

A NEW GENUS, TWO NEW SPECIES, AND SYNONYMICAL NOTES ON THE
TRIBE SPATHOPHORINI (HETEROPTERA: COREIDAE:
MEROPACHYDINAE), WITH A KEY TO GENERA OF THE TRIBE

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Abstract.—*Himellastella*, new genus, and two new species *H. aploa* from Brazil, and *H. conica* from Brazil, Peru and Bolivia are described in the tribe Spathophorini (Coreidae). Habitus illustrations and drawings of the male and female genitalia, as well as the head, pronotum and metathoracic peritreme are included. *Hoplaphthonia* Schmidt is reduced to a new junior synonym under *Acocopus* Stål and *Hoplaphthonia gigantea* Schmidt is transferred to the genus *Acocopus* (n. comb.). A key to the Spathophorini genera is given.

Key Words: Insecta, Heteroptera, Coreidae, Meropachydinae, South America

The subfamily Meropachydinae Stål (Heteroptera: Coreidae) restricted to the Western Hemisphere, is a relatively small but diverse group of Heteroptera characterized primarily by having the apex of hind tibia ending beneath in a short projecting spine, hind femur curved and usually strongly incrassate, and hind coxae widely separated. The subfamily includes 15 genera separated into three tribes: Merocorini (1 genus), Meropachyni (7 genera), and Spathophorini (7 genera) (Kormilev 1954, Packauskas 1994).

The new genus belongs to the tribe Spathophorini which are recognizable by the triangular scutellum, flat, shorter than clavus, the hind femora not attaining the apex of the abdomen, antennal segment IV usually slender, and abdominal spiracles elliptical and positioned between the anterior and middle third of the segment. This new genus is unique among members of Spathophorini in having the middle third of the metasternum conspicuously produced into two large conical lobes freely directed

downwards, and the parameres bilobated. In the known genera the metasternum is always flat, and the parameres usually elongated and fusiform except in *Paralycambes* Kormilev, a closely related genus.

The following abbreviations are used for the institutions cited in this paper: HNHM (Hungarian Natural History Museum, Budapest); INPA (Instituto de Pesquisas da Amazonia, Manaus); MABR (Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Buenos Aires); MEM (Mississippi Entomological Museum, Mississippi State, Mississippi); NRE (Naturhistoriska Riksmuseet, Stockholm); SMT (Staatliches Museum für Tierkunde, Dresden); UNAM (Instituto de Biología, Universidad Nacional Autónoma de México, México D.F.).

All measurements are given in millimeters.

KEY TO GENERA OF SPATHOPHORINI

1. Outer and inner apical third of antennal segment III dilated, obovate in outline; inner apical third of antennal segment II dilated
..... *Spathophora* Amyot and Serville

- Antennal segments II and III cylindrical, never apically dilated 2
- 2. Middle third of metasternum conspicuously produced into two large conical lobes directed downwards (Figs. 4–5) . . . *Himellastella*, n. gen.
- Metasternum flat, without conical tubercles . . . 3
- 3. Body length greater than 32.0 mm; posterior border of the pronotum lacking triangular process; antenniferous tubercles elevated; space between antenniferous tubercles not filled by tylus; humeral angles remarkably expanded laterally, broad, winglike, with long marginal spines *Acocopus* Stål
- Body length shorter than 26.3 mm; posterior border of the pronotum with triangular process; antenniferous tubercles not elevated; space between antenniferous tubercles filled by tylus; humeral angles not produced laterally into winglike expansions. 4
- 4. Hind femur strongly clavate, swollen distally, with proximal half slender; fore and middle femora dorsally granulate from base to apex; hind femur in dorsal view with apical third armed with strong conical plates. *Allopeza* Bergroth
- Hind femur gradually incrassate from base toward apex; fore and middle femur dorsally smooth; hind femur dorsally smooth or with few small tubercles 5
- 5. Hind tibia longer than length of hind femur; humeral angles obtusely rounded, or produced laterally into angulate short projection; posterior angles of connexival segments IV to VI each armed with long and acute spines (male) or medium size and broad spines (female); apex of scutellum globose and raised. *Diariptus* Stål
- Hind tibia shorter than length of hind femur; humeral angles distinctly angulate or produced laterally into sharp spine; posterior angles of connexival segments IV to VI each armed with tiny spine; apex of scutellum acute or subacute 6
- 6. Mesosternum elevated; humeral angles sharp but hardly produced laterally; posterolateral border of pronotum almost smooth or only with upper half finely nodulose . . . *Lycambes* Stål
- Mesosternum flat (Fig. 12); humeral angles produced laterally into medium sized and acute spine; posterolateral border of pronotum abruptly crenate *Paralycambes* Kormilev

***Himellastella* Brailovsky and Barrera,
new genus**

Diagnosis.—*Himellastella*, like its closely related genus *Paralycambes* Kormilev, has the space between the antenniferous tubercles filled by tylus, antennal segment IV

longest, III shortest, and II shorter than I, ventral surface below and behind the bucculae without tubercle, triangular process of pronotum broad and bifid, mesosternum flat, metathorax not expanded laterally, with metapleura and hind acetabulae not visible dorsally, hind femora attaining abdominal sternite VI with dorsal surface smooth, hind tibiae shorter than hind femora, scutellum longer than wide, triangular, flat and shorter than clavus, and parameres bilobed (Figs. 7–8, 13). *Himellastella* can be recognized from *Paralycambes* by its humeral angles markedly produced laterally into a sharp and large spine (Fig. 3), the middle third of the metasternum conspicuously produced into two large conical lobes freely directed downwards (Figs. 4–5), and metathoracic peritreme with anterior lobe ear-like, and posterior lobe tiny (Fig. 6). In *Paralycambes* the humeral angles are produced laterally into an acute medium-sized angulate triangle (Fig. 11), the middle third of the metasternum is flat (Fig. 12), the metathoracic peritreme is elongate, fusiform, without posterior lobe, and the spermathecal bulb with an elongate digitiform process, absent in *Himellastella* (Figs. 10, 14).

Generic description.—Body medium-sized, oblong-obovate. *Head*: Wider than long, pentagonal, non declivent, dorsally flat; tylus unarmed, apically globose, raised, extending anterior to and higher laterally than juga and antenniferous tubercles; juga unarmed, shorter than tylus; space between antenniferous tubercles filled by tylus, and space between them smaller than width of one tubercle; antenniferous tubercles unarmed, border entire, continuous, almost semicircular, not prominent; side of head anterior to eye unarmed; antennal segment I robust, cylindrical, flat, thickest, slightly curved outward, weakly sulcate, longer than head; segments II and III cylindrical, flat, sulcate; segment IV fusiform; segment IV longest, III shortest, and II shorter than I (Fig. 2); ocelli close to eyes; distance between ocelli 2.2 to 3.6 times diameter of each ocellus; preocellar pit obliquely deep;

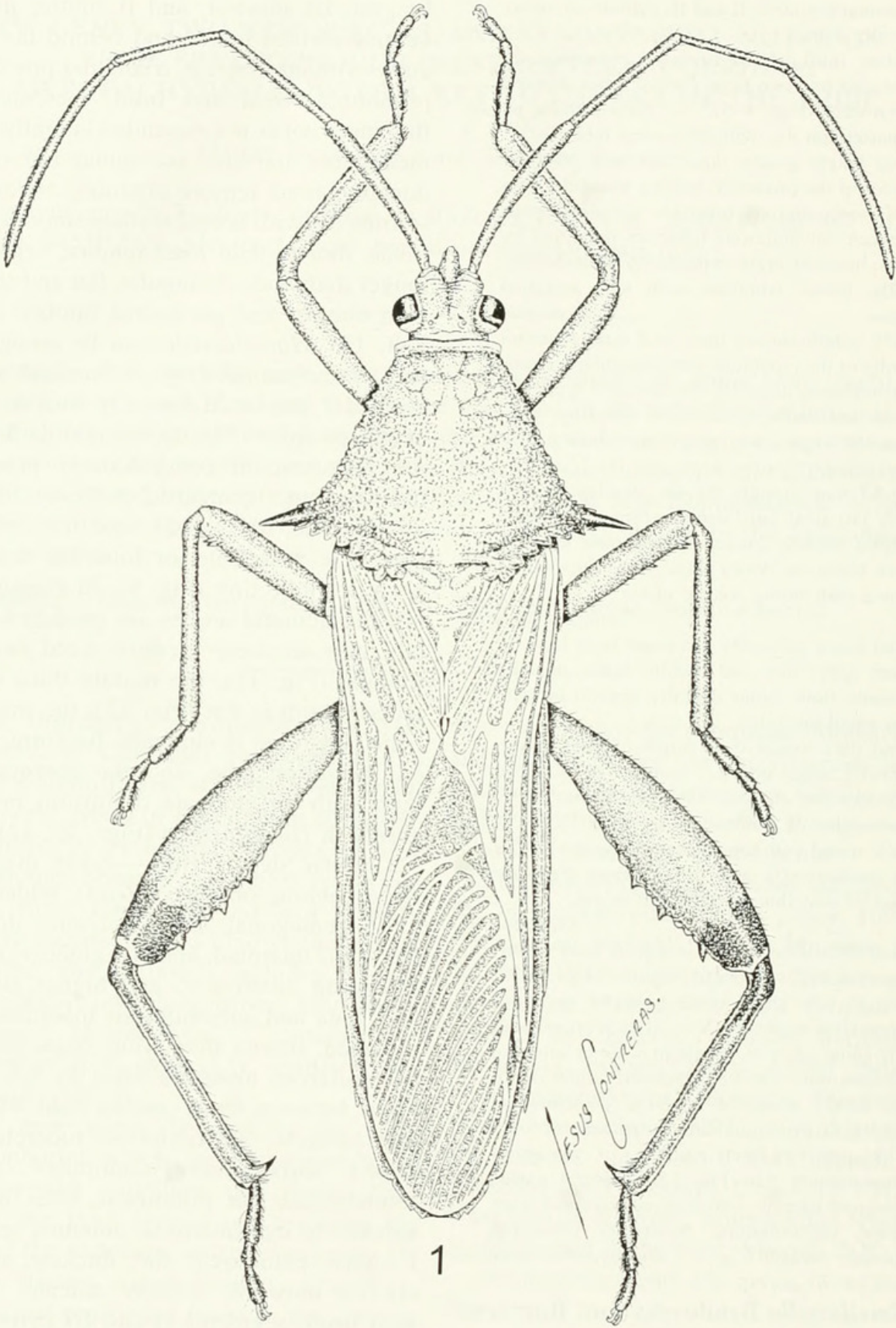


Fig. 1. Dorsal view of *Himellastella conica*.

eyes globose, slightly protuberant, upper margin located at same level, or above, vertex and frontal area; postocular tubercle absent; mandibular plate absent; buccula squarish, raised, short, entire, not projecting beyond antenniferous tubercle, meeting posteriorly; rostrum reaching middle third of mesosternum; rostral segment III shortest, I longest, and II subequal or shorter than IV; ventral surface below and behind the bucculae without tubercle.

Thorax: Pronotum wider than long, trapeziform, slightly declivent, with posterior border subequal to base of scutellum in width; collar wide; anterolateral angles obtuse; humeral angles markedly produced laterally into sharp and large spine, with medium sized and broad marginal spines and tubercles; calli entire, not elevated separated at midline by short longitudinal furrow; anterior margin smooth and curved; anterolateral margin obliquely straight, uniformly nodulose; posterolateral border abruptly spinate and tuberculate; triangular process broad and bifid; posterior border almost straight, margin with irregular transverse ridge (Fig. 3). Prosternum sunken, posterior third in front of area between fore legs produced into a narrow acute projection; mesosternum flat, anterior third in front of area between fore legs, raised into a broad and blunt keel, posterior third between middle legs raised into a squarish plate, laterally carinate and projected in two slender arms; metasternum broad, rectangular, anterior border slightly bifid, each tubercle small, broad and blunt, close to mesocoxae (Figs. 4, 5); mesosternal arms facing one to one to metasternal anterior tubercles; middle third of metasternum conspicuously produced into two large conical lobes freely directed downwards; posterior border of metasternum straight, lateral angles projected into broad rectangular plate, laying against metacoxae; posterior border of metathorax straight, entire; upper margin of mesopleuron raised; metathorax laterally not expanded, in dorsal view with metapleura and hind acetabula not visible;

metathoracic peritreme located near lower margin of metapleuron, with upper third closed; canal elongate, with raised sides; anterior lobe ear-like, and almost fused with tiny posterior lobe; evaporative area poorly developed (Fig. 6).

Legs: Hind coxae separated, distance between them 1.2 to 1.6 times diameter of one coxa, and apically with broad and blunt tubercle located on external surface; fore and middle femora slender, ventrally armed with one or two subdistal spines; hind femur incrassate, attaining posterior third of abdominal sternite VI; dorsal surface smooth, ventrally armed with one row of strong spines and tubercles, running from middle third to apex; fore and middle tibiae unarmed, sulcate, widened distally; hind tibia almost straight, flattened, shorter than length of hind femur, with outer margin sulcate, not expanded, and inner margin not expanded and dimorphic, in male armed with one row of acute spines running from middle third to apex, including a broad and large spine near middle third, and one acute spine at distal third, and in female unarmed, except for the large apical spine.

Scutellum: Longer than wide, triangular, flat, shorter than clavus; disc without triradiate ridge; apex acute, elevated; lateral margins emarginate.

Hemelytra: Macropterous, reaching apex of abdomen; clavus and claval suture not covered by the scutellum; costal margin emarginate; apical margin obliquely straight, with apical angle narrowly, very long, extending beyond middle third of hemelytral membrane.

Abdomen: Gradually narrowed beyond middle; abdominal segment VII of male slightly exposed, on female not expanded; connexival segments scarcely elevated; posterior angle of segments V and VI projected into short and broad spine, segments II to IV and VII entire without spine; abdominal sterna without medial furrow; abdominal spiracles elliptical; abdominal spiracle III closer to anterior border and spiracles IV to VII situated nearer middle third; abdominal

sternite II visible, slender, short, rectangular, without tubercle, and with the lateral angles truncate without lateral plate; abdominal sternite III not expanded laterally.

Male genitalia: Genital capsule simple, semiglobose; posteroventral edge with medial broad projection, protruding as a large hemispherical plate, with short median tubercle, laterally with angles rounded and broad (Fig. 9). Parameres: shaft relatively slender, almost parallel-sided, apically bilobate, with proximal lobe short, and distal lobe rather broad and triangular (Figs. 7, 8).

Female genitalia: Abdominal sternite VII with plica and fissura; plica rectangular, narrowed; fissura with inner margin overlapping; gonocoxae I subtriangular, short, exposed, in caudal view closed, in lateral view almost straight, with upper border rounded; paratergite VIII triangular, spiracle visible; paratergite IX squarish, longer than paratergite VIII, in caudal view opened, or almost contiguous. Spermatheca: bulb hemispherical with one elongate and digitiform process, basal duct barely coiled, chamber dilated with small lateral spines, distal duct weakly coiled, and relatively short membrane duct (Fig. 10).

Integument: Body surface shining, with clavus, corium, prosternum, mesosternum, and metasternum rather dull; included antennal segments and legs sparsely clothed with long to short decumbent to suberect setae; head, prosternum, mesosternum, metasternum, connexival segments, abdominal sterna, and middle third of propleura, mesopleura and metapleura impunctate; pronotum, acetabulae, anterior and posterior margin of propleuron, posterior margin of mesopleuron and metapleuron, clavus and corium, densely to finely punctate; calli smooth; scutellum transversely striate; propleura, mesopleura and metapleura with creamy yellow hardened protuberance; pronotal disc with or without creamy yellow hardened spot.

Etymology.—Named for its similarity to the nematopodini genus *Himella* Dallas; feminine.

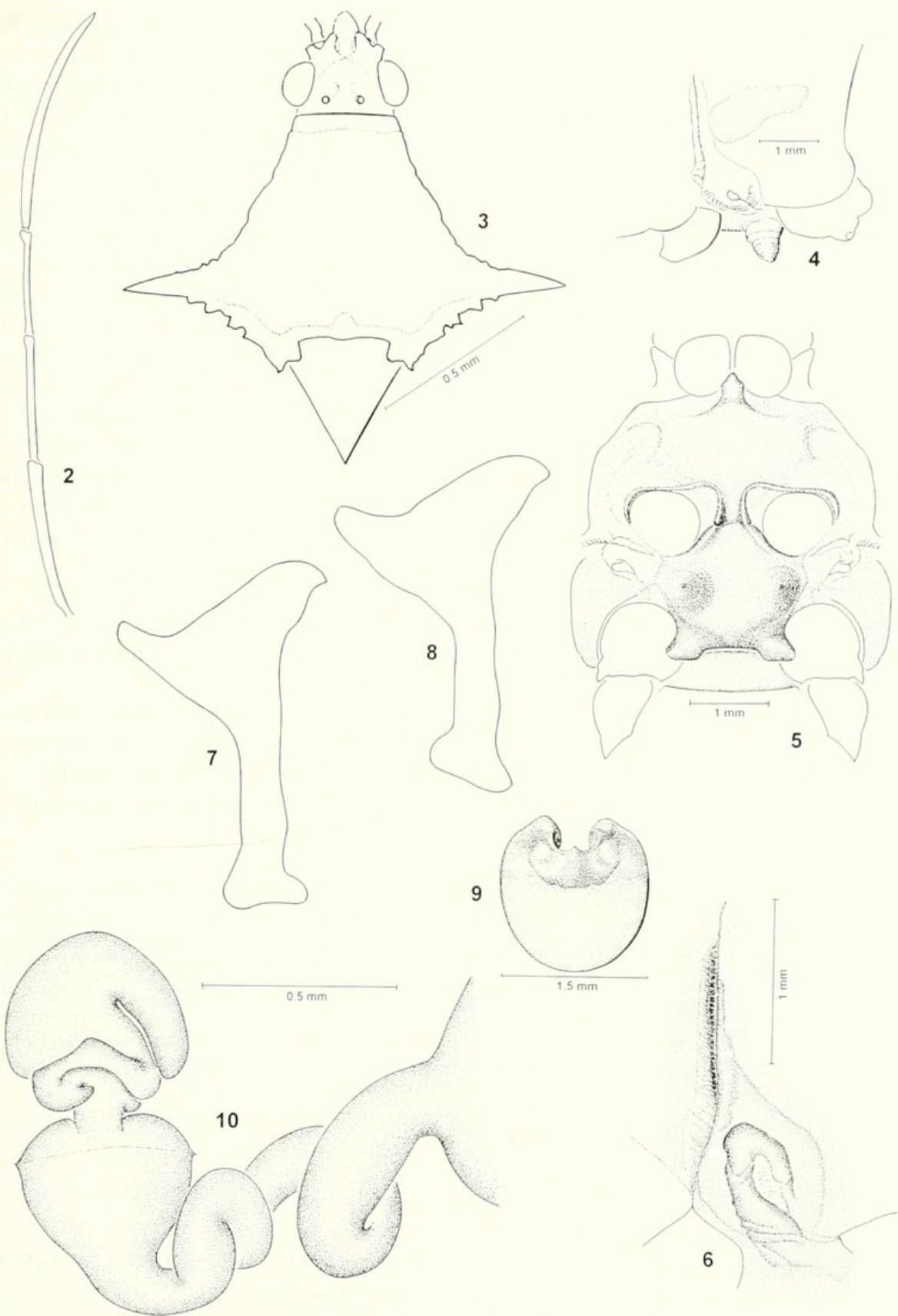
Type species.—*Himellastella conica* Brailovsky and Barrera, new species.

***Himellastella conica*
Brailovsky and Barrera,
new species
(Figs. 1–10)**

Description.—Measurements: *Male:* Head length in dorsal view 1.52; width across eyes 2.08; interocular space 0.93; preocular distance 0.93; interocellar space 0.40; length antennal segments: I, 3.40; II, 2.56; III, 2.08; IV, 4.72. Pronotum: Length 3.88; width across frontal angles 1.92; width across humeral angles 6.72. Hind leg: Length femur 5.77; length tibia 4.78. Scutellar length 1.80; width 1.48. Body length 16.00.

Female: Head length in dorsal view 1.84; width across eyes 2.20; interocular space 1.08; preocular distance 1.08; interocellar space 0.47; length antennal segments: I, 3.72; II, 2.84; III, 2.20; IV, 4.44. Pronotum: Length 3.92; width across frontal angles 2.02; width across humeral angles 7.20. Hind leg: Length femur 6.68; length tibia 5.39. Scutellar length 2.08; width 1.60. Body length 18.30.

Male: Dorsal coloration: Head bright ochre yellow; ocelli and eye bright red; antennal segments bright orange; pronotum bright ochre yellow, with humeral angles and spines black or dark brown, and two creamy yellow hardened spots located on middle third, one behind calli, other on posterior margin; scutellum bright ochre yellow, with apex creamy yellow; clavus rather dull ochre yellow with punctures orange red, and vein pale yellow; corium rather dull dark red, with costal margin, apical margin and veins pale yellow; hemelytral membrane dark ambarine, with basal angle and veins darker; connexival segments bright yellow; abdominal segments rather dull pale orange yellow with black marks on segment VII. Ventral coloration: Including rostral segments I to IV, legs, and genital capsule bright orange yellow with following areas black: apex of rostral segment



Figs. 2–10. *Himellastella conica*. 2, Antenna. 3, Head, pronotum and scutellum in dorsal view. 4, Metathorax in lateral view. 5, Mesothorax and metathorax in ventral view. 6, Metathoracic peritreme. 7, 8 Parameres. 9, Male genital capsule in caudal view. 10, Spermatheca.

IV, two apical rings on hind femur, basal third of hind tibia, and the space between conical lobes of metasternum; propleuron with small and mesopleuron and metapleuron with large and broad creamy yellow hardened protuberance. Genitalia: Genital capsule: Fig. 9. Paramere: Figs. 7, 8.

Female: Similar to male. Antennal segment I pale orange yellow, and II to IV bright orange; connexival segments VIII and IX bright yellow; abdominal segments VIII and IX rather dull orange yellow; genital plates bright orange yellow. Genitalia: Spermatheca: Fig. 10.

Variation (both sexes).—1, Antennal segments I to IV dark red to pale orange yellow. 2, Hind femur bright yellow to orange yellow with one black ring on the apical joint. 3, Space between conical lobes of metasternum yellow. 4, Abdominal sterna III to VI laterally with or without one or two creamy yellow spots. 5, Punctures orange yellow or red brown.

Type material.—Holotype: ♂, Brasil, Rondônia, vic Caucalandia, 10°32'S 62°48'W, (160–350 m), 30 October 1991, J. MacDonald (MEM). Paratypes: 1 ♂, Brasil, Amazonas, Manaus, Reserva Ducke, May 1968, E. V. Silva and A. Faustino (INPA). 1 ♀, Brasil, Rondônia, 62 km., SW Ariquemes, Fzda. Rcho. Grande, 7 October 1993, C. W. and L. O'Brien (UNAM). 1 ♂, Brasil, Rondônia, Forte Principe da Beira, 19 November 3 December 1967, G. R. Kloss (UNAM). 1 ♀, Peru, Pachitea (without data) (HNHM). 1 ♀, Sud Bolivia, Sta. Cruz, H. Rolle (Berlin SW 11) (HNHM).

Etymology.—Named for the conical projection of the metasternum.

Distribution.—Brazil, Peru, Bolivia.

Himellastella aploa
Brailovsky and Barrera,
new species

Description.—Measurements: *Female*: Head length in dorsal view 1.72; width across eyes 2.12; interocular space 1.08; preocular distance 1.04; interocellar space 0.52; length antennal segments: I, 2.84; II,

2.24; III, 1.68; IV, 3.76. Pronotum: Length 3.88; width across frontal angles 1.96; width across humeral angles 6.60. Hind leg: Length femur 5.70; length tibia 4.33. Scutellar length 1.80; width 1.48. Body length 15.10.

Female: Coloration: Including antennal segments, rostral segments and legs bright chestnut orange, with following areas black: humeral angles and spines, apex of rostral segment IV, apical joint of hind femur, and basal joint of hind tibia; hemelytral membrane dark ambarine, with basal angles and veins darker; abdominal segments rather dull orange yellow with lateral margins of segments VII to IX black; mesopleuron and metapleuron with large and broad creamy yellow hardened protuberance.

Male: Unknown.

Type material.—Holotype: ♀, Brasil, Amazonas, Manaus, 17 October 1957, Elias and Roppa (UNAM).

Etymology.—From “*aploos*” (Greek adjective meaning simple) refers to the lack of striking characters in this species.

Distribution.—Only known from the type locality.

KEY TO SPECIES OF *HIMELLASTELLA*

1. Pronotal disc with two creamy yellow hardened spots; propleuron with a creamy yellow hardened spot; antennal segment I longer than 3.3 mm; antennal segment IV longer than 4.4 mm *H. conica*, n. sp.
- Pronotal disc without creamy yellow hardened spots; propleuron without creamy yellow hardened spot; antennal segment I shorter than 2.9 mm; antennal segment IV shorter than 3.8 mm *H. aploa*, n. sp.

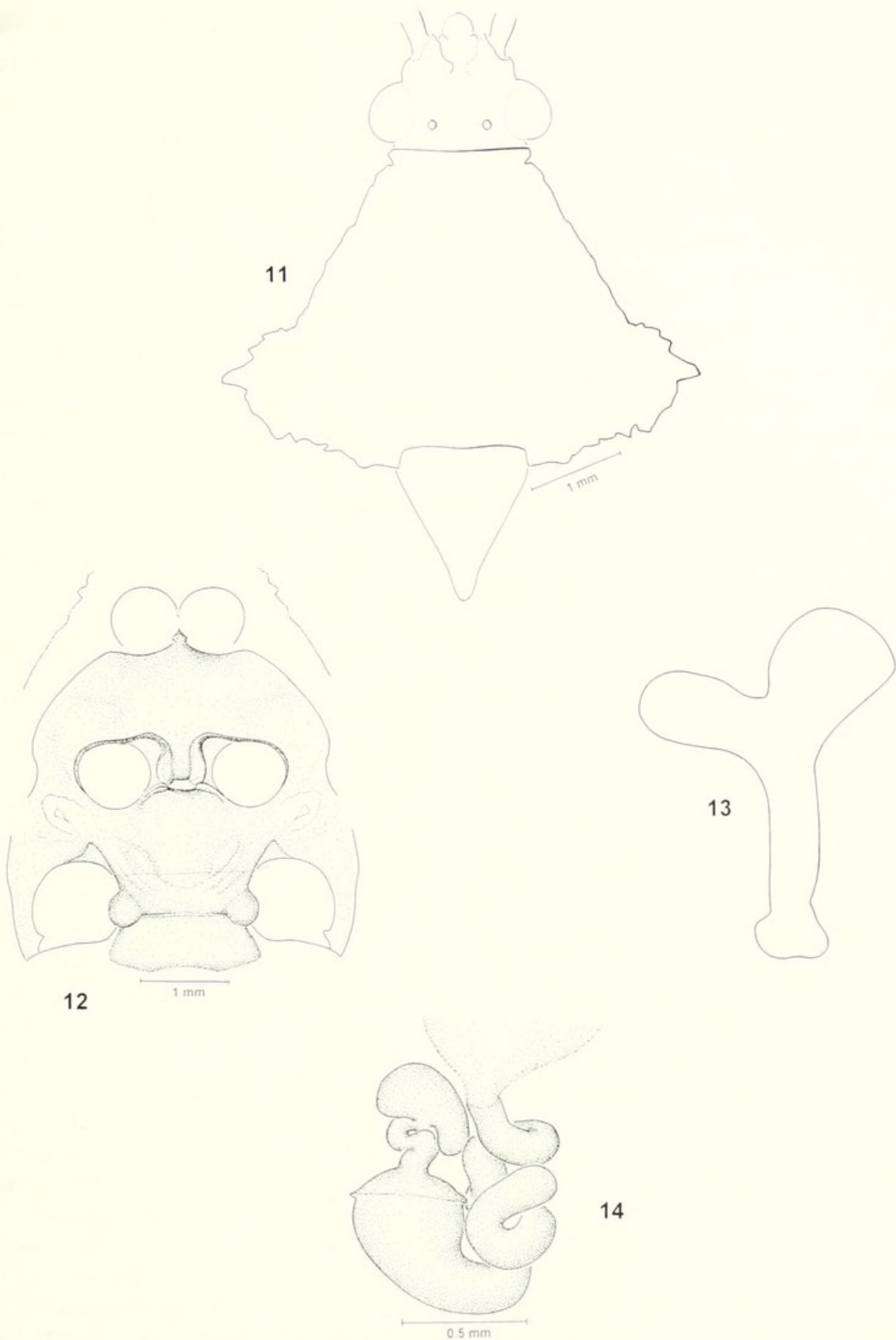
Acocopus Stål

Acocopus Stål 1864: 55–56.

Hoplaphthonia Schmidt 1911: 565–566.

New synonym.

The genus *Acocopus* was erected by Stål (1864) to include one species, *A. verrucifer*, collected in the Amazon (Brazil). Years later Schmidt (1911) described the genus *Hoplaphthonia* and included one species *H. gi-*



Figs. 11–14. *Paralycambes misionensis* Kormilev. 11, Head, pronotum and scutellum. 12, Mesothorax and metathorax in ventral view. 13, Paramere. 14, Spermatheca.

gantea from Bolivia. Examination of the type material deposited in NRE and SMT, respectively, shows that both genera are the same and *Hoplaphthonia* is here synonymized under *Acocopus*. The species *Hoplaphthonia gigantea* Schmidt (1911: 566–567) is transferred to the genus *Acocopus* resulting in the new combination *Acocopus gigantea* (Schmidt).

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LITERATURE CITED

- Kormilev, N. A. 1954. Notas sobre Coreidae Neotropicales II; (Hemiptera) Merocorinae de la Argentina y paises limítrofes. *Revista Ecuatoriana de Entomología y Parasitología* 2(1–2): 153–187.
- Packauskas, R. J. 1994. Key to the subfamilies and tribes of the New World Coreidae (Hemiptera), with a checklist of published keys to genera and species. *Proceedings of the Entomological Society of Washington* 96(1): 44–53.
- Schmidt, E. 1911. Drei neue Coreiden-Gattungen (Hemipt.). *Deutsche Entomologische Zeitschrift* 1911: 565–571.
- Stal, C. 1864. Hemiptera nonnulla nova vel minus cognita. *Annales de la Société Entomologique de France* 4: 47–68.



Brailovsky, Harry and Barrera, Ernesto. 1998. "A NEW GENUS, TWO NEW SPECIES, AND SYNONYMICAL NOTES ON THE TRIBE SPATHOPHORINI (HETEROPTERA : COREIDAE : MEROPACHYDINAE), WITH A KEY TO GENERA OF THE TRIBE." *Proceedings of the Entomological Society of Washington* 100, 746–754.

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