



Two new species of *Amnestus* from Guatemala, with new records for some other Guatemalan burrower bugs (Hemiptera: Heteroptera: Cydnidae)

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Abstract

In this paper we describe two new species in the genus *Amnestus*, *Amnestus henryi* and *Amnestus zacki*, and we register new localities for 10 species of burrowing bugs for the fauna of Guatemala; two of these species correspond to new records, *Amnestus pusio* (Stål), and *Dallasiellus reflexus* Froeschner. We include a brief description of the 28 species known for Guatemala, mentioning old and new records; new species are fully described and illustrated, and drawings of the male genitalia, scent gland opening, fore, and hind legs of males are also presented. A key to separate the 28 Guatemalan species of burrower bugs is provided.

Key words: New species, Central America, *Amnestus*, diversity

Introduction

The Cydnidae are distributed worldwide, and are represented by 88 genera and 680 species (Lis, 2006). Most of the species are black or brown, often with a smooth, glossy or shining surface; a few are brightly colored. Many species, probably the majority, are fossorial; and they are often called burrower bugs (Froeschner, 1960; Schuh and Slater, 1995).

There have been only a few attempts to review the cydnid fauna of America: the work of Pennington (1920) for Argentina; the one of Wolcott (1948) and Froeschner and Maldonado (1992) for Puerto Rico; and the most important study was the revision of the Western Hemisphere fauna of Cydnidae by Froeschner (1960); the Heteroptera or true bugs of Ecuador by Froeschner (1981) who recorded 10 species of cydnids; true bugs of the Galapagos (Froeschner, 1985), with two species; true bugs of Panama (Froeschner, 1999), who registered 33 species of cydnids; and finally the work of Mayorga (2002) who reviewed the genera for Mexico, with also a list of 39 species. No previous revisionary works of the Guatemalan cydnid fauna have been made, and there are only isolated reports in the Froeschner Catalog, or in the study of *Scaptcoris talpa* Champion by Bianchi (1935).

There are two genera in the subfamily Amnestinae, the genus *Amnestus* Dallas (1851) with species that are recognized by their small size, and by the four or five marginal pegs on the juga (Froeschner, 1960). Froeschner (1960) reported 20 species from Canada to Argentina, and recently Mayorga and Cervantes (2001, 2005) described seven new species for Mexico. In addition is the recently described *Lattinestus* Eger (2008) with three species that are similar to *Amnestus* but differ by the reduced hemelytral membrane, by the absence of ocelli, and by the length of the claval commissure; the *Lattinestus* species were recorded from Mexico, Costa Rica, and Ecuador

Here, we describe two new species of *Amnestus*; and mentioned all the species of burrower bugs that have been reported from Guatemala, including two species which correspond to new records; in total we have treated 28 species. This contribution does not attempt to be a complete review of the Guatemalan cydnid

fauna, because there will be new records and maybe more new species as soon as more sampling is accomplished.

Materials and methods

Most of the specimens were obtained from a loan from Dr. Richard S. Zack, from the Washington State University, who was working in collaboration with Universidad del Valle de Guatemala in biological diversity studies. Some more specimens were deposited in the Smithsonian Institution, in Washington, D.C.

Specimens are deposited in the following collections: The James Entomological Collection, Washington State University (WSUC); Coleccion Nacional de Insectos from Instituto de Biología, UNAM, México (CNIN); Coleccion Entomologia del Instituto de Ecología, A.C. in Xalapa, Veracruz, México (IEXA); Smithsonian Institution in Washington (NMNH); and Universidad del Valle de Guatemala (UVGC).

Results

Amnestus zacki sp. nov.

(Figs. 1–6)

Diagnosis. This species is recognized by these characters: fore tibia slightly flattened with seven spines on external margin (Fig.4); and prosternal carinae longer than high, with ventral margin straight. *A. zacki* is similar to *A. uhleri* Distant, because both species have five pegs on juga; although *A. zacki* has seven spines on fore tibia whereas *A. uhleri* has only six; the acute apex of the parameres in *A. uhleri* is much longer.

Head. Antennal segments III, IV, and V, pronotum, scutellum, and abdominal venter dark brown. Prosternal carina, and legs pale brown. Antennal segments I, III, rostrum, marginal carina of pronotum, clavus, and corium pale yellow.

Head. Middle region of head with anterior part without punctures, tylus with four robust pegs on its apex and longer than jugum; antenna with five segments, second very small; rostrum short, reaching base of metasternum. **Thorax.** Pronotum with anterior margin concave and middle part of anterior lobe strongly convex and with densely distributed punctures, anterolateral margins carinated along their length, posterior margin wide and convex and laterally straight. Propleura smooth and shiny, prosternal carina elevated and straight with a series of fine hairs (Fig.4). Mesopleura even, evaporatorium expanded and reaching posterior and lateral margins of pleura, with a shiny area on posterior region. Metapleura even, evaporatorium extended into middle part of the pleura, peritreme shiny and long, with apex slightly curved, posterior margin of evaporatorium entire, with short hairs (Fig.5). **Legs.** Anterior tibia slightly flattened with seven spines on external margin, anterior femur with a bifid spine on middle part of ventral surface (Fig.2); internal and external margins of posterior femur smooth with a simple spine close to its apex on ventral surface (Fig. 3). **Scutellum.** Triangular with acute apex, disc with dense punctures. **Hemelytra.** Corium with evenly distributed punctures, clavus with three pale rows of punctures; membrane hyaline, longer than apex of abdomen. **Abdomen.** Ventrally convex with fine hairs.

Male genitalia. Parameres slightly dilated with acute apex, with eleven long setigerous punctures on the middle area, followed by a series of short setigerous punctures (Fig. 6).

Male measurements. Body length 4.0 ± 0.3 ; head length 0.64 ± 0.09 ; width across eyes 0.81 ± 0.01 ; interocular distance 0.46 ± 0.03 ; interocellar distance 0.24 ± 0.04 ; antennal segments: I 0.24 ± 0.04 , II 0.10 ± 0 , III 0.41 ± 0.01 , IV 0.27 ± 0.07 , V 0.41 ± 0.06 ; rostral segments: I 0.36 ± 0.04 , II 0.36 ± 0.06 , III 0.30 ± 0 , IV 0.25 ± 0 ; pronotum length 1.41 ± 0.1 ; width across anterior margin 0.86 ± 0.06 ; width across humeral angles 2.0 ± 0.1 ; scutellum: length 0.89 ± 0.1 , width 1.2 ± 0.04 ; length fore femur 0.75 ± 0.05 ; length fore tibia 0.90

± 0.1 ; fore tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 ; length posterior femur 1.1 ± 0.01 ; length posterior tibia 1.3 ± 0.1 ; posterior tarsi: I 0.10 ± 0 , II 0.05 ± 0 ; III 0.15 ± 0 .

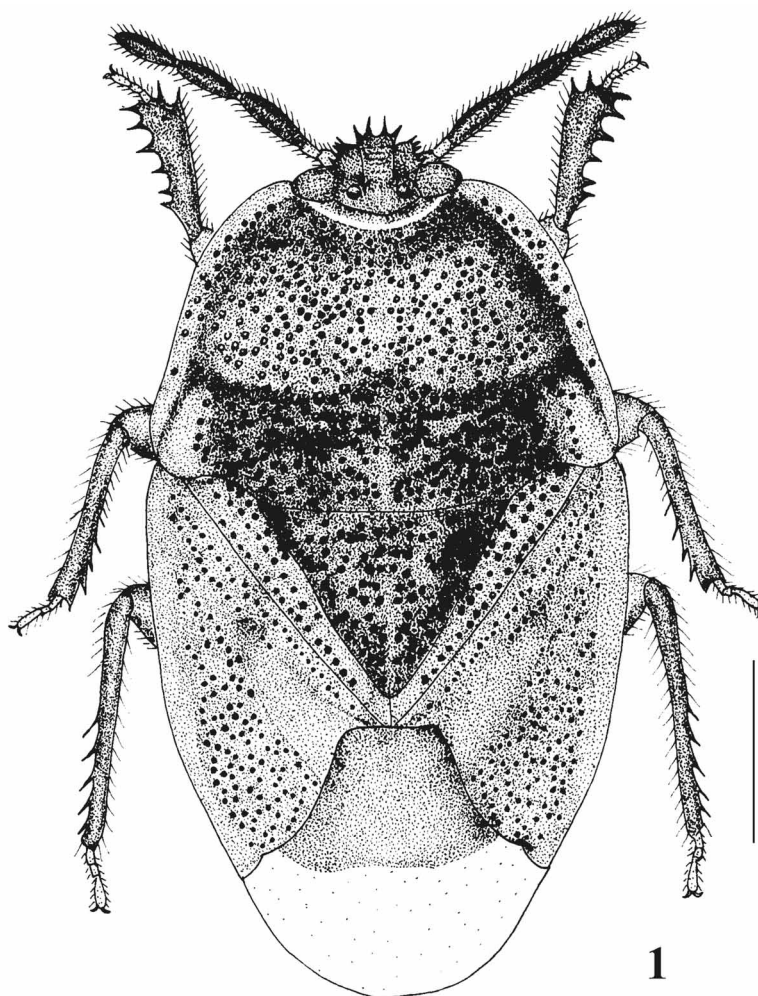


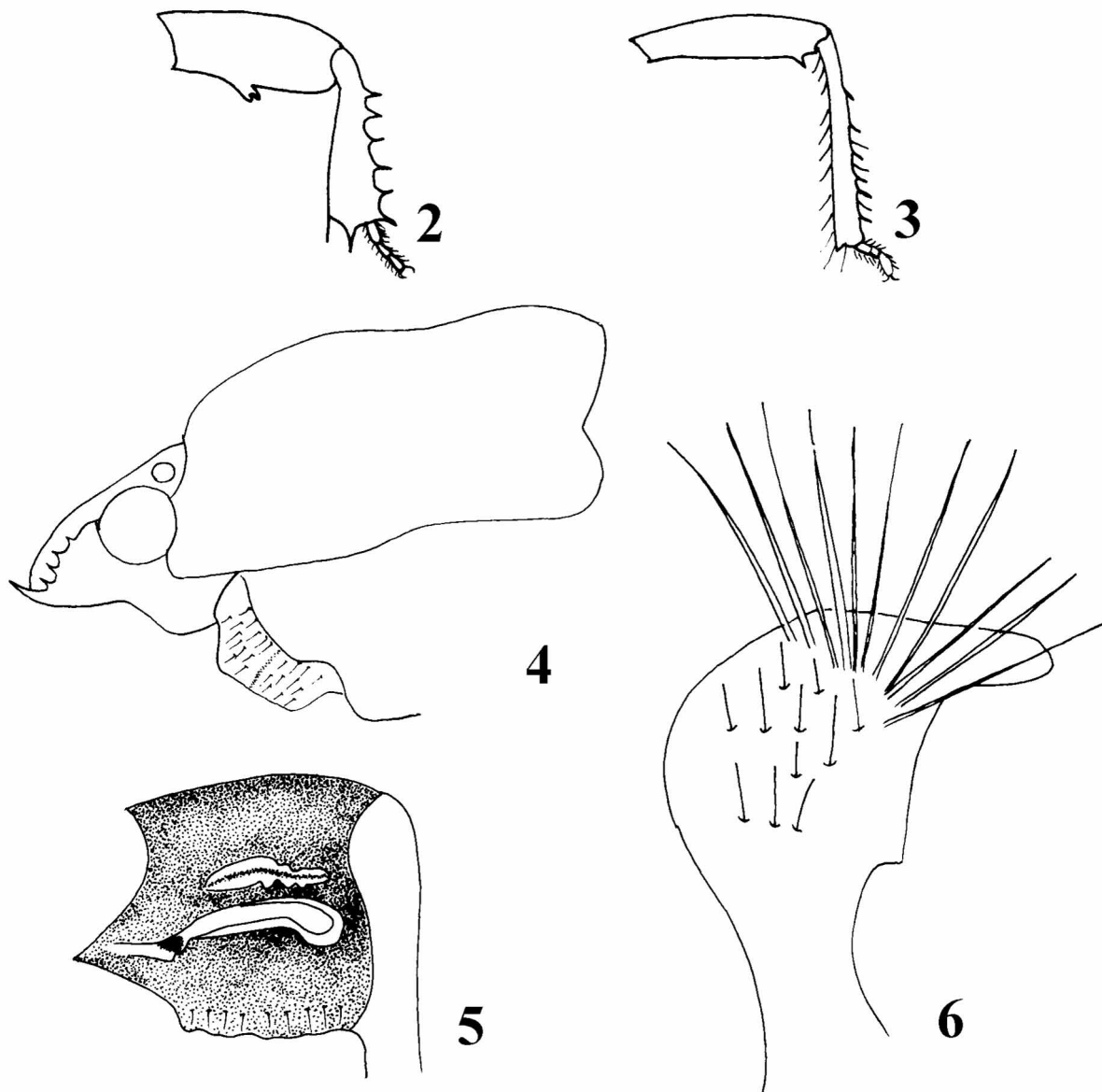
FIGURE 1. *Amnestus zacki* sp. nov. Male.

Female measurements. Body length 4.0 ± 0.01 ; head length 0.65 ± 0.05 ; width across eyes 0.84 ± 0.01 ; interocular distance 0.47 ± 0.03 ; interocellar distance 0.25 ± 0 ; antennal segments: I 0.25 ± 0.03 , II 0.10 ± 0 , III 0.39 ± 0.06 , IV 0.32 ± 0.03 , V 0.40 ± 0 ; rostral segments: I 0.33 ± 0.03 , II 0.39 ± 0.04 , III 0.30 ± 0 , IV 0.25 ± 0 ; pronotum length 1.36 ± 0.04 ; width across anterior margin 0.90 ± 0 ; width across humeral angles 2.1 ± 0.02 ; scutellum: length 0.95 ± 0.05 , width 1.1 ± 0.02 ; length fore femur 0.74 ± 0.06 ; length fore tibia 0.83 ± 0.07 ; fore tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 ; length posterior femur 1.1 ± 0 ; length posterior tibia 1.2 ± 0 ; posterior tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 .

Material Examined. HOLOTYPE: Male. Guatemala: Suchitepequez Dept. Finca los Tarrales Ca. 8 km. N of Patulul, 8-june-2005, $14^{\circ}31.37'N$ $91^{\circ}08.17'W$, 760 msnm, BL/MV Traps, R.S. Zack (WSUC).

PARATYPES: Guatemala: Suchitepequez Dept. Finca los Tarrales Ca. 8 km, N of Patulul, 8-june-2005, $14^{\circ}31.37'N$ $91^{\circ}08.17'W$, 760 msnm, BL/ MV Traps, R.S. Zack. five males and three females (CNIN, IEXA, UVGC). Paraguay: Pastoreo 3-5-I- 1972, Coll. L.E. Pena. 24 male and 29 female, Paraguay: Asunción 11-XII-1990, 1 female.

Etymology. Dedicated to Dr. Richard Zack from Washington State University, who collected most of the material included in this paper.



FIGURES 2–6. *Amnestus zacki* sp. nov. 2. Fore leg. 3. Hind leg. 4. Prosternal carina. 5. Metathoracic scent gland. 6. Paramere.

***Amnestus henryi* sp. nov.**

(Figs. 7–12)

Diagnosis: This species is distinguished by these characteristics: the fore tibia flattened with four robust spines on external margin and one on its apex, ventrally with a small spine on middle area; posterior femur with a spine near to apex on internal margin. This species is very similar to *A. bergrothi* Distant, but in *A. henryi* the parameres are elongated and have one side slightly straight (Fig. 12), whereas in *A. bergrothi* the parameres are not elongated and one side is rounded.

Head. Antennal segments III and IV, pronotum, prosternal carina, abdominal venter and scutellum pale brown; antennal segments I, II, and V, rostrum, clavus, corium, and legs pale yellow, posterior margin of pronotum dark brown (Fig. 7). Posterior part of head with disperse punctures; tylus with four robust pegs and with transverse rugae, not longer than jugum; antenna with five segments, second very small; rostrum longer

than base of metasternum. **Thorax.** Pronotum with anterior margin concave and anterior half area elevated and with disperse punctures, transverse impression strongly marked; anterolateral margins entire, no carinated; posterior margin wide and convex. Propleura shiny and smooth; prosternal carina with anterior part elevated (Fig. 10); mesopleura even; evaporatorium extended, reaching posterior and lateral margins of pleura; metapleura with evaporatorium extended to posterior and lateral margins of pleura, with peritreme elongated and slightly curved apically; posterior margin toothed with a series of setigerous punctures (Fig. 11). **Legs.** Fore tibia flattened with four robust spines on external margin and one on its apex, ventrally with a small spine on middle area (Fig.8) Fore femur with a bifid spine on its ventral area; posterior femur with a spine closed to apex with a simple spine near to apex, on internal margin (Fig. 9). **Scutellum.** Triangular, with evenly distributed punctures on disc. **Hemelytra.** Slightly punctured surface, with basal margin entire; clavus with two rows of punctures through its first half of its length; membrane hyaline, longer than apex of abdomen; membrane hyaline. **Abdomen.** Shiny, ventrally convex, covered with fine hairs.

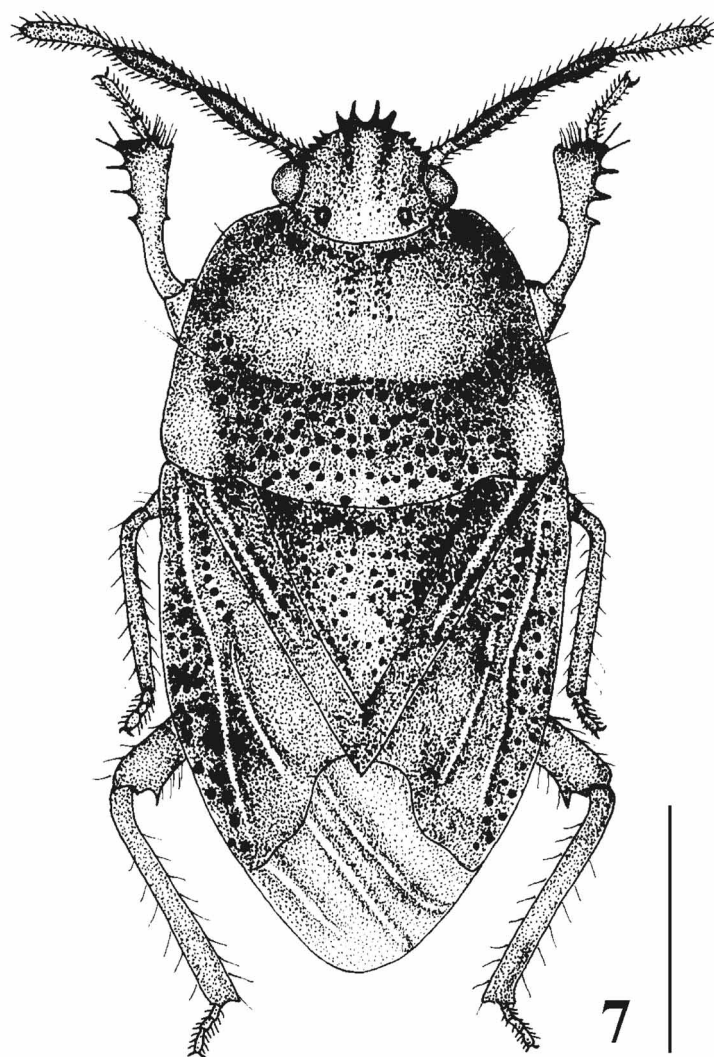
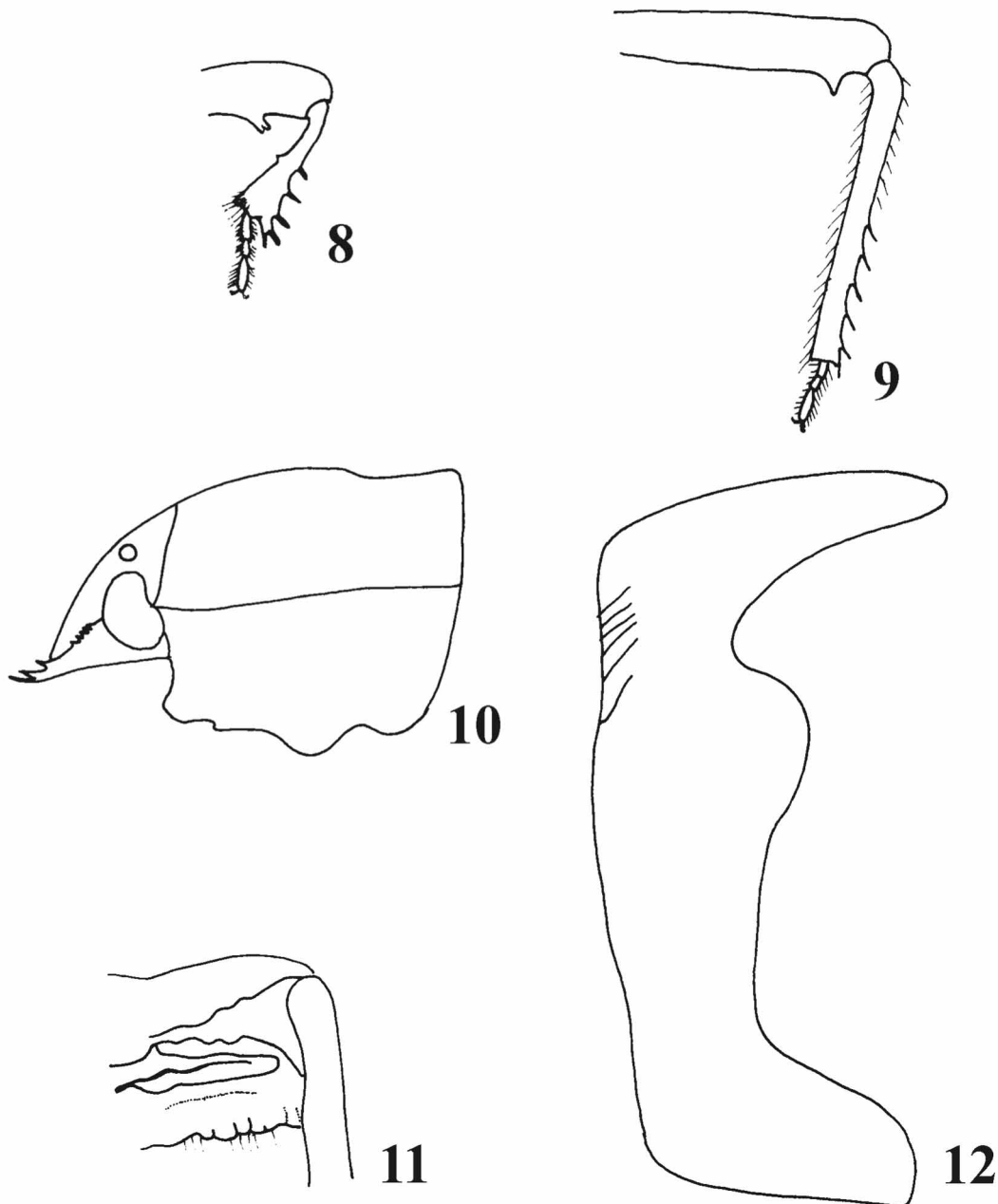


FIGURE 7. *Amnestus henryi* sp. nov. Male.

Male genitalia. Parameres elongated with middle region swallowed and slightly curved apically (Fig. 12).

Male measurements. Body length 3.3 ± 0.2 ; head length 0.45 ± 0.05 ; width across eyes 0.77 ± 0.03 ; interocular distance 0.43 ± 0.03 ; interocellar distance 0.17 ± 0.02 ; antennal segments: I 0.20 ± 0 , II 0.05 ± 0 , III 0.30 ± 0 , IV 0.37 ± 0.04 , V 0.42 ± 0.03 ; rostral segments: I 0.25 ± 0 , II 0.35 ± 0 , III 0.30 ± 0 , IV 0.25 ± 0 ; pronotum length 1.1 ± 0.1 ; width across anterior margin 0.75 ± 0.05 ; width across humeral angles 1.74 ± 0.1 ; scutellum: length 0.80 ± 0 , width 0.82 ± 0.03 ; length fore femur 0.57 ± 0.07 ; length fore tibia 0.72 ± 0.07 ; fore

tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 ; length posterior femur 0.97 ± 0.1 ; length posterior tibia 1.0 ± 0.1 ; posterior tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 .



FIGURES 8–12. *Amnestus henryi* sp. nov. 8. Fore leg. 9. Hind leg. 10. Prosternal carina. 11. Metathoracic scent gland. 12. Paramere.

Female measurements. Body length 3.6 ± 0.1 ; head length 0.48 ± 0.02 ; width across eyes 0.75 ± 0 ; interocular distance 0.45 ± 0 ; interocellar distance 0.23 ± 0.02 ; antennal segments: I 0.20 ± 0 , II 0.05 ± 0 , III 0.35 ± 0 , IV 0.35 ± 0 , V 0.41 ± 0.05 ; rostral segments: I 0.30 ± 0 , II 0.35 ± 0 , III 0.40 ± 0 , IV 0.27 ± 0.03 ; pronotum length 1.1 ± 0.1 ; width across anterior margin 0.77 ± 0.03 ; width across humeral angles 1.76 ± 0.1 ; scutellum: length 0.81 ± 0.1 , width 0.93 ± 0.07 ; length fore femur 0.56 ± 0.04 ; length fore tibia 0.75 ± 0 ; fore tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 ; length posterior femur 0.95 ± 0.05 ; length posterior tibia 1.0 ± 0.1 ; posterior tarsi: I 0.10 ± 0 , II 0.05 ± 0 , III 0.15 ± 0 .

Material Examined. HOLOTYPE: Male. Guatemala, Alta Verapaz, Lanquin, Cueva Lanquin, 28-VIII-1969. (NMNH)

PARATYPES: Guatemala, Alta Verapaz, Lanquin, Cueva Lanquin, 28-VIII-1969, 1 male and 5 females (CNIN, NMNH).

Etymology. Dedicated to Dr. Thomas Henry from the Smithsonian Institution in Washington, D.C., who lent us the specimens of this species.

Other species from Guatemala

Amnestus bergrothi Distant

Original Description. Allied to *Amnestus uhleri*, but smaller, the anterior lobe of the pronotum more punctuate; apical margin of the corium concolorous, the lateral spines of the head much longer and equal in length to those of frontal lobe.

Old records. Pantaleon, Dueñas, San Gerónimo (Distant 1880–1893)

Amnestus championi Distant

Diagnosis. Species with five pegs on the margin of each jugum, which can be recognized by the closely punctuate umbones and the subbasal fuscous spot on the corium. 2.15 to 2.38 mm long.

Head, pronotum, and scutellum dark brown to black, shining, paler along free edges of head and pronotum; clavus and coria translucent yellow, latter with distinct fuscous spot near base and usually faint clouding along apical margin; underside reddish brown to brown; antennae, labium, and legs distinctly paler. Head. Tylus longer than juga; juga with five marginal pegs; surface coarsely punctuate between and posterior to eyes; labium reaching middle coxae. Pronotum with transverse impression moderately impressed, punctuate; anterior lobe, including most of disc of calli, with crowded, prominent punctures; posterior lobe, including umbones, densely punctuate. Mesocorium with few scattered punctures discally; exocorium abundantly punctuate across full width. Prosternal carinae about twice as high as rostral segment II, anterior margin vertical, ventral margin concave. Fore femur with medioventral spine strongly oblique, unequally furcated, with small, subapical tubercle on posteroventral margin; hind femur with ventral, subapical spine very short, oblique, not or weakly bifid.

Old records. Zapote (Distant 1880–1893)

Amnestus pusillus Uhler

Diagnosis. The male of this species can be recognized by the presence on the hind femur of a ventral, subapical spine which is more than one-third as long as the tibia. The female is marked by the presence of a flattened, polished, glabrous area on the middle of the last sternite and the presence of a short, oblique, subapical spine on the ventral margin of the hind femur. Body length 2.08 to 2.66 mm.

General coloration yellowish tan, coria, legs, and rostrum usually paler. Head. Tylus longer than juga; latter with four marginal pegs becoming finer toward eye; surface except tylus, roughly punctuate; rostrum reaching bases of hind coxae. Pronotum with transverse impression distinct, marked by regular row of coarser, closer punctures; anterior lobe with coarse punctures in three or four rows laterally and subapical, and along midline and scattered over calli; posterior lobe, except umbones, abundantly punctuate. Mesocorium discally with single, irregular row of fine punctures; exocorium punctuate for full width. Prosternal carina almost as high as rostral segment II, abruptly terminated posteriorly. Fore femur ventrally with submedian spine very short, simple; fore tibia with two prominent spines on lower edge.

Old records. Specimens intercepted in Texas, labeled “Guatemala” (Froeschner 1960).

Amnestus pusio (Stål)

Diagnosis. Small size (1.2 to 2.1 mm); four marginal pegs on jugum; presence of coarse punctures on the disc of calli. Males lack spines or angulation on the ventral margin of the anterior tibia.

Yellowish brown, posterior pronotal lobe and corium slightly lighter, rostrum and legs pale yellow. Body length 1.82 to 2.02 mm.

Head. Tylus slightly surpassing juga; rostrum attaining posterior coxa. Pronotum. Anterior margin feebly concave; side margins straight or slightly sinuate on basal half; transverse impression prominent with row of punctures; anterior lobe with large punctures laterally, subapically, medially and scattered over calli; posterior lobe, except umbones, with numerous coarse punctures. Prosternal carina about as high as labial II, more or less abruptly terminated. Hemelytra. mesocorium with small scattered punctures; exocorium abundantly punctate. Legs. Fore femur with premedian spine simple or weakly bifid at apex, posteroventral margin with minute, subapical tubercle; posterior femur ventrally with prominent, triangular tooth near apex.

New records. 3 females, 3 males, Suchitepequez, Finca Los Tarrales, 8 km N of Patulul, 14°31'37" N 91°08'17", 760m, 8/VI/2005, R. Zack (WSUC, UVGC, CNIN, IEXA).

Amnestus signoreti Distant

Original Description. Black; lateral and frontal margins of head, lateral margins of pronotum and corium, legs, and antennae pale castaneous. Head with the usual frontal and lateral spines; head, pronotum, scutellum, and corium thickly and coarsely punctuate; pronotum with a somewhat obscure transverse incision; membrane pale hyaline, ochraceous at base. Long. 2.5 mm.

Old records. Quiche Mountains (Distant 1880–1893)

Amnestus stali Distant

Original Description. Head and pronotum castaneous, scutellum black, corium, legs, and antennae ochraceous, apical area of corium black. Head coarsely punctuate, the frontal and lateral spines equally long; pronotum with a distinct transverse impression considerably before the middle, anterior lobe with the anterior and lateral margins thickly and coarsely punctuate, and with discal punctures at centre and lateral areas, posterior lobe and scutellum thickly and coarsely punctuate; corium more finely punctuate, the posterior disc impunctate. Long. 3 mm.

Old records. Quiche Mountains (Distant 1880–1893)

Amnestus subferrugineus (Westwood)

Diagnosis. The present species may be recognized by the vertical anterior edges of the prosternal carina and the immaculate coria.

Head, pronotum, scutellum, and venter reddish brown; coria yellowish, immaculate; rostrum and legs yellow. Head. Tylus slightly surpassing apices of juga; latter with five marginal pegs becoming smaller toward eye; surface with coarse punctures between eyes. Rostrum reaching middle of mesosternum. Pronotum with transverse impression strongly impressed, marked by a row of slightly coarser punctures; anterior lobe strongly tumid, higher than posterior lobe, virtually impunctate except for two rows laterally and one subapically; posterior lobe, except calli with numerous, close-set punctures. Mesocorium with few scattered punctures apically; exocorium closely punctuate across full width. Prosternal carina higher than rostral segment II, bluntly triangular, anterior margin vertical. Fore femur ventrally with abruptly curved, stout spine

near middle; hind femur ventrally with subapical, oblique, straight spine about two-thirds as long as femoral height.

Old records. Cacao, Trece Aguas, Alta Vera Paz (Froeschner 1960)

Amnestus uhleri Distant

Diagnosis: The large size of the body and the greatly elongated clypeus strongly mark this species as different from all others in the genus. Body length 4.04 to 4.46 mm.

Head. Clypeus surpassing truncated apices of juga, surface irregular, impunctate, shining; jugum with five marginal pegs becoming thicker and longer distally. Pronotum. Anterior margin shallowly and simply emarginated, anterior angles not cupped; lateral margins entire, transverse impression moderate, punctate; anterior lobe tumid, impunctate except for single lateral subapical row of very closely set, coarse punctures; posterior lobe, except umbones, with numerous small punctures. Prosternal carinae about as high as labial II, evanescent anteriorly, obtusely angled posteriorly. Scutellum. Width greater than length. Hemelytron. Mesocorium with numerous punctures becoming finer and closer apically; exocorium with numerous punctures becoming obsolete toward costa; costa subparallel on basal half. Legs. Anterior femur ventrally with premedian stout, unequally furcated spine; anterior tibia with ventral margin straight, neither angled nor toothed medially; posterior femur with subapical spine almost at a right angle bent at middle.

Old records. Zapote (Distant 1880–1893)

Cyrtomenus (Syllobus) emarginatus Stål

Diagnosis. This species can be distinguished from other cydnids by the triangular projecting jugal apices. Body length 10.8 to 13.95 mm.

Head. Surface polished, jugum with numerous round and elongated punctures, ventrally polished and impunctate; ocelli large; rostrum reaching between middle coxa. Pronotum. Lateral margin straight on basal third or half, with submarginal row of six to nine setigerous punctures; transverse impression obsolete, marked by irregular interrupted row of punctures; anterior lobe with very broad, shallow, median, subapical depression; posterior lobe with few large punctures medially; propleuron polished, with numerous fine punctures on depression; mesopleuron with evaporatorium interrupted posteriorly by a shining submarginal band, lateral area impunctate; metapleuron with lateral margin of evaporatorium distinctly concave, lateral area impunctate. Scutellum. Impunctate across base and apex, disc with widely scattered, coarse, sunken punctures. Hemelytra. Clavus and corium polished; clavus with single row of large punctures; mesocorial punctures forming two more or less distinct rows, elsewhere with scattered punctures; exocorial punctuation more abundant and variable. Legs. Posterior tibia not expanded near apex.

Old records. Morales (Froeschner 1960)

New records. 1 female, 3 males, Peten, Parque Natural Ixpanpajul, near Santa Ana, 16°52'366" N 89°48'890" W, 180m, 22/VII/2007, R. Zack; 1 female, 2 males, Izabal, 15°22'749" N 88°41'692" W, 950m, 20/VII/2007, R. Zack. (WSUC, UVGC, CNIN, IEXA).

Cyrtomenus (Syllobus) grossus Dallas

Diagnosis. The very great width of the interocular part of the head, which is greater than the length of the head, will permit recognition of this species.

Head. Surface shining, with faint, radiating rugae and minute, widely scattered punctures; rostrum surpassing hind coxae, sometimes reaching sternite IV. Pronotum with lateral margin straight on basal two-

thirds, with submarginal row of twelve setigerous punctures; transverse impression virtually not impressed, marked by very irregular row of punctures; anterior lobe with intermixed coarse and fine punctures laterally and in subapical band paralleling anterior margin, with broad, shallow basin-like depression over most of middle third; posterior lobe with few minute and fewer coarse punctures scattered irregularly across width. Scutellum disc polished, with about half dozen coarse punctures and several fine ones widely scattered. Clavus and corium shining; clavus with a single row of coarse punctures and several finer scattered ones; mesocorium with one complete and one partial row of punctures paralleling claval suture; exocorium less densely punctured than mesocorium; costa with five or six setigerous punctures. Hind tibia distinctly compressed, gently widened to apical third.

Old records. Purulhá (Froeschner 1960)

Cyrtomenus (Syllobus) teter (Spinola)

Diagnosis. This species may be recognized by a combination of three features: regularly rounded outline of head, less than ten setigerous punctures on costa, and the short rostrum which does not surpass the posterior coxae.

Head. Anterior outlining a flattened semicircle, tylus as long as juga; surface shining, with faint to moderate radiating rugae, punctuation fine or absent. Pronotum. Lateral margin with 16 to 18 setigerous punctures submarginally; transverse impression more strongly impressed laterally than medially, marked with irregular, medially interrupted row of coarse punctures; anterior lobe impunctate except for few punctures laterally and irregularly, transverse row of coarse punctures subapically; posterior lobe polished, with few widely scattered punctures. Scutellum disc impunctate or with few widely scattered punctures. Clavus and corium polished; clavus with one complete row of punctures, sometimes also with several scattered punctures; mesocorium with two rows of punctures paralleling claval suture; exocorium with punctuation much more sparse than on mesocorium; costa with five or seven setigerous punctures.

Old records. Coban (Froeschner 1960)

Cyrtomenus (Cyrtomenus) crassus Walker

Diagnosis. The very broadly rounded antecocular part of head beyond which the eyes project only slightly, added to the presence of a postmedian row of setigerous punctures on lateral third of sternites IV to VI, will separate this species. Body length 7.93 to 8.98 mm.

Head. Anterior margin very broadly rounded; eyes projecting beyond sides of head by not more than one-third their width; juga longer than tylus and nearly or quite contiguous in front of it; apices of juga and tylus broadly recurved; surface noticeably convex, shining, with prominent, coarse, irregular rugae radiating from base of tylus, minutely punctate; jugum ventrally shining, in part obsoletely rugulose. Pronotum. Lateral margin straight to slightly concave on basal two-thirds, with submarginal row of 15 to 18 setigerous punctures; transverse impression distinct laterally, obsolete medially, interrupted medially by a irregular row of coarse punctures; anterior lobe impunctate except for moderate punctures laterally and in subapical band; posterior lobe with several coarse punctures anteriorly, these more numerous medially; propleuron shining, with few distinct punctures in depression; mesopleuron with lateral area polished, impunctate, with few oblique rugulae; metapleuron with lateral margin of evaporatorium more or less concave, lateral area polished and impunctate. Scutellum. Length subequal to, slightly longer or shorter than width; disc with few to several widely scattered, coarse, sunken punctures. Hemelytra. Clavus and corium shining; clavus with one submedian row of punctures; mesocorial punctuation forming two rows, elsewhere, except along radial vein, uniformly punctate; exocorium more irregularly and less densely punctate than mesocorium; costa with six to ten setigerous punctures. Legs. Posterior tibia strongly dilated toward apex; anterior tibia with nine or ten

stout, flattened, blunt spines arising from blackened elevation on dorsal margin. Sternites shining, polished or faintly alutaceous, rugulose in spiracular area; setigerous punctures on segments III to VII prominent, with long setae.

Old records. Antigua (Froeschner 1960).

New records. 7 female, 2 males, Izabal, ca. 25 km SSE Morales, 15° 22'749" N 88° 41'692" W, 950m, 20/VII/2007, R. Zack. (WSUC, UVGC, CNIN, IEXA).

Cyrtomenus (Cyrtomenus) bergi Froeschner

Diagnosis. The smaller ocelli which are separated from the eyes by a space slightly greater than the transverse ocellar width, or the absence of strong rugae on the head, will separate this species. Body length 6.17 to 9 mm.

Head. Anterior margin nearly or quite a full semicircle, juga surpassing and covering or contiguous in front of tylus; surface polished, with weak to obsolete, radiating rugae, impunctate, with minute punctures or with few distinct punctures anterior to ocelli; jugum ventrally weakly alutaceous, sometimes with few small punctures; rostrum surpassing apices of middle coxae. Pronotum. Lateral margins straight on basal half, with submarginal row of 15 to 20 setigerous punctures; transverse impression weakly to moderately impressed, obsolete or absent at middle, marked by irregular, interrupted row of coarse punctures; anterior lobe with weak subapical impression; posterior lobe with few to many coarse scattered punctures medially; propleuron variable, from polished and impunctate to roughened by crowded, fine, longitudinal rugulae and small punctures; mesopleuron with lateral area shining, impunctate, with few oblique rugae; metapleuron with lateral area polished and impunctate. Scutellum. Disc with widely scattered, sunken, coarse punctures. Hemelytra. Clavus and corium polished; clavus with one row of punctures medially; mesocorial punctures arranged in two rows, outer row often incomplete, discal punctures numerous, well separated, often absent along radial vein; exocorium usually more sparsely punctuate; costa with six to eight setigerous punctures. Legs. Posterior tibia compressed, very weakly expanded toward apex. Sternites polished, virtually impunctate except among longitudinal rugae in spiracular area.

Old records. Champerico, Morales (Froeschner 1960).

New records. 29 females, 4 males, Suchitepequez, Finca Los Tarrales, 8 km N of Patulul, 14° 31'37" N 91° 08'17", 760m, 3/VI/2005, R. Zack; 1 female, Suchitepequez, Finca Los Tarrales, 12 km N of Patulul, 14° 32'24" N 91° 09'40", 1086m, 6/VI/2005, R. Zack. (WSUC, UVGC, CNIN, IEXA).

Dallasiellus (Dallasiellus) lugubris (Stål)

Diagnosis. Within its subgenus this species may be recognized by its small size (3.9 to 5.5 mm) coupled with the presence of two or more setigerous punctures in the front of the eye on the submargin of the head, and two almost equally developed rows of mesocorial punctures paralleling the claval suture.

Head. Anterior margin semicircular, juga very slightly longer than tylus; surface polished, impunctate, and with faint, radiating rugae; two to four close-set submarginal setigerous punctures immediately in front of eye and usually two widely separated ones beyond them; juga ventrally polished, impunctate; bucculae about as high as rostral II, evanescent posteriorly; rostrum reaching between middle coxae. Pronotum. Anterior margin weakly, doubly emarginated; side margins entire, gently curving on anterior third, with six submarginal setigerous punctures; transverse impression more or less impressed laterally, obsolete medially; anterior lobe with a curved, irregular band of distinct punctures subapically and a patch of numerous coarse punctures laterally; posterior lobe with several distinct punctures medially and laterally; propleuron distinctly punctured only in the depression; prosternal carinae less than half as high as rostral II; mesopleuron with evaporatorium reaching lateral margin and extended anteriorly, polished area impunctate; metapleuron with peritreme free apically, evaporatorium virtually straight laterally, polished area impunctate. Scutellum. Disc

polished and with numerous scattered punctures becoming finer apically. Hemelytra. Corium and clavus polished; clavus with one complete row and one incomplete row of punctures; mesocorium with two complete rows of punctures paralleling clavocorial suture; exocorium more densely punctate; costa with one to three setigerous punctures. Sternites shining, impunctate except for a few punctures behind spiracles.

Old records. Coban (Froeschner, 1960).

New records. 2 females, 2 males, Suchitepequez, Finca Los Tarrales, 8 km N of Patulul, 14° 31'37" N 91° 08'17", 760m, 8/VI/2005, R. Zack; 1 female, Peten, Parque Natural Ixppanpajul, 18/X/2006, J. & M. Huether. (WSUC, UVGC, CNIN, IEXA).

***Dallasiellus (Ecarinoceps) reflexus* Froeschner**

Diagnosis. The high bucculae whose posterior termination is abrupt, not evanescent, mark this species. Body length 8.24 to 8.85 mm.

Head. Anterior margin a faintly flattened semicircle; tylus as long as juga; juga impunctate, with few weak, radiating rugae and but one submarginal setigerous puncture in front of eye; ocelli small; bucculae higher than rostral II, abruptly terminated posteriorly; rostrum reaching posterior half of mesosternum. Pronotum. Anterior margin moderately concave; side margins entire, gently narrowed from base; transverse impression obsolete to absent; with few punctures along transverse impression, on middle of posterior lobe and sometimes behind anterior emargination, remainder of surface impunctate; propleuron shining, impunctate except near acetabulum and in depression; prosternal carinae low, acute; mesopleuron with evaporatorium reaching lateral margin of segment; lateral area impunctate; metapleuron with lateral edge of evaporatorium weakly concave, lateral area impunctate. Scutellum. Surface shining, punctured except at base and apex. Hemelytra. Corium and clavus finely but distinctly alutaceous; exocorium and mesocorium mostly with very weak to obsolete fine punctures, mesocorium also with two rows of coarse punctures paralleling claval suture; clavus with one row and basal part of another row of punctures; costa broadly reflexed, with two setigerous punctures. Sternites finely alutaceous, impunctate except in spiracular area.

New records. 8 females, 9 males, Zacapa, Santa Cruz, Marble Quarry rd, NE of Teculután, 15° 02'604" N 89° 40'126", 573m, 17/V/2006, R. Zack. (WSUC, UVGC, CNIN, IEXA).

***Ectinopus muticus* Froeschner**

Diagnosis. Either the short, third antennal segment or the oblique, crenulate impressed line extending laterally from apex of the peritreme sets this species apart.

Head. Anterior outline subquadrate; surface impunctate, with a few moderate oblique rugae. Pronotum with transverse impression with several widely separated punctures, in a broad irregular band; rest of surface virtually impunctate except for about a dozen punctures laterally on anterior lobe. Scutellum surface with several distinct, well-separated moderate punctures; apex impunctate.

Old records. Bobas (Froeschner 1960)

***Pangaeus (Homaloporus) bilineatus* (Say)**

Dignosis. This species is characterized by the absence of tubercles on ventral surface of the posterior femora; no punctures on the subapical impression of the pronotum; and by the presence of three or more submarginal setigerous punctures on each jugum. Body length 5.25 to 7.78 mm.

Head. Anterior margin a full semicircle or less, usually evenly curved; tylus as long as juga, little narrowed apically; jugum usually with feeble to obsolete radiating rugae; ocelli moderately large; rostrum

reaching between middle coxae. Pronotum. Anterior margin moderately, simply emarginated; side margins entire, nearly straight on middle third, lateral submarginal row of nine to twelve setigerous punctures; transverse impression submedian, obsolete to absent, impunctate or marked by irregular row of distinct punctures; anterior lobe impunctate or sometimes with few weak punctures laterally; posterior lobe impunctate or with few to a dozen punctures medially; propleuron distinctly alutaceous, punctured only in depression; prosternal carina less than half as high as rostral II. Scutellum with surface obsoletely alutaceous with numerous punctures discally, except across base and at extreme apex. Hemelytra. Corium and clavus distinctly alutaceous; clavus usually with one or two partial rows of punctures; mesocorium with one complete and a second partial or complete row of punctures; exocorium with numerous punctures usually more distinct than those of mesocorial disc; costa with two to six setigerous punctures. Sternites distinctly alutaceous, impunctate.

Old records. Zacapa (Froeschner, 1960).

New records. 5 females, 1 male, Zacapa, Santa Cruz, Marble Quarry rd, NE of Tecolutan, 15° 02'604" N 89° 40'126', 573m, 17/V/2006, R. Zack; 4 females, 4 males, Zacapa, Santa Cruz, Marble Quarry rd, NE of Tecolutan, 15° 01'680" N 89° 40'447', 290m, 19/VII/2007, R. Zack. (WSUC, UVGC, CNIN, IEXA).

***Pangaesus (Homaloporus) rugiceps* Horvath**

Diagnosis. This is the only species in the subgenus with a single submarginal setigerous puncture in front of the eye. Body length 5.6 to 7.22 mm.

Head. Anterior margin an elongated semicircle; juga longer than apically narrowed tylus and nearly or quite contiguous beyond it; juga impunctate, with strong, mostly transverse rugae, submarginally with one setigerous puncture anterior to eye; ocelli moderately large; jugum ventrally in large part rugopunctate; bucculae about as high as rostral II; rostrum reaching between middle coxae. Pronotum. Anterior margin shallowly, doubly emarginated: lateral margins straight to very slightly sinuate, with six setigerous submarginal punctures; transverse impression weak, obsolete at middle, marked by medially interrupted, irregular row of coarse punctures: surface elsewhere impunctate, except for prominent punctures laterally on anterior lobe and a few medially on posterior lobe; propleuron vaguely alutaceous, with no distinct punctures; prosternal carina less than half as high as rostral II, and sharp; mesopleuron and metapleuron with lateral area finely alutaceous, impunctate; metapleuron with evaporatorium moderately concave laterally. Scutellum. Surface polished, basal third to fourth impunctate, disc with several widely scattered, coarse punctures and numerous interspersed minute punctures. Hemelytra. Clavus and corium shining, very weakly alutaceous; clavus with a partial row of punctures; mesocorium with two complete rows, discally with numerous scattered small punctures becoming more abundant and stronger apically; exocorium with few weak punctures; costa with two or three setigerous punctures. Sternites shining, impunctate but with fine longitudinal rugae in spiracular area.

Old records. Chiquimula; Sacapulas; Zacapa (Froeschner, 1960).

New records. 83 females, 52 males, Zacapa, Santa Cruz, Marble Quarry rd, NE of Tecolutan, 15° 01'680" N 89° 40'447', 290m, 19/VII/2007, R. Zack. (WSUC, UVGC, CNIN, IEXA).

***Pangaesus (Pangaesus) aethiops* (Fabricius)**

Diagnosis. The male is easily recognized by the deep medioapical emargination of the genital capsule, although females cannot easily be identified, except by the large ocelli. Body length 7.34 to 9.73 mm.

Head. Anterior margin outline a slightly elongate semicircle, juga as long as or longer than tylus and nearly or quite contiguous beyond its apex; surface polished, with few scattered minute punctures, apex distinctly curved; juga longitudinally impressed medially, with one submarginal setigerous puncture

immediately anterior to eye; ocelli large; jugum ventrally, except posterior fourth, polished, impunctate; rostrum reaching between or slightly beyond middle coxae. Pronotum. Anterior margin shallowly, doubly emarginated; lateral margin nearly straight on basal two thirds, with four or five setigerous punctures submarginally; transverse impression weak but evident, marked by medially interrupted row of punctures; anterior lobe with median line finely impressed on apical half; posterior lobe with several to many punctures scattered across full width; propleuron weakly alutaceous, punctured in depression and sometimes anterior to acetabulum, prosternal carina less than half as high as rostral II; mesopleuron with lateral area with few or no punctures; metapleuron with lateral margin of evaporatorium weakly or not concave, lateral area impunctate. Scutellum. Disc polished, with numerous punctures scattered nearly to apex. Hemelytra. Clavus and corium alutaceous; clavus with one complete and sometimes a second incomplete row of punctures; mesocorium with one complete and sometimes another incomplete or complete row of punctures; exocorial punctures likewise varying from absent to distinct; costa with two setigerous punctures. Legs. Posteroventral margin of hind tibia with fine tubercles basal of distinct angulation at basal sixth and three or four subapical spines. Sternites without distinct punctures except in spiracular area.

Old records. Finca el Cipres, south of Flores, Sacapulas (Froeschner, 1960).

New records. 3 females, 3 males, Suchitepequez, Finca Los Tarrales, 10 km N of Patulul, 14° 32'24" N 91° 09'40", 1050m, 5/VI/2005, R. Zack; 4 females, 1 male, Zacapa, Santa Cruz, Marble Quarry rd, NE of Teculután, 15° 02'604" N 89° 40'126', 573m, 17/V/2006, R. Zack. (WSUC, UVGC, CNIN, IEXA).

Pangaeus (Pangaeus) docilis (Walker)

Diagnosis. The male of *P. docilis* may be separated from all other species in the genus by the subbasal angulation on the posteroventral margin of the hind tibia and the single setigerous puncture on the costa.

Head. Anterior outline semicircular; tylus as long as juga and strongly narrowed apically; surface shining, impunctate, with weak rugae; jugum with one submarginal setigerous puncture anterior to eye; rostrum reaching between middle coxae. Pronotum with anterior margin shallowly, doubly emarginated; lateral margin straight on basal half, with five setigerous punctures submarginally; transverse impression slightly postmedian, sharply impressed across full width, marked by medially interrupted regular row of close-set punctures; anterior lobe impunctate except for few punctures medially. Scutellum disc shining, with few to numerous scattered punctures. Clavus and corium alutaceous; clavus with one row of punctures; corium not distinctly punctate except along one complete and usually basal part of second row paralleling claval suture.

Old records. Alta Verapaz; Trece Aguas (Froeschner 1960)

Pangaeus (Pangaeus) moestus (Stål)

Diagnosis. This species can be delimited by the presence of two setigerous punctures on the costa, and the corium is polished. Body length 5.38 mm.

Head. Anterior margin a full semicircle; tylus as long as juga; surface shining, impunctate, with obsolete, radiating rugae; jugum with single submarginal puncture near eye; ocelli moderate; bucculae about half as high as labial II; rostrum attaining base of middle coxae. Pronotum. Anterior margin shallowly emarginated; lateral margin almost straight on basal half, with five setigerous punctures submarginally; transverse impression submedian, lightly impressed across full width; anterior lobe impunctate except for four to five punctures laterally; posterior lobe with less than ten punctures medially; propleuron shining, distinctly punctate only in depression; prosternal carina less than half as high as rostral II; meso- and metapleuron with lateral area impunctate, evaporatorium with lateral margin straight. Scutellum. Disc polished, with sparse, scattered punctures. Hemelytra. Clavus and corium polished; clavus with one row of strong punctures; corium virtually impunctate except for one complete and interrupted second row of mesocorial punctures; costa with

two setigerous punctures. Legs. Hind tibia without subbasal spine ventrally, posteroventral margin with four spines.

Old records. Acatenango (Froeschner, 1960).

New records. 2 females, 2 males, Suchitepequez, Finca Los Tarrales, 10 km N of Patulul, 14° 32'24" N 91° 09'40", 1050m, 5/VI/2005, R. Zack (WSUC, UVGC, CNIN, IEXA).

***Pangaeus (Pangaeus) piceatus* Stål**

Diagnosis. Among the species with one setigerous puncture on the submargin of the head and one on the costa, males of this species may be recognized by the lack of ventral, subbasal angulation on the hind tibia coupled with the presence of but four spines on the postero-ventral margin of the posterior tibia.

Head. Anterior outline an elongate semicircle; juga little longer than tylus; surface shining, usually with weak, radiating rugae; rostrum extended between middle coxae. Pronotum with anterior margin doubly emarginated; lateral margin straight to weakly convex on basal two-thirds, with submarginal row of four or five setigerous punctures; transverse impression distinct across full width, weaker at middle; anterior lobe impunctate except for occasional small punctures laterally; posterior lobe with few scattered punctures on anterior half of middle area. Scutellum disc shining, with several widely scattered punctures. Clavus and corium polished; clavus with one row of punctures; corium obsoletely or not punctate except for punctures in one complete row and usually one partial row paralleling claval suture.

Old records. Antigua (Froeschner 1960)

***Scaptocoris divergens* Froeschner**

Diagnosis. The prolonged and strongly expanded tylus will separate this species from others in the genus. Yellow-brown, apices of fore tibiae and sometimes marginal spines of corbicles of hind tibiae fuscous or black.

Head. Juga weakly convex, shorter than tylus. Pronotum with posterior lobe impunctate. Scutellum impunctate. Hemelytra polished, obsoletely or not punctate. Corbicle of hind tibia with single, submedian row of tubercles on dorsal half.

Old records. Guatemala (Froeschner 1960)

***Scaptocoris talpa* Champion**

Diagnosis. The single row of transverse tubercles situated close to the outer edge of the corbicular area of hind tibia, and the large size (over 8.5 mm) separate this species.

Light brown, apices of fore tibiae and marginal and discal tubercles of corbicle of hind tibia fuscous to black.

Head. Wider than long; tylus subparallel-sided, subequal to length of juga. Pronotum with posterior lobe with distinct, fine punctures. Scutellum with few, scattered, fine punctures. Hemelytra shining, with small, distinct punctures.

Old records. Capetillo (Champion, 1900); Escuintla (Bianchi, 1935).

Tominotus hogenhoferi (Signoret)

Diagnosis. The broad band of the setigerous punctures along the sides of the pronotum plus the impunctate abdomen will identify this species.

Head. Juga rounded, forming a flattened semicircle, as long as tylus, latter with two subapical setigerous punctures giving rise to a row of stout pegs with numerous cilia scattered between and mesially; surface flattened, vertex and tylus smooth; rostrum reaching between middle coxae. Pronotum with anterior margin broadly and deeply emarginated; lateral margins entire, not emarginated, with a broad, submarginal line of many setigerous punctures; transverse impression at midlength, vague, marked by an irregular row of moderate punctures; anterior lobe polished, impunctate except for a few punctures laterally; posterior lobe polished, with a few scattered punctures. Scutellum surface smooth, with numerous well-separated punctures becoming fine apically; apex broadly rounded, wider than half of membrane suture. Corial areas well defined; surface polished and punctures scattered, fine on apical half, becoming coarser toward base and in two rows paralleling claval suture; costa with 14 or 15 setigerous punctures; membrane suture weakly bisinuated, rounded at lateral angle. Legs moderately long, not unusually modified.

Old records. Escuintla (Froeschner 1960)

Tominotus unisetosus Froeschner

Diagnosis. Among its congeners with the uninterrupted mesopleural evaporatorium, this species may be recognized by the single setigerous puncture on the costa.

Head. Juga semicircular, converging but not contiguous beyond apex of tylus; latter with two setigerous punctures subapically; juga with submarginal punctures giving rise to peg-like setae anteriorly and long slender setae basally; surface faintly to distinctly rugose radially, with numerous rounded, wide, shallow punctures; rostrum reaching between middle coxae. Pronotum with anterior margin strongly emarginate; side margins convex, not sinuate nor constricted at ends of transverse groove; lateral submarginal row with six or seven setigerous punctures; transverse impression weak, marked by a row of close-set, prominent punctures; anterior lobe impunctate discally, with an irregular double row of prominent punctures and numerous minute ones; posterior lobe polished, with few scattered, moderate punctures and more numerous minute ones on median disc and laterally. Scutellum disc with numerous distinct, irregularly placed punctures except on basal fifth and on apex. Corial areas well defined, polished; mesocorium with numerous punctures, these obsolete on middle third, coarser and closer set in two rows paralleling claval suture; exocorial area distinctly, closely and rather irregularly punctured throughout; clavus with a disrupted, submedian row of distinct, close-set punctures. Sternites shining, impunctate, irregularly sculptured with obsolete to distinct longitudinal rugae.

Old records. 70 miles east of Guatemala City; Panzos (Froeschner 1960)

Key to the burrower bugs (Cydnidae) of Guatemala

1. Clavus meeting beyond scutellum and forming a commissure almost as long as scutellum; anterior third of peritreme modify apically into a ring, lobe or band, and is wider than base of peritreme and more or less shiny; specimens less than 4.5 mm long (Amnestinae) 2
- 1'. Clavus not meeting beyond scutellum, and not forming a commissure; anterior third of peritreme, without a differentiated structure, sometimes with a subapical projection in form of a hook or wing; specimens more than 5 mm long 11
2. Jugum with five marginal pegs 3
- 2'. Jugum with four marginal pegs 10
3. Tylus longer than jugum, usually as long as wide 4
- 3'. Tylus equal or not longer than jugum 5
4. Prosternal carinae longer than high, ventral margin feebly convex *Amnestus. uhleri* Distant

- 4'. Prosternal carinae longer than high, ventral margin straight.....*Amnestus zacki* **sp. nov.**
5. Pronotal umbones distinctly, closely punctuate over full surface..... *Amnestus championi* Distant
- 5'. Pronotal umbones polished, mostly impunctate 6
6. Prosternal carinae (in profile) lobulate, vertical anteriorly..... *Amnestus subferrugineus* (Westwood)
- 6'. Prosternal carinae rounded or longer than high, not vertical anteriorly 7
7. Anterior lobe of pronotum with disperse punctures, fore femur with internal margin serrated, with a simple spine ...
..... *Amnestus stali* Distant
- 7'. Anterior lobe of pronotum with dense punctures, fore femur not as above 8
8. General coloration black; pronotum, scutellum, and corium thickly and coarsely punctuate
..... *Amnestus signoreti* Distant
- 8'. General coloration pale brown; pronotum, scutellum, and corium with punctures not thickly and coarsely 9
9. Fore tibia flattened with four robust spines on external margin, and one on its apex, ventrally with a small spine on middle area (Fig. 8); corium pale yellow.....*Amnestus henryi* **sp. nov.**
- 9'. Fore tibia slightly flattened with four spines on external margin, and one on its apex, ventrally without a spine; corium creamy white.....*Amnestus bergrothi* Distant
10. Subapical ventral spine of posterior femur in males, more than one-third length of tibia. Last sternite in females with medially flattened, glabrous area delimiting laterally by partial or complete, obtuse, longitudinal carinae
..... *Amnestus pusillus* Uhler
- 10'. Subapical ventral spine of posterior femur in males, shorter than vertical height of femur. Males fore tibia without spines or angulation on ventral margin. Last sternite in females without medially flattened, glabrous area
..... *Amnestus pusio* (Stål)
11. Anterior tibia strongly cultrate, much produced beyond tarsal insertion so that tarsus appears to arise at middle of tibial length (Cephaloetinae) 12
- 11'. Anterior tibia not cultrate, tarsus arising at or very near apex of tibia (Cydniinae) 13
12. Tylus distinctly surpassing apices of juga and broadly expanded anterior to them; posterior lobe of pronotum impunctate..... *Scaptocoris divergens* Froeschner
- 12'. Tylus not surpassing apices of juga; posterior lobe of pronotum with distinct, fine punctures
..... *Scaptocoris talpa* Champion
13. Anterior part of osteolar peritreme modified apically into a short process, which is wider than basal part of peritreme and more or less polished; osteolar opening usually visible ventrally at base of terminal process
..... *Ectinopus muticus* Froeschner
- 13'. Anterior part of osteolar peritreme without enlarged, differentiated apical structure; osteolar opening posteriorly on peritreme, not visible ventrally 14
14. Pronotum, anteriorly with a deep line, well defined and running transversely through anterior margin (this line usually without punctures) (*Pangaeus*) 15
- 14'. Pronotum anteriorly without a deep line, although usually with a row of punctures in the same area 20
15. Mesopleuran evaporatorium extended along posterior margin of sclerite into posterolateral angle 16
- 15'. Mesopleuran evaporatorium limited, separated from posterolateral angle and posterior margin by a shiny area . 19
16. Posterior tibia with distinct, subbasal angulation, with one to three spines on posteroventral margin before apex . 17
- 16'. Posterior tibia ventrally without subbasal angulation, posteroventral margin with four or more spines before apex ..
..... 18
17. Apex of genital capsule with a broad, deep, U-shaped emargination *Pangaeus aethiops* (Fabricius)
- 17'. Apex of genital capsule not emarginated, sometimes gently sinuate *Pangaeus docilis* (Walker)
18. Costa with two setigerous punctures*Pangaeus moestus* (Stål)
- 18'. Costa with one setigerous puncture*Pangaeus piceatus* Stål
19. Jugum with a setigerous puncture immediately anterior to eye; dorsum of head strongly convex, usually with transverse rugae well defined *Pangaeus rugiceps* Horvath
- 19'. Jugum with three to five setigerous submarginal punctures; head surface neither strongly convex or with rugae
..... *Pangaeus bilineatus* (Say)
20. Posterior tibia conspicuously compressed, anterior and posterior faces glabrous, not spined; spines of posteroventral margin conspicuously longer, thinner, and more tapering than those on dorsal margin (*Cyrtomenus*) 21
- 20'. Posterior tibia not or only weakly compressed, dorsal and ventral spines about equally developed 25
21. Mesopleural evaporatorium posteriorly interrupted by shining, submarginal band 22
- 21'. Mesopleural evaporatorium entire 24
22. Apices of juga projecting as blunt to acute triangle.....*Cyrtomenus emarginatus* Stål
- 22'. Apices of juga rounded, not projecting triangularly 23
23. Interocular width distinctly greater than length of head; costa not continuing or paralleling outline of lateral margins of pronotum, distinctly more flaring posteriorly..... *Cyrtomenus grossus* Dallas
- 23'. Interocular width less than length of head; costa continuing or paralleling outline of lateral margins of pronotum

- *Cyrtomenus teter* (Spinola)
24. Sternites IV to VI with postmedian, partial, transverse row of prominent setigerous punctures on lateral third; posterior tibia strongly compressed, its greatest diameter nearly or quite equal to that of fore tibia.....
..... *Cyrtomenus crassus* Walker
- 24'. Sternites IV to VI without a transverse row of prominent setigerous punctures on lateral third; posterior tibia weakly to moderately compressed, greatest diameter not more than two thirds that of fore tibia.....
..... *Cyrtomenus bergi* Froeschner
25. Head with a complete row (extending from eye to apex of jugum) of coarse, more or less contiguous punctures giving rise to numerous long hairs and usually also to a row of pegs (*Tominotus*) 26
- 25'. Head without a complete row (absent or extending not more than three-fourths of way to apical angle of jugum) of coarse setigerous punctures; pegs never present (*Dallasiellus*) 27
26. Mesopleural evaporatorium interrupted posteriorly by a transverse, marginal polished band; a broad band of setigerous punctures along the sides of the pronotum *Tominotus hogenhoferi* (Signoret)
- 26'. Mesopleural evaporatorium not interrupted posteriorly by polished band; with a row of six or seven setigerous punctures on lateral submargin of pronotum *Tominotus unisetosus* Froeschner
27. Margin of jugum with a dorsal, marginal carina that runs from apex to eyes *Dallasiellus lugubris* (Stål)
- 27'. Margin of jugum wide, without carina or only a partial submarginal carina that do not reach eyes
..... *Dallasiellus reflexus* Froeschner

Acknowledgments

We want to thank Dr. Richard S. Zack from the Washington State University for collecting and lending us the material and Jose Monzon Sierra from Universidad del Valle de Guatemala for his help in collecting the material. We also thank Dr. Thomas Henry from the Smithsonian Institution for lending the specimens of one new species of *Amnestus* and for his kind attention during several stays in Washington. We want to thank Mick Webb and Luis Hernandez from the Natural History Museum in London for their attention in several visits to the collections and for providing photographs of some of the types of *Amnestus*. We want to thank also Jerzy Lis from Opole University, Poland for comments on the manuscript.

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