

**Two new species of *Anasa*
(Hemiptera: Heteroptera: Coreidae: Coreini)
from Mexico and Central America^{*)}**

Harry BRAILOVSKY & Ernesto BARRERA

Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México, Apdo Postal No. 70153, México 04510 D. F., México; e-mail: coreidae@servidor.unam.mx (HB)

Abstract. Two new species of *Anasa* Amyot & Serville, 1843 (Coreidae), *Anasa paveli* sp. nov. from Mexico, and *A. stysi* sp. nov. from Guatemala, Mexico, and Nicaragua, are described. Drawings of the pronotum, hemelytra, male genital capsule, and paramere are provided.

Key words. Hemiptera, Heteroptera, Coreidae, Coreini, *Anasa*, new species, Guatemala, Mexico, Nicaragua.

Introduction

BRAILOVSKY (1985) reviewed the genus *Anasa* Amyot & Serville, 1843, and recognized 63 species. Later, BRAILOVSKY (1990, 2001) and BRAILOVSKY & BARRERA (2000) added five new species from Dominican Republic, Ecuador, El Salvador, French Guiana, and Mexico. A considerable quantity of additional Coreini material has become available, and two new species have been identified. The genus now contains 70 species.

The genus is characterized by having the hind femur usually armed with one or more subdistal spines, the humeral angles not acutely spined, the tylus not compressed and raised above juga, the rostrum reaching or extending beyond the middle third of mesosternum, and the head below the antenniferous tubercle lacking a raised shelflike plate.

Material and methods

The following abbreviations are used for the institutions cited in this paper:

- MELN Muséum Entomológico, León, Nicaragua;
TAMU Texas A & M University, College Station, USA;
UNAM Colección Entomológica, Instituto de Biología, Universidad Nacional Autónoma de México, México;
USNM National Museum of Natural History, Smithsonian Institution, Washington D.C., USA.

^{*)} We are pleased to dedicate this paper to Dr. Pavel Štys in honor of his seminal contributions to our knowledge of World Hemiptera-Heteroptera.

Taxonomy

Features in common of the species described. Head wider than long, pentagonal, dorsally flat, non-declivent; tylus unarmed, extending anteriorly to juga; juga unarmed, thickened, slightly raised above tylus in lateral view; preocellar pit deep; postocular tubercle protuberant; vertex with deep longitudinal furrow; buccula rounded, without teeth, short, elevated, not projecting beyond antenniferous tubercles. Thorax. Pronotum wider than long, trapeziform, declivent, bilobed; collar wide; anterior lobe shorter than posterior lobe; callar region flat. Anterior lobe of metathoracic peritreme reniform, posterior lobe subacute, and shorter. Scutellum wider than long, triangular, flat, apex subacute. Hemelytra. Macropterous, reaching or extending beyond the apex of last abdominal segment; costal margin slightly emarginated. Abdomen. Connexivum raised above terga.

Integument. Surface usually dull with short decumbent to suberect setigerous hairs; posterior lobe of pronotal disk, scutellum, clavus, corium, pro-, meso-, and metapleura densely punctate; head, anterior lobe of pronotal disk, pro-, meso-, and metasternum, and abdominal sterna scattered punctate; connexivum smooth; tylus, juga, antenniferous tubercles, inner face of eyes, postocular tubercles, buccula, head ventrally, and abdominal sterna sparsely tuberculate.

Anasa paveli sp. nov.

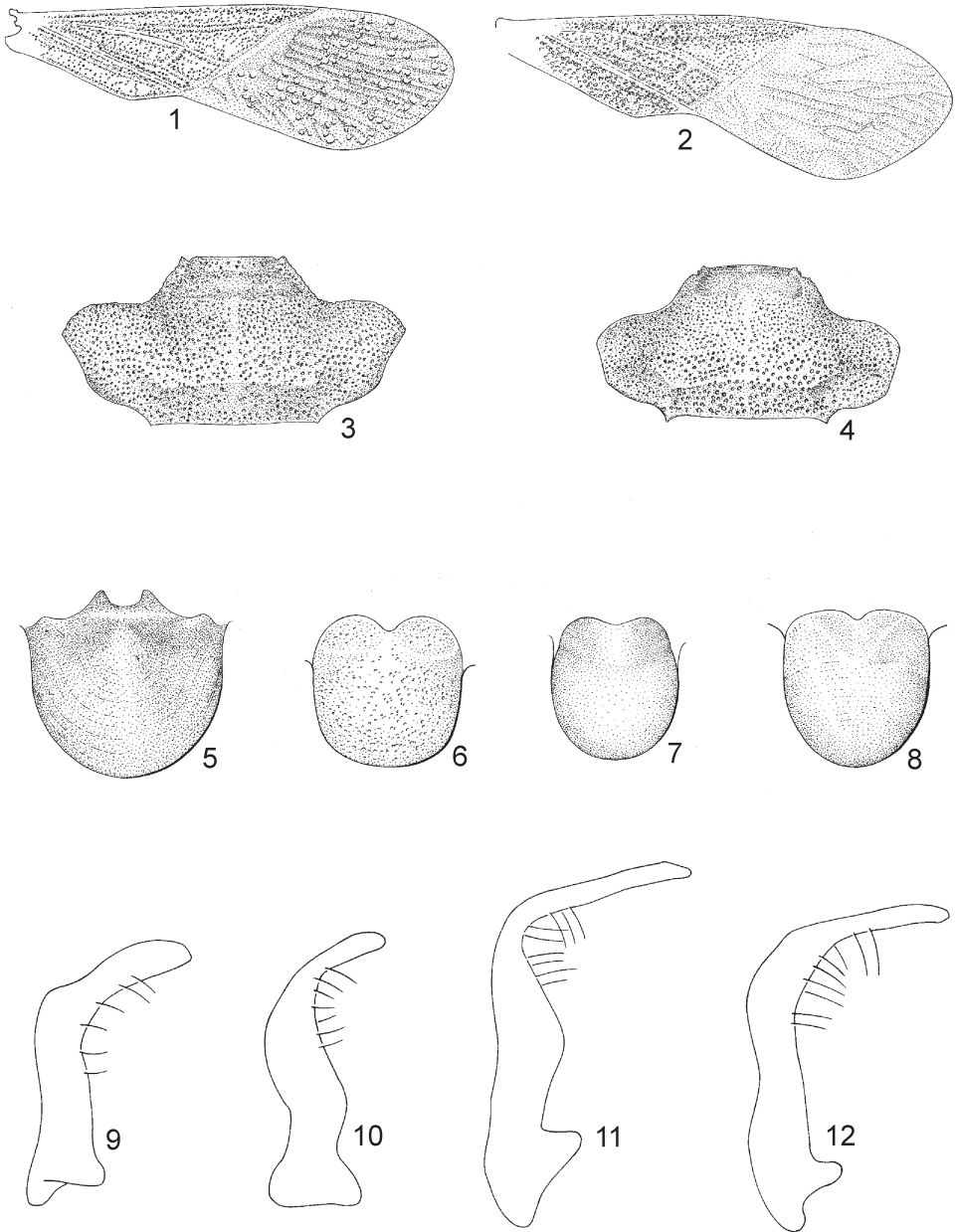
(Figs. 3, 5, 11-12)

Type locality. Mexico, Oaxaca, km 110 Tuxtepec-Oaxaca.

Type material. HOLOTYPE: ♂, 'Mexico: Oaxaca, km 110 Tuxtepec-Oaxaca, 28.v.1990, E. Barrera and A. Cadena' (UNAM). PARATYPES: **MEXICO:** 1 ♂ 1 ♀, same data as for holotype (UNAM); 3 ♂♂ 4 ♀♀, Oaxaca, km 83.8 Tuxtepec-Oaxaca, 26.v.1990, E. Barrera and A. Cadena (UNAM); 1 ♂ 2 ♀♀, Oaxaca, La Esperanza, 1.vii.1995, J. Blackaller, A. Perez, and A. Soria (UNAM); 3 ♂♂ 4 ♀♀, Oaxaca, km 78.5 Tuxtepec-Oaxaca, 24.ix.1989, A. Cadena (UNAM).

Description. Male (holotype). Dorsal coloration. Ground color dark orange with tubercles and punctures black to dark reddish brown; antennal segment I black, II and III dorsally black, ventrally shiny reddish orange except basal and apical joint black, and IV shiny reddish orange with basal third black to reddish black; preocellar tubercle, outer third of humeral angles, and apex of scutellum black; hemelytral membrane dark brown; connexivum black with anterior third yellowish orange; dorsal abdominal segments II to VI shiny reddish orange, and VII black. Ventral coloration. Shiny reddish orange with some punctures reddish brown to black; rostral segments shiny chestnut (apex of rostral segment IV black); anterior and posterior lobe of metathoracic peritreme creamy yellow; pro-, meso-, and metasternum yellowish orange with black punctures; coxae yellowish orange with one or two black discoidal spots; trochanter yellowish orange; femora and tibia reddish orange with black discoidal spots; tarsi reddish orange; abdominal sterna III to VII laterally black with anterior third yellow; posterior margin of abdominal sterna VI and VII with dark red transversal mark near midline; genital capsule shiny reddish orange.

Structure. Head. Antenniferous tubercle unarmed; rostrum reaching posterior border of mesosternum. Pronotum. Anterolateral margins gently nodulose to smooth; posterolateral



Figs. 1-12. *Anasa* spp. 1-2 – hemelytra: 1 – *A. litigiosa* Stål, 1862; 2 – *A. stysi* sp. nov. 3-4 – pronotum: 3 – *A. paveli* sp. nov.; 4 – *A. stysi* sp. nov. 5-8 – male genital capsule: 5 – *A. paveli* sp. nov.; 6 – *A. stysi* sp. nov.; 7 – *A. delibata* Distant, 1892; 8 – *A. litigiosa*. 9-12 – paramere: 9-10 – *A. stysi* sp. nov.; 11-12 – *A. paveli* sp. nov.

margins sinuate, outer third weakly nodulose, inner third smooth; posterior border almost straight; triangular process absent; frontal angles with broad conical expansion directed forward; humeral angles exposed, produced laterally, directed upward, with upper border rounded, and smooth (Fig. 3). Legs. Fore and middle femora unarmed; hind femur with two short subapical spines, like tubercles. Genital capsule. Posteroventral edge with mesial semi-circular and symmetrical notch; inner angles obtusely produced, and lateral angles sinuate, and shallowly convex (Fig. 5). Paramere. Figs. 11-12.

Measurements (mm). Body length 12.85. Head length including the apex of tylus 1.35; width across eyes 1.77; interocular distance 0.95, interocellar distance 0.42; preocular distance 0.80; length of antennal segments: I, 1.95; II, 2.35; III, 2.25; IV, 1.90. Pronotum length 2.70; maximum width across humeral angles 5.30. Scutellar length 1.50; width 1.60.

Female. Habitus and color similar to male holotype. Connexival segments VIII and IX black with anterior and posterior border reddish orange; dorsal abdominal segments VIII and IX black; genital plates shiny reddish orange, scattered with black punctures.

Measurements (mm). Body length 15.92. Head length including the apex of tylus 1.65; width across eyes 1.98; interocular distance 0.97, interocellar distance 0.55; preocular distance 1.12; length of antennal segments: I, 2.50; II, 2.70; III, 2.65; IV, 2.20. Pronotum length 3.60; maximum width across humeral angles 6.15. Scutellar length 2.15; width 2.30.

Variation. i) Fore and middle femora with two short subapical tubercles. ii) Dorsal abdominal segments II to VI yellowish orange, and VII black.

Differential diagnosis. The new species has been placed in couplet 69-69' of the BRAILOVSKY (1985) key, and is related to *A. delibata* Distant, 1892, by having the antenniferous tubercles unarmed; head dorsally without two black longitudinal stripes running lateral to midline; antennal segment I without black discoidal spots, II and III never entirely reddish orange, and IV yellow with basal third black to dark brown; femora unicolorous with black discoidal spots; connexivum black with anterior third yellow or yellowish orange; anterior and posterior lobe of metathoracic peritreme yellow to creamy yellow; and pro- and mesopleura without black discoidal spot.

In *A. delibata* the hemelytral membrane is dark yellow, irregularly scattered with pale brown spots; dorsal abdominal segment VI almost black; abdominal sterna III to VI yellow with one small black discoidal spot lateral to midline; scutellum basally with three black discoidal spots; coxae yellow without black discoidal spots; and posteroventral edge of male genital capsule simple, with small U-shaped concavity at middle third, and lateral angles rounded (Fig. 7). *Anasa paveli* sp. nov., has the hemelytral membrane entirely dark brown, the dorsal abdominal segment VI shiny reddish orange, the abdominal sterna III to VI shiny reddish orange without black discoidal spots lateral to midline, the scutellum basally without three black discoidal spots, the coxae yellowish orange with one or two black discoidal spots, and the posteroventral edge of male genital capsule with mesial notch semi-circular and symmetrical, the inner angles obtusely produced, and the lateral angles sinuate and shallowly convex (Fig. 5).

Etymology. Named in honor of the distinguished Czech entomologist Dr. Pavel Štys.

Distribution. Only known from Mexico (Oaxaca).

Anasa stysi sp. nov.

(Figs. 2, 4, 6, 9-10)

Type locality. Mexico, Chiapas, Las Margaritas.**Type material.** HOLOTYPE: ♂, 'Mexico: Chiapas, Las Margaritas, 18.vi.1965, Burk, Meyer and Schaffner' (UNAM). PARATYPES: **MEXICO:** 1 ♀, Chiapas, Sumidero Cyn., near Tuxtla Gutierrez, 1219 m a.s.l., 19.vi.2001, D. B. Thomas (UNAM); 1 ♀, Chiapas, Opio. Tenejapan, Tenejapan, 16.vii.1996, C. Ramirez and S. Gomez (UNAM). **GUATEMALA:** 1 ♀, Yepocapa, i.1949, H. T. Dalmat (USNM). **NICARAGUA:** 4 ♂♂ 3 ♀♀, Esteli, Miraflores UTM, 16 P, 05°80'80"N-146°64'42"W, 1434 m a.s.l., 26.-27.x.2001, J. M. Maes and B. Tellez (MELN, UNAM).**Description. Male (holotype).** Dorsal coloration. Ground color dark yellow, tubercles black and punctures dark reddish brown to dark orange; antennal segment I dark reddish brown suffused with dark orange, II and III with dorsal surface dark reddish brown to black and ventral surface dark reddish orange suffused with reddish brown to black spots, and IV dark orange with basal joint dark reddish brown; ocellar tubercle black; scutellum yellow, punctures, three quadrate spots at basal third and apex black; hemelytral membrane pale brown, veins slightly darker, and basal third pale yellow with white transversal vein (Fig. 2); connexivum with anterior third yellow and posteriorly black with yellow spot near middle third; dorsal abdominal segments black. Ventral coloration. Ground color dark yellow with punctures black; rostral segments dark orange (apex of IV black); legs dark yellow, tubercles dark reddish brown, and densely covered with black discoidal spots; anterior and posterior lobe of metathoracic peritreme creamy yellow; abdominal sterna dark yellow, densely covered with black large spots, and with a clearly row of black discoidal spots lateral to middle line; lateral margin of abdominal sterna dark yellow, punctures black, and anterior third pale yellow; genital capsule dark yellow with black punctures.**Structure.** Head. Antenniferous tubercle unarmed; rostrum reaching posterior border of mesosternum. Pronotum. Anterolateral margins gently nodulose to smooth; posterolateral margins sinuate, outer third slightly convex and gently nodulose, and inner third concave and smooth; posterior border almost straight; triangular expansion elongate and acute; frontal angles with broad conical expansion, directed forward; humeral angles slightly exposed (Fig. 4). Legs. Femora with two short subapical spines. Genital capsule. Posteroventral edge with lateral angles exposed, shallowly convex, and conspicuously excavated in the middle third (Fig. 6). Paramere. Figs. 9-10.**Measurements (mm).** Body length 12.30. Head length including the apex of tylus 1.25; width across eyes 1.55; interocular distance 0.85, interocellar distance 0.44; preocular distance 0.72; length of antennal segments: I, 1.85; II, 2.05; III, 2.14; IV, 2.00. Pronotum length 2.65; maximum width across humeral angles 4.60. Scutellar length 1.73; width 2.00.**Female.** Habitus and color similar to male holotype. Connexival segments VIII and IX black with anterior third yellow; dorsal abdominal segments VIII and IX black; genital plates dark yellow, suffused with pink marks and with tubercles and punctures black.**Measurements (mm).** Body length 13.84. Head length including the apex of tylus 1.45; width across eyes 1.65; interocular distance 0.92, interocellar distance 0.50; preocular distance

0.84; length of antennal segments: I, 1.90; II, 2.00; III, 2.10; IV, 2.05. Pronotum length 3.05; maximum width across humeral angles 5.00. Scutellar length 1.85; width 2.15.

Variation. i) Antennal segment IV shiny reddish orange with apical third shiny yellowish orange. ii) Hemelytral membrane whitish with veins darker.

Differential diagnosis. The new species has been placed in couplet 66-66' of the BRAILOVSKY (1985) key, and is related to *A. litigiosa* Stål, 1862, by having the apex of scutellum black, and abdominal sterna dark yellow, and densely suffused with black spots. In *A. costalis* Stål, 1870, the apex of scutellum is yellow, and the abdominal sterna pale yellowish orange, scattered with black spots.

Anasa litigiosa, recorded from Mexico, and Guatemala, has the dorsal abdominal segments IV and V yellow, the hemelytral membrane brown with white discoidal spots (Fig. 1), the femora unarmed, the triangular expansion of pronotum absent, and the posteroventral edge of male genital capsule weakly excavated at middle third (Fig. 8). In *A. stysi* sp. nov., here recorded from southern Mexico, Guatemala, and Nicaragua, the dorsal abdominal segments IV and V are black, the hemelytral membrane pale brown to whitish without white discoidal spots, the femora armed with two subapical spines or tubercles, the triangular expansion elongate and acute, and the posterolateral border of male genital capsule with lateral angles exposed, shallowly convex, and conspicuously excavated at middle third (Fig. 6).

Anasa maculipes Stål, 1862, recorded from United States, Mexico, Guatemala, Honduras, and Costa Rica, also resembles *A. stysi* sp. nov. In *A. maculipes* dorsal abdominal segments III to VI are yellow, the hemelytral membrane dark brown, and antennal segments I to III pale reddish orange. In the new species the dorsal abdominal segments III to VI are black, the hemelytral membrane pale brown to whitish, and antennal segments I to III dark reddish brown to black and suffused with dark orange marks.

Etymology. Named in honor of the distinguished Czech entomologist Dr. Pavel Štys.

Distribution. Widespread in Mexico (Chiapas), Guatemala, and Nicaragua.

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