorsal abdominal segments II to VI shiny orange, and VII shiny orange with posterior third reddish brown. Ventral coloration: ground color dark yellow with punctures shiny brownish-orange; rostral segments I to IV, posterior margin of pleural sterna III to VII, and legs ochre yellow; prosternum, mesosternum, and metasternum shiny orange; femora and tibiae with obscure subapical pale yellow ring; anterior lobe of metathoracic peritreme creamy yellow, and posterior lobe orange.

Measurements. ♂. Head length 1.82; width across eyes 1.36; interocular width 0.78; interocellar width 0.34; preocular distance 1.30. Length of antennal segments: I, 1.24; II, 1.84; III, 0.98; IV, 1.38. Pronotum: Total length 2.00; width across frontal angles 1.92; width across humeral angles 3.20. Scutellar length 1.68; width 1.52. Total body length 10.40.

Female. Coloration: similar to male; femora brownish-yellow with subapical yellow ring; tibiae brownish-yellow with two yellow rings, one subbasal, the other near middle third; connexival segments VIII and IX with upper margin yellow and inner margin reddish brown; dorsal abdominal segments III to IX shiny reddish orange; gonocoxae I with inner face ochraceus and punctures shiny brownish-orange, and outer face reddish brown; paratergite VIII and IX ochraceus.

Measurements. ♀. Head length 2.08; width across eyes 1.48; interocular width 0.86; interocellar width 0.40; preocular distance 1.38. Length of antennal segments: I, 1.28; II, 2.00; III, 1.04; IV, 1.32. Pronotum: Total length 2.16; width across frontal angles 2.00; width across humeral angles 3.52. Scutellar length 1.76; width 1.68. Total body length 11.70.

Holotype: ♂, PAPUA, NORTH NEW GUINEA, Toricelli (Gebirge), Kais Wilhelmsland, II-1910, Dr. Schlaginhaufen (SMTD).

Paratype: 1 ♀ INDONESIA, Irian Jaya, Humboldt Bay District, Bewani Mts., IX-1937 (BMNH).

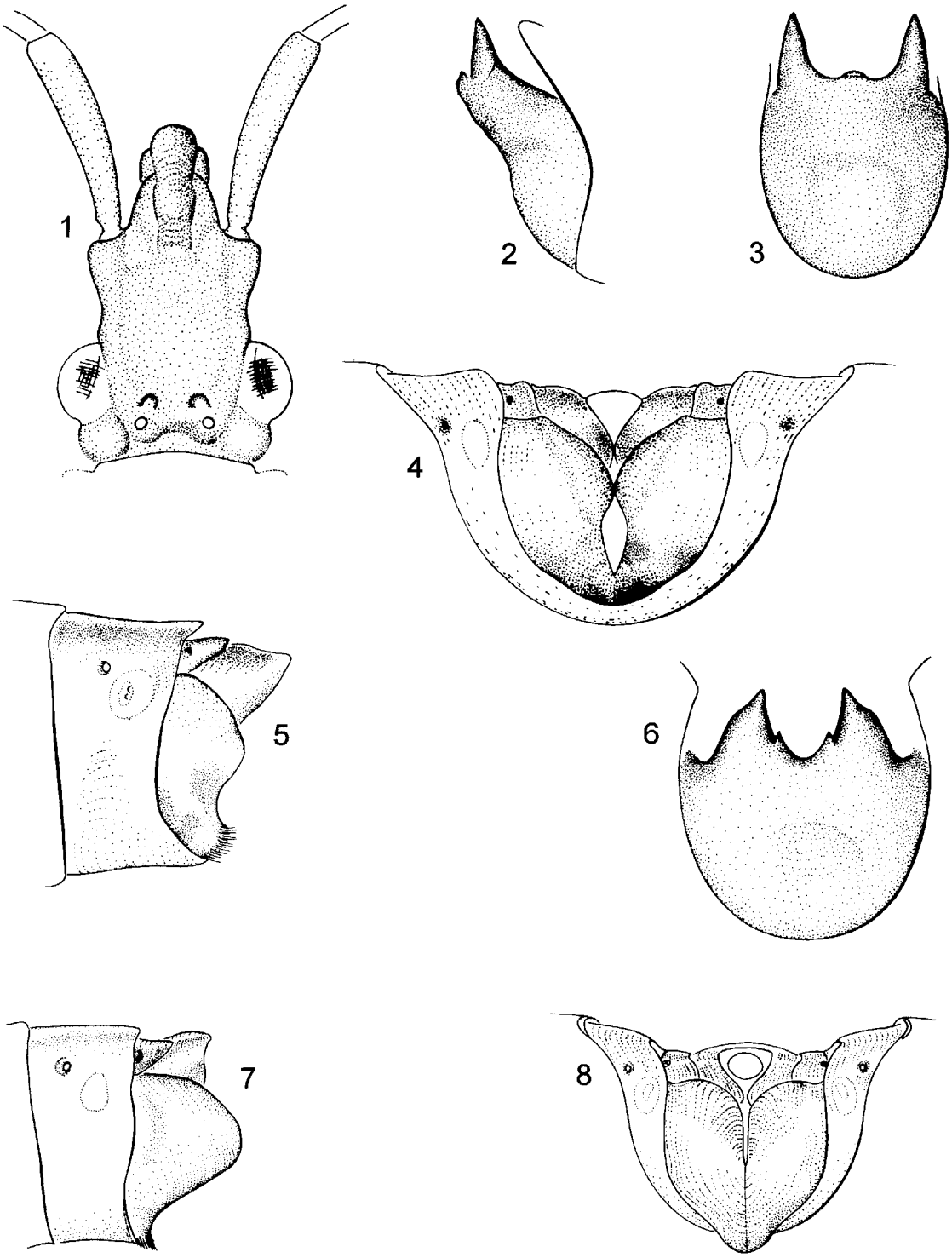
Etymology. The specific name refers to the fine color and proportions of this species.

Distribution. Known only from Irian Jaya (Indonesia) and northern Papua New Guinea (Toricelli).

Scioriedeli Brailovsky **NEW GENUS**

Type species: *Scioriedeli mandibularis* Brailovsky, monobasic.

Description. Body medium size, and relatively elongate. Head longer than wide or as long as wide across eyes, pentagonal, and dorsally flat; tylus unarmed, with the apex barely bifid, extending anteriorly to and laterally higher than juga; juga unarmed, apically truncate; antennal segment I moderately robust, thickest, slightly curved outward and longer than maximal length of head; segments II and III cylindrical and slender, and segment IV fusiform; antennal segment II longest, IV shortest, and I longer than III; ocelli well developed; preocellar pit deep; eyes spherical; postocular tubercles protuberant; buccula rounded, short, not extending beyond antenniferous tubercles, with sharp spiny middle projec-



Figs. 1-3. *Cephalohygia decorata* Brailovsky. 1. Head in dorsal view. 2-3. Male genital capsule. 2. Lateral view. 3. Caudal view. Figs. 4-6. *Scioriedeli mandibularis* Brailovsky. 4-5. Female genital plates. 4. Caudal view. 5. Lateral view. 6. Male genital capsule in caudal view. Figs. 7-8. Female genital plates of *Cephalohygia decorata* Brailovsky. 7. Lateral view. 8. Caudal view.

tions; rostrum reaching anterior or middle third of abdominal sternite V; mandibular plate armed with short tubercle; genae unarmed. Thorax: Pronotum wider than long, trapeziform, bilobed, and declivant; collar wide; frontal angles projected forward as tiny lobe; humeral angles rounded, not exposed; anterolateral borders sinuate, smooth; posterolateral and posterior borders straight, smooth; calli barely convex; anterior lobe of metathoracic peritreme reniform, posterior lobe sharp, small. Legs unarmed; tibiae sulcate. Scutellum triangular, longer than wide, apex subacute, and weakly raised. Hemelytra macropterous, reaching the apex of the last abdominal segment; costal margin emarginate; apical margin obliquely straight; clavus and corium including the apical margin of endocorium punctate. Abdomen. Connexivum higher than terga, with posterior angle of each segment entire, and not projected into a spine. Male genitalia: Posteroventral edge of genital capsule with pronounced U-shaped concavity, enclosed by two large, robust arms; inner face of each arm at middle third with small denticle (Fig. 6). Female genitalia: Abdominal sternite VII entire, without plica or fissura, and with posterior margin of the plate projected as a large and broad triangular expansion; gonocoxae I enlarged dorso-ventrally, in caudal view opened, with the space relatively broad, in lateral view with upper third broadly convex and exposed, and lower third with apical angle blade-shaped, noticeably protruding into large and broad lobes, directed upward; paratergite VIII short, square, with visible spiracle; paratergite IX squarish, longer than paratergite VIII (Figs. 4-5).

Integument. Body surface rather dull, almost glabrous.

Etymology. Named for Alexander Riedel, distinguished German entomologist.

Discussion. *Scioriedeli* New Genus, with abdominal sternite VII of female without plica or fissura belongs to the "*Sciophyrus*" complex, recently revised by Brailovsky and Barrera (1996). In that contribution a key to closely related genera was given, as well as a full description of each genus. In *Scioriedeli*, *Sciophyrus* Stål, *Sciophyropsis* Brailovsky and Barrera, *Sciophyrella* Brailovsky and Barrera, and *Schaeferhygia* Brailovsky and Ortega (1994), the fore femora are unarmed, while in *Sciophyritides* Brailovsky and Barrera, and *Sciophyroides* Brailovsky and Barrera they are armed.

Scioriedeli, *Sciophyrus*, *Sciophyrella*, and *Schaeferhygia* share the body surface rather dull, the pronotum weakly bilobed, and the hemelytra clearly macropterous. In *Sciophyropsis* the body surface is shiny, the pronotum clearly bilobed, and hemelytra are submacropterous.

In *Sciophyrus* the antennal segment III is the shortest, in the other three closest genera the antennal segment IV is the shortest. *Schaeferhygia* has the genae armed, the external face of gonocoxae I rounded without lobulations, and in caudal view the concave mesial margins of the first gonocoxae are closed. In *Sciophyrella* and *Scioriedeli* the genae are unarmed, and the external face of gonocoxae I basally and apically lobulate.

Sciophyrella has the apical margin of endocorium smooth, without punctures, the gonocoxae I in caudal view with the concave mesial margins closed, the antennal segment III longer than I, and the mandibular plate unarmed. The apical margin of endocorium in *Scioriedeli* is clearly punctate, the gonocoxae I in caudal view with the mesial margins opened, antennal segment III shorter than I, and mandibular plate armed with short tubercle.

Scioriedeli mandibularis Brailovsky **NEW SPECIES**
(Figs. 4-6)

Description. Holotype male. Dorsal coloration: head shiny brownish-orange with longitudinal stripe adjacent to eyes, dorsal aspect of postocular tubercle, jugum, and apex of tylus yellow; antennal segments I and II brownish-orange, III brown with basal joint yellow, and IV yellow with basal joint brown; pronotum shiny brownish-orange with anterolateral margins and irregular creamy white marks at middle third; scutellum dark yellow with punctures shiny brownish-orange, and apex pale yellow; clavus and corium dark brownish-yellow with punctures shiny brownish-orange; hemelytral membrane dark yellow with veins pale brown; connexivum reddish brown with posterior margin yellow; dorsal abdominal segments shiny orange with black marks at posterior margin. Ventral coloration: Ground color dark yellow with punctures shiny brownish-orange; rostral segments I to IV, and posterior margin of pleural sterna III to VII yellow; prosternum, mesosternum, and metasternum shiny orange; metathoracic peritreme with anterior lobe creamy white, and posterior lobe orange; coxae and trochanters yellow; fore and middle femora yellow with subapical third brown; hind femur and tibiae pale brown with two yellow rings one subbasal, the other near middle third; tarsi pale brown with yellow marks.

Measurements. ♂. Head length 1.70; width across eyes 1.70; interocular width 0.90; interocellar width 0.38; preocular distance 1.12. Length of antennal segments: I, 2.14; II, 3.52; III, 1.92; IV, 1.64. Pronotum: Total length 2.20; width across frontal angles 2.04; width across humeral angles 3.80. Scutellar length 1.92; width 1.68. Total body length 11.50.

Female. Coloration: similar to male. Connexival segments III to V reddish brown with posterior margin yellow; segments VI to VIII reddish brown with anterior and posterior margin yellow, and IX reddish brown with anterior margin yel-

low; dorsal abdominal segments shiny orange yellow; gonocoxae I yellow with punctures shiny brownish-orange; paratergite VIII and IX yellow.

Measurements. ♀. Head length 1.94; width across eyes 1.84; interocular width 0.98; interocellar width 0.48; preocular distance 1.32. Length of antennal segments: I, 2.24; II, 3.64; III, 2.06; IV, 1.76. Pronotum: Total length 2.60; width across frontal angles 2.54; width across humeral angles 4.64. Scutellar length 2.26; width 2.04. Total body length 13.95.

Holotype: ♂ INDONESIA, Irian Jaya, mountain slope above Bernhard Camp, 750 m, 19-III-1939, L. J. Toxopeus (Neth. Ind. Amer. New Guinea Exped.) (RNHL).

Paratypes. INDONESIA: 1 ♀ Irian Jaya, mountain slope above Bernhard Camp, 750 m, 25-III-1939, L. J. Toxopeus (Neth. Ind. Amer. New Guinea Exped.) (UNAM). 1 ♀, Irian Jaya, Jayawijaya Prov., Bime, 1600-2000 m, 10-IX-1993, A. Riedel (ZSMC). 1 ♀, Irian Jaya, Lordberg, 7-XII-1912, S. G. Burgers (Kais Augustfl Exp.) (ZMHB). 1 ♀, Irian Jaya, Etappenberg, 850 m, 10-12-XI-1912, S. G. Burgers (Kais Augustfl Exp.) (ZMHB).

Etymology. Named for the appearance of the mandibular plate.

Distribution. Only known from Irian Jaya (Indonesia).

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References Cited

Brailovsky, H. 1993. New genera and new species of Colpurini (Heteroptera: Coreidae) from the Fiji Islands and New Guinea. Proc. Entomol. Soc. Washington 95(3): 435-448.

Brailovsky, H. 1996. A revision of the tribe Colpurini (Heteroptera: Coreidae) from the Fiji Islands. Proc. Entomol. Soc. Washington 98 (3): 473-490.

Brailovsky, H. 2003. A further contribution to the systematics of the tribe Colpurini (Heteroptera: Coreidae: Coreinae). J. New York Entomol. Soc. 111(4): 211-226.

Brailovsky, H., and G. Ortega Leon. 1994. Three new genera and six new species of Colpurini (Heteroptera: Coreidae) from New Guinea). Proc. Entomol. Soc. Washington 96(3): 500-515.

Brailovsky, H., and E. Barrera. 1996. Revision del Complejo *Sciophyrus* (Hemiptera: Heteroptera: Coreidae: Colpurini). Folia Entomol. Mexicana 96: 15-106.