REICHENBACHIA

Staatliches Museum für Tierkunde Dresden

Band 33 | Ausgegeben: 30. März 2000 | Nr. 34

Four new species of Neotropical Coreidae (Insecta: Hemiptera: Heteroptera)

With 16 figures

HARRY BRAILOVSKY & ERNESTO BARRERA

Abstract. Four new species of Coreidae (Heteroptera) collected in Mexico, Costa Rica, and Ecuador are described and included in the tribes Acanthocerini (1), Coreini (1) and Nematopodini (2). Dorsal view illustrations and drawings of antennal segments, pronotum, male genital capsule, and parameres are provided. Each species is compared with the closest one.

Introduction

The neotropical fauna of the family Coreidae (Hemiptera-Heteroptera) are compoused by relatively heavy-bodied insects usually robustly elongate or broadly elliptical. The family includes some of the largest of living heteropterans, as well as other species that are delicate or slender. The body length ranges from 7 to 45 mm, and many have bizarre dilations and expansions on hind femur or tibia and antennal segment III and striking develop on the humeral angles of pronotum.

Four new species are described here as part of ongoing studies relating to the Neotropical coreids. One of the species belongs to the tribe Acanthocerini, one to Coreini, and two are included in Nematopodini. Because this group of coreids are never abundantly present in collections, their distributional data are limited and it is hoped more material will be collected.

This paper is a continuing effort to revise the family Coreidae to make identifications possible and stimulate the study of their biology in a wide sense.

Tribe Acanthocerini

Golema ecnomia sp. n. (Figs. 2, 14)

Female. Head. Subquadrate; dilation of third antennal segment obovate in outline (Fig. 2); ocelli protuberant; postocular tubercle medially globose; rostrum reaching posterior margin of mesosternum. Pronotum. Slightly declivent; collar wide; frontal angles projecting forward as nodulose teeth; humeral angles laterally produced, and apically subacute; triangular process well developed; callar region transversely convex. Legs. Fore and middle femora ventrally armed with two rows of spines; hind femur conspicuously clavate, slender towards base and behind

Authors' address:
Dr. Harry Brailovsky & Biol. Ernesto Barrera, Instituto de Biología, U.N.A.M., Departamento de Zoología, Apdo Postal No. 70-153, México D.F. 04510 (México).
E-mail: coreidae@servidor.unam.mx

middle abruptly incrassate, with dorsal surface densely tuberculate, and ventrally armed with two rows of robust spines.
Dorsal coloration. Head bright orange; antennal segment I reddish black with basal third bright orange, and segments II to IV reddish black; pronotum pale yellow with two reddish brown squarish spots lateral to middle line and cover great portion of posterior lobe; scutellum pale yellow with reddish brown spot at basal middle third; clavus pale yellow with three reddish brown marks one at inner basal third, the other running across the outer basal third, and the third one near to claval comissure; corium pale yellow with two reddish brown marks, one close to basal third, the other one between middle third and apical margin; hemelytral membrane black; connexival segments pale yellow; dorsal abdominal segments bright orange with diffuse yellow marks. Ventral coloration. Including head, rostral segments I to IV (apex of IV black), thorax (upper margin of hind acetabulae chestnut red), fore and middle leg, abdominal sterna, and genital plates bright orange; hind leg with coxa, trochanter and tarsi bright orange, femur bright orange with two red rings one close to middle third, the other subapical, and tibia bright orange with pale yellow ring close to middle third.

Male Unknown.

Measurements Female. Head length: 1.20 mm; width across eyes: 2.28 mm; interocular space: 1.20 mm; interocellar space: 0.64 mm; preocular distance: 0.77 mm; length of antennal segments: I, 3.84 mm; II, 3.28 mm; III, 2.14 mm; IV, 2.14 mm. Pronotum: Total length: 3.08 mm; width across frontal angles: 2.40 mm; width across humeral angles: 5.52 mm. Scutellar length: 2.04 mm; width: 2.10 mm. Total body length: 16.10 mm.

Holotype ♀: Ecuador: 1 km SE Santo Domingo de los Colorados, 1978.V.2, O'Brien & Marshall. In Wilbur R. Enns Entomology Museum, University of Missouri, USA.

Remarks The only included species, *Golema histrio* (Burmeister, 1835), recorded from Surinam, French Guiana, Brazil and Bolivia (O'Shea 1980) is easily identified by its orange red and black coloration and by the following combination of characters: Antennal segments II to IV bright orange with distal third of II bright reddish brown; dilation of third antennal segment broadly obovate with its lower lobe slightly sinuate apically (Fig. 1); hind femur orange with one reddish brown to black ring close to middle third; and connexival segments orange with anterior margin reddish brown to black. *Golema ecnomia* sp. n. distributed in Ecuador, is distinguished by its pale yellow coloration, antennal segments II to IV reddish black, dilation of third antennal segment slightly obovate in outline (Fig. 2), hind femur orange with two red rings, and connexival segments pale yellow.

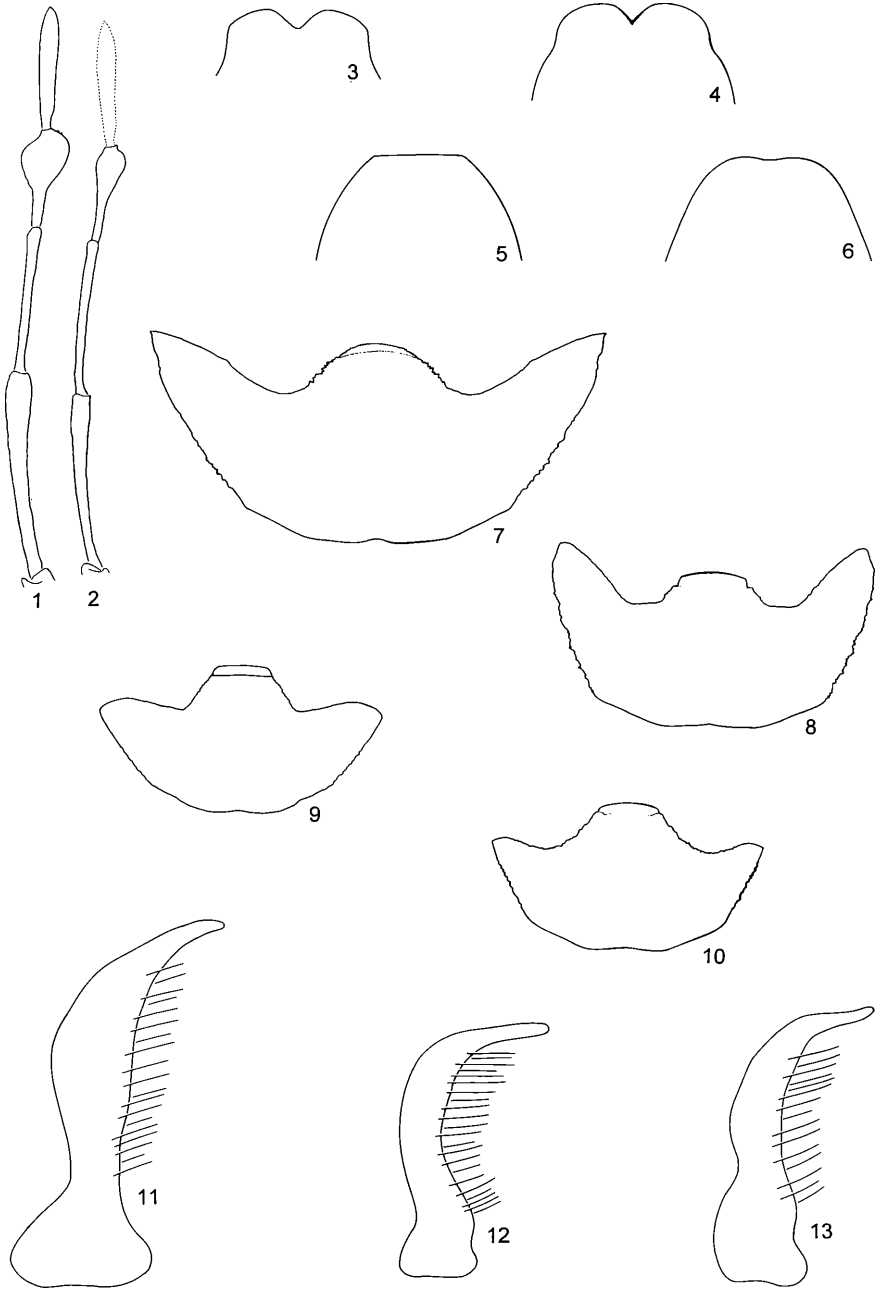
Distribution Ecuador.

Etymology From the Greek, *ecnomios*, unusual, referring to the dilation of third antennal segment.

Tribe Coreini

Anasa scitula sp. n. (Figs. 4, 15)

Male. Head. Antenniferous tubercle unarmed; rostrum reaching posterior border of mesosternum or anterior third of metasternum. Pronotum. Frontal angles rounded; anterolateral border entire; humeral angles not exposed, obtuse; posterolateral borders and posterior border almost straight and entire. Legs. Femora unarmed. Genital capsule. Posteroventral edge with median "V" notch deep, with lateral lobes rounded (Fig. 4).
Dorsal coloration. Head yellow with ocellar tubercle black; antennal segments I to III black, and IV dark chestnut brown; pronotum reddish brown to black, with collar, calli, anterolateral and



Figs. 1–13.
Figs. 1–2: Antennal segments of *Golema* spp.: 1: *G. histrio* (BURMEISTER); 2: *G. ecnomia* sp. n. – Figs. 3–4: Male genital capsule in caudal view of *Anasa* spp.: 3: *A. marginella* BLOTE; 4: *A. scitula* sp. n. – Figs. 5–13: *Piezogaster* spp.: 5–6: Male genital capsule in caudal view: 5: *P. achillelus* sp. n.; 6: *P. reclusus* sp. n. – 7–10: Pronotum: 7: *P. achilles* (STÅL); 8: *P. achillelus* sp. n.; 9: *P. chontalensis* (DISTANT); 10: *P. reclusus* sp. n. – 11–13: Paramere: 11: *P. achilles* (STÅL); 12: *P achillelus* sp. n.; 13: *P. reclusus* sp. n.

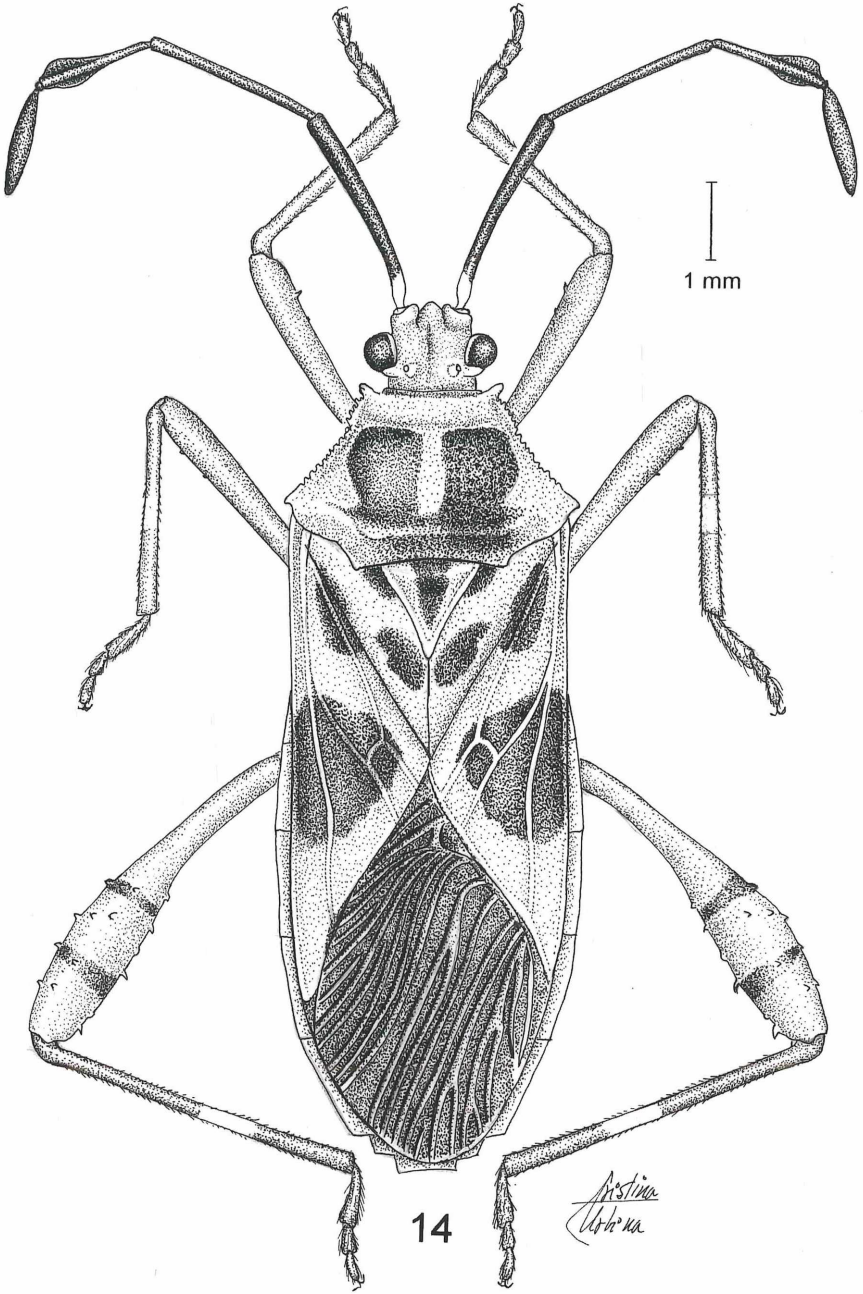


Fig. 14: Dorsal view of *Golema ecnomia* sp. n. (female).

posterolateral margins and anterior margin yellow; scutellum yellow; clavus black with claval commissure yellow; corium black with costal border, apical angle, and apical margin yellow; hemelytral membrane black; connexival segments III to VI yellow and VII black; abdominal segments II to IV orange yellow, V black with anterior margin orange yellow, and VI-VII black. Ventral coloration. Head, rostral segments (apex of IV black), thorax, coxae, trochanters, and abdominal sterna II to VI yellow; abdominal sternite VII black with pleural margin and middle third of anterior and posterior margin yellow; genital capsule black with posterior margin yellow; femora yellow with black to reddish brown stripe running along their length; tibiae black to reddish brown; tarsi dark chestnut brown.

Female Similar to the holotype. Connexival segments VIII-IX, abdominal segments VIII-IX, and genital plates black with anterior third of connexival segments VIII-IX, and inner margin of paratergite VIII and IX dirty yellow.

Measurements. (Male first, then female). Head length: 1.32 mm, 1.40 mm; width across eyes: 1.68 mm, 1.80 mm; interocular space: 0.92 mm, 1.02 mm; interocellar space: 0.40 mm, 0.46 mm; preocular distance: 0.64 mm, 0.88 mm; length of antennal segments: I, 2.16 mm, 2.22 mm; II, 2.56 mm, 2.64 mm; III, 2.32 mm, 2.48 mm; IV, 2.60 mm, 2.88 mm. Pronotum: Total length: 2.36 mm, 2.80 mm; width across frontal angles: 1.62 mm, 1.80 mm; width across humeral angles: 4.04 mm, 4.88 mm. Scutellar length: 1.48 mm, 1.80 mm; width: 1.72 mm, 2.04 mm. Total body length: 12.18 mm, 15.40 mm.

Holotype ♂: Ecuador: Napo, km 30 via Hollin-Loreto, 1100 m, 1987.XII.6, A. RODRIGUEZ. Type specimen in Pontificia Universidad Católica del Ecuador, Quito, Ecuador. Paratypes 1 ♂, 3 ♀♀: Ecuador: Napo. km 4 or km 30 via Hollin-Loreto, 1100 m, 1987.XII.6, H. FREIRE, A. RODRIGUEZ, Galarza, and R. BOADA. In Instituto de Biología, Universidad Nacional Autónoma de México, and Pontificia Universidad Católica del Ecuador, Quito, Ecuador.

Remarks This species appears to be closely related to *Anasa marginella* BLOTE (1935) particularly due to the antenniferous tubercle unarmed, anterolateral margins of pronotum entire without spines or tubercles, frontal and humeral angles rounded, not exposed, femora unarmed without black spots, and thorax and abdominal sterna without creamy yellow longitudinal stripe (BRAILOVSKY 1985). *Anasa scitula* sp. n., recorded from Ecuador, can be distinguished by having the head dorsally yellow with ocellar tubercle black to reddish brown, posterior margin of pronotum black, scutellum yellow, antennal segments I to III black and IV dark chestnut brown, femora yellow with black longitudinal stripe running along their length, tibiae black, and abdominal sternite VII black with pleural margins and middle third of anterior and posterior margin yellow. In contrast, *A. marginella* known only from Peru, has the head dorsally yellow with black spot between ocelli and vertex, posterior margin of pronotum yellow, scutellum yellow with two brown spots, antennal segments I to III dirty yellow and IV with anterior half reddish brown, and posterior half yellow with the apex reddish brown, femora and tibiae yellow to dirty orange, and abdominal sternite VII entirely yellow. The male genital capsule in caudal view differs in both species (Figs. 3–4).

Distribution Ecuador.

Etymology From the Latin *scitulus*, beautiful, handsome.

Tribe Nematopodini

Piezogaster achillelus sp. n. (Figs. 5, 8, 12)

Male. Pronotum. Steeply declivent; calli and collar distinctly marked; anterior margin smooth; anterolateral margins scarcely nodulose; posterolateral margins smooth, obliquely straight;

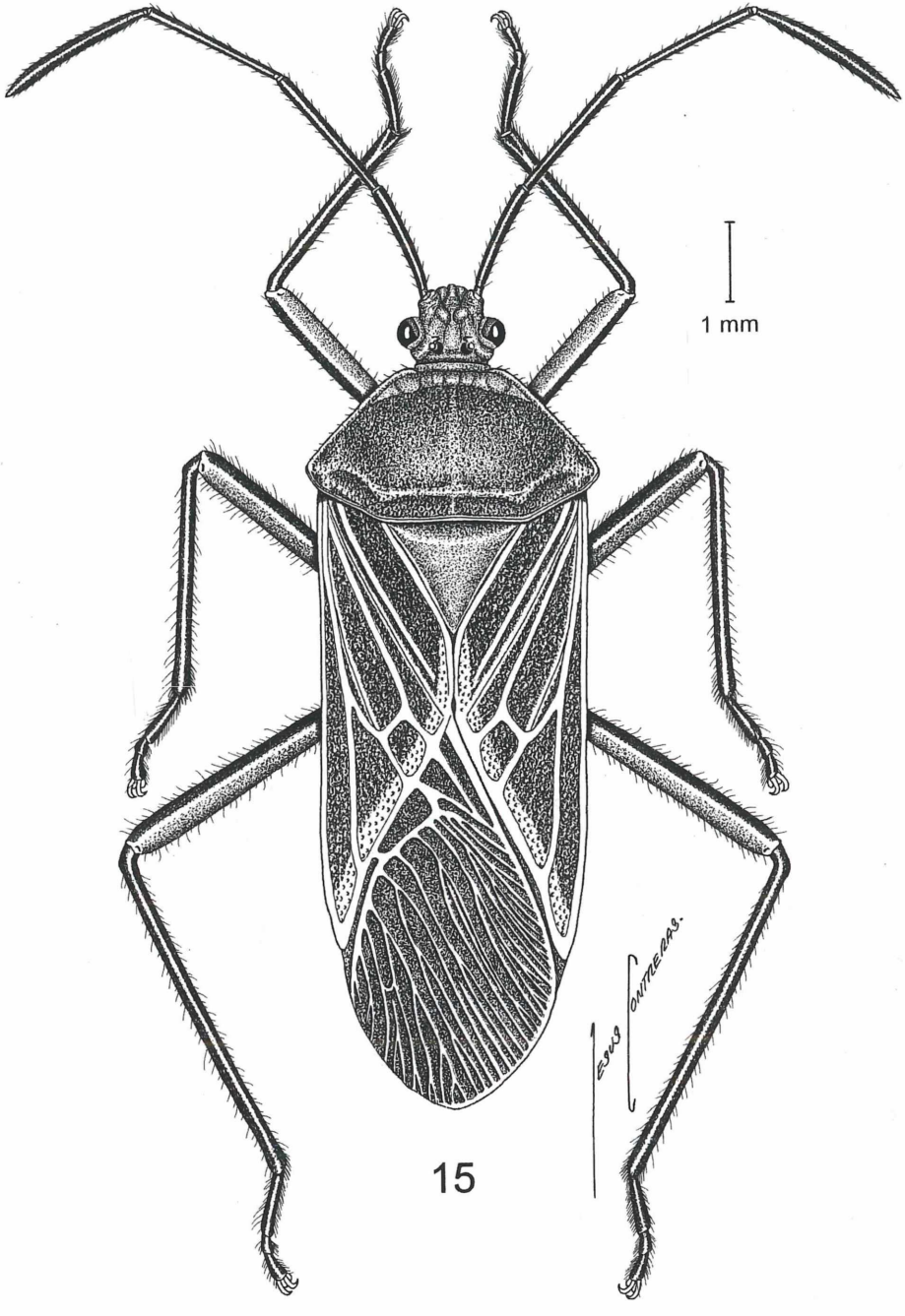


Fig. 15: Dorsal view of *Anasa scitula* sp. n. (female).

posterior margin smooth, gently sinuate; humeral angles expanded into wing like projections, broadly produced, directed upwardly and forwardly, anteriorly nodulose, and posteriorly distinctly serrate, and apically blunt (Fig. 8). Genital capsule. Posteroventral edge simple, sinuate, with inner margin transversely depressed, and below with strong "y" longitudinal expansion (Fig. 5). Paramere: Fig. 12.

Pubescence. Head, pronotum, thorax, and abdominal sternite II densely clothed with short erect to adpressed withish setae like-hairs; antennal segment I densely clothed with erect setae; scutellum, clavus, corium, abbdominal sternite III to VII, and genital capsule scattered with short suberect withish setae like-hairs.

Dorsal coloration. Head bright chestnut yellow; antennal segments I to III orange, and IV yellow; pronotum, scutellum, clavus and corium bright reddish orange, with external margin of humeral angles usually black, and apex of scutellum yellow; hemelytral membrane ambarine; connexival segments II-VI orange yellow, and VII orange yellow with upper margin reddish brown; dorsal abdominal segments III to VI bright orange with black spots located lateral de midline, and VII entirely bright orange. Ventral coloration. Including rostral segments I to IV bright chestnut yellow with the rim of each abdominal spiracle and a wide longitudinal stripe on abdominal sternite III reddish brown; coxae and trochanter chestnut yellow, femora pale to dark reddish orange, tibiae pale reddish orange, and tarsi yellow; tubercles and spines of hind femur yellow to orange.

Female Similar to the holotype. Connexival segments VIII-IX dark to pale orange yellow, with upper margin reddish brown; abdominal segments VIII-IX dark to pale orange with posterior margin reddish orange; genital plates yellow.

Variation 1. Antennal segment IV with anterior half yellow and posterior half reddish orange. 2. Basal angle of scutellar disc pale yellow. 3. Connexival segments III-VI pale to dark orange or yellow. 4. Dorsal abdominal segments III-VI entirely bright orange.

Measurements (Male first, then female). Head length: 1.65 mm, 1.72 mm; width across eyes: 2.15 mm, 2.10 mm; interocular space: 1.17 mm, 1.22 mm; interocellar space: 0.55 mm, 0.54 mm; preocular distance: 1.20 mm, 1.15 mm; length of antennal segments: I, 3.75 mm, 3.25 mm; II, 3.30 mm, 3.00 mm; III, 2.70 mm, 2.40 mm; IV, 3.40 mm, 3.05 mm. Pronotum: Total length: 4.25 mm, 4.67 mm; width across frontal angles: 1.85 mm, 1.90 mm; width across humeral angles: 8.25 mm, 8.20 mm. Scutellar length: 2.74 mm, 2.50 mm; width: 2.70 mm, 2.80 mm. Total body length: 20.60 mm, 20.10 mm.

Holotype ♂: México: Oaxaca, Toltepec, 1987.XI.1, E. BARRERA. Type specimen in Instituto de Biología, Universidad Nacional Autónoma de México. Paratypes 2 ♂♂, 1 ♀: México, Oaxaca, Toltepec, 1987.XI.1, E. BARRERA, F. ARIAS, R. BARBA. In Instituto de Biología, Universidad Nacional Autónoma de México. 29 ♂♂, 18 ♀♀: México: Oaxaca, 3 km N Candelaria Loxicha, 1974.VII.17, CLARK, MURRAY, ASHE, SCHAFFNER. In Texas A & M University, College Station, USA, and Instituto de Biología, Universidad Nacional Autónoma de México. 4 ♂♂, 1 ♀: México: Oaxaca, 3 km N Candelaria Loxicha, 1973.VII.15, MASTRO, SCHAFFNER. In Texas A & M University, College Station, USA. 1 ♀: México: Guerrero, Acahuizotla, 1983.XI.19, A. IBARRA. In Instituto de Biología, Universidad Nacional Autónoma de México.

Remarks *Piezogaster achillelus* sp. n. is extremely similar to the mexican species *P achilles* (STÅL, 1862), agreeing in almost all details of structure and color. The two species can be separated by the greatly differing shapes of their pronotum, parameres and size of the body. *P. achillelus* is characterized by its relatively slender form, by its smaller size (16.00 mm to 20.60 mm), paramere shape (Figs. 11–12), and distinctive development of humeral angles of pronotum (Fig. 8). *P. achilles* is a robust species, longer than 23.40 mm, with humeral angles strongly produced, and obviously expanded laterally into wide wing-like lobes (Fig. 7).

Piezogaster achillelus is similar in size and coloration to the Nicaraguan species *P. chontalensis* (DISTANT, 1892), but may be separated from the latter species by the shape of the humeral angles

of pronotum which are longer, and directed forwardly (Fig. 8). In *P. chontalensis* are shorter, and directed backwardly (Fig. 9).

Distribution México.

Etymology Named for its similarity of appearance to *Piezogaster achilles* (STÅL).

Piezogaster reclusus sp. n. (Figs. 6, 10,13, 16)

Male. Pronotum. Steeply declivent; calli, and collar distinctly marked; anterior margin smooth; anterolateral margins clearly nodulose; posterolateral margins smooth, obliquely straight; posterior margin barely sinuate; humeral angles expanded into medium sized wing like projections, broadly produced, directed upwardly and outwardly, anteriorly nodulose, posteriorly serrate, and apically almost blunt (Fig. 10). Genital capsule. Posteroventral edge simple, sinuate, with inner margin transversely depressed and below with gently longitudinal expansion (Fig. 6). Paramere. Fig. 13.
Pubescence. Head, pronotum, and thorax densely clothed with short and erect to adpressed whitish setae like-hairs; scutellum, clavus, corium, abdominal sterna, and genital capsule scattered with short and erect to suberect withish setae like-hairs; antennal segment I densely clothed with erect setae.
Dorsal coloration. Head pale yellow; pronotum, scutellum (apex pale yellow), clavus, corium, and connexival segments dark yellow ambarine, with punctures chestnut orange; antennal segment I orange, segments II to IV dark yellow ambarine; hemelytral membrane ambarine with veins darker; dorsal abdominal segments bright orange. Ventral coloration. Including rostral segments I to IV (apex of IV black), and genital capsule pale yellow; anterior lobe of metathoracic peritreme creamy yellow, and posterior lobe pale yellow; coxae, and trochanter chestnut yellow; femora bright orange with spines and tubercles orange yellow; tibiae and tarsi dark ambarine yellow.

Female. Similar to the holotype. Connexival segments VIII-IX dark yellow ambarine; dorsal abdominal segments VIII-IX bright orange yellow; genital plates pale yellow.

Variation. 1. Antennal segment I dark yellow ambarine. 2. Head, pronotum, scutellum, clavus and corium bright chestnut yellow with punctures orange. 3. Head ventrally and thorax dark yellow ambarine, and abdominal sterna bright orange yellow. 4. Fore and middle femora dark to bright yellow ambarine. 5. Anterior lobe of metathoracic peritreme yellow ambarine. 6. Dorsal abdominal segments bright yellow. 7. Rim of abdominal spiracle yellow or brown.

Measurements (Male first, then female). Head length: 1.67 mm, 1.67 mm; width across eyes: 1.98 mm, 1.98 mm; interocular space: 1.08 mm, 1.10 mm; interocellar space: 0.57 mm, 0.51 mm; preocular distance: 1.08 mm, 1.10 mm; length of antennal segments: I, 3.16 mm, 2.91 mm; II, 2.85 mm, 2.60 mm; III, 2.48 mm, 2.23 mm; IV, 2.48 mm, 2.41 mm. Pronotum: Total length: 3.91 mm, 3.90 mm; width across frontal angles: 1.92 mm, 2.04 mm; width across humeral angles: 6.58 mm, 6.57 mm. Scutellar length: 2.32 mm, 2.32 mm; width: 2.32 mm, 2.32 mm. Total body length: 18.00 mm, 18.08 mm.

Holotype ♂: Costa Rica: Provincia Guanacaste, Estación Maritza, Lado W Volcan Orosi, 600 m, 1992.II.26.III.10, S. ROJAS. Type specimen in Instituto Nacional de Biodiversidad, Heredia, Costa Rica. Paratypes 4 ♂♂, 2 ♀♀: Costa Rica: Provincia Guanacaste, Estación Maritza, Lado W Volcan Orosi, 600 m, 1992.II.26.III.10, S. ROJAS, M. REYES, A. MARIN. In Instituto Nacional de Biodiversidad, Heredia, Costa Rica, and Instituto de Biología, Universidad Nacional Autónoma de México. 1 ♂: Costa Rica: Provincia Guanacaste, Estación Palo Verde, Ref. Nac. Fauna Silvestre, R. L. RODRIGUEZ, 10 m, 1991.VI, U. CHAVARRIA. In Instituto Nacional de Biodiversidad,

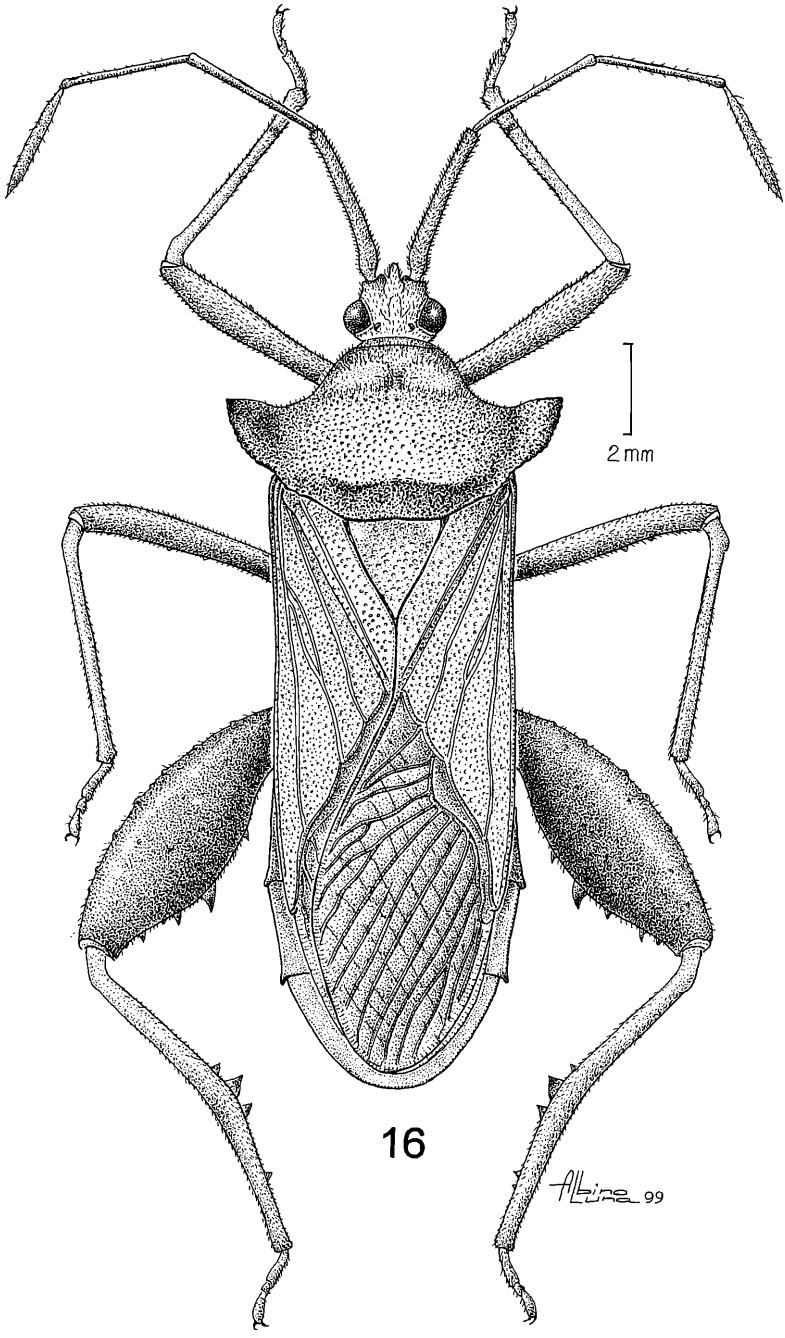


Fig. 16: Dorsal view of *Piezogaster reclusus* sp. n. (male).

Heredia, Costa Rica. 1 ♀: Costa Rica: Provincia Guanacaste, vicinity of Estación Murcielago, 8 km SW Cuajiniquil, 100 m, 1989.II, GNP Biodiversity Survey. In Instituto Nacional de Biodiversidad, Heredia, Costa Rica. 2 ♂♂: Costa Rica: Provincia Guanacaste, Estación Santa Rosa, 300 m, 1989.VII, and 1990.VIII, GNP Biodiversity Survey. In Instituto Nacional de Biodiversidad, Heredia, Costa Rica. 1 ♂: Costa Rica: Monte Verde, 1976.III.12, H. C. REED. In Instituto de Biología, Universidad Nacional Autónoma de México.

Remarks *Piezogaster reclusus* sp. n. is structurally similar to *P. achillelus* (described on this paper) and *P. chontalensis* (DISTANT, 1892) but may be separated by its dark yellow ambarine coloration, with bright orange to bright orange yellow color of the dorsal abdominal segments. Other characters exhibited by *P reclusus* and useful in separating these three species are the distinctive develop of the humeral angles of pronotum which are directed upward and outwardly (Fig. 10), and the shape of the paramere (Figs. 12-13). In *P. achillelus* the humeral angles are directed upward and forwardly (Fig. 8) and in *P. chontalensis* upward and backwardly (Fig. 9).

Distribution Costa Rica.

Etymology The name *reclusus* refers to the elusive nature of this species.

Acknowledgements

We would like to thank Mr. Jesus UGALDE (Instituto Nacional de Biodiversidad, Heredia, Costa Rica), Dr. Giovanni ONORE (Pontificia Universidad Católica del Ecuador, Quito, Ecuador), Dr. Robert W. SITES (University of Missouri) and Dr. Joseph C. SCHAFFNER (Texas A & M University, College Station, USA) for the opportunity to study material preserved in their collections. Special thanks to Albino LUNA, Cristina URBINA, and Jesus CONTRERAS for the preparation of the dorsal view illustrations.

References

BLOTE, H. C. (1935): Catalogue of the Coreidae in the Rijksmuseum van Natuurlijke Histoire. Part II. Coreinae. First part. – Zool. Meded. **18**: 181–227.

BRAILOVSKY, H. (1985): Revisión del género *Anasa* Amyot-Serville (Hemiptera-Heteroptera-Coreidae-Coreinae-Coreini). – Monogr. Inst. Biol. Univ. Nal. Autón, México **2**: 1–266.

BURMEISTER, H. (1835): Handbuch der Entomologie. Zweiter Band. Besondere Entomologie. 1. Ordnung Rhynchota. Theod. Chr. Friedr. Enslin. Berlin: 1–400.

DISTANT, W. L. (1890–1893). Insecta. Rhynchota. Hemiptera-Heteroptera. Vol. I. Biologia Centrali-Americana, London: 1–462.

O'SHEA, R. (1980): A Generic Revision of the Acanthocerini (Hemiptera: Coreidae: Coreinae). – Studies on Neotropical Fauna and Environment **15**: 57–80.

STÅL, C. (1862): Hemiptera Mexicana (part.). – Stett. Ent. Ztg. **23**: 273–281.

(Received on May 21, 1999)