

**New genera and new species of Acanthocerini (Hemiptera:
Heteroptera: Coreidae) from French Guyana**

HARRY BRAILOVSKY

*Departamento de Zoología, Instituto de Biología, UNAM, Apdo. Postal 70153, México, D. F., México;
e-mail: coreidae@ib.unam.mx*

BRAILOVSKY H. 2015: New genera and new species of Acanthocerini (Hemiptera: Heteroptera: Coreidae) from French Guyana. *Acta Musei Moraviae, Scientiae biologicae* (Brno) **100(1): 5–15**. – *Brulecoris diaphorus* gen. et sp.nov., *Dalensocoris stictus* gen. et sp.nov., and *Lacrimascellus bellatulus* gen. et sp.nov. (Coreidae: Coreinae: Acanthocerini) from French Guyana are described, and their male genital capsules are illustrated in caudal view. The relationships of these genera to others of the tribe is discussed. All known genera of Acanthocerini known from French Guyana (including *Acanthocerus* Palisot 1818, *Golema* Amyot et Serville, 1843, *Sagotylus* Mayr, 1865, and *Schaeferocoris* O’Shea, 2000) are photographed and a key to identify the genera and species is included.

Keywords. Hemiptera, Heteroptera, Coreidae, Acanthocerini, new genera, new species French Guyana, Neotropical Region

Introduction

The tribe Acanthocerini Bergroth, 1913 includes 17 genera and 50 species widely distributed in the Western Hemisphere from the northern United States, Greater and Lesser Antilles and Central America, to South America, including Chile and Argentina. The tribe is characterized by having all the tibiae sulcate, the hind tibiae unarmed at apex, tylus barely projecting beyond juga, the hind femur spinose or tuberculate, strongly incassate in males, antenniferous tubercles occupying most of the anterior head, and the metathoracic scent gland peritreme with a single fused auricle (O’Shea 1980; BRAILOVSKY & BARRERA 1982; PACKAUSKAS 1994, 2010). Only two genera and three species of Acanthocerini are recorded for French Guyana: *Golema histrio* (Burmeister, 1835), *Zoreva armator* (Fabricius, 1803) and *Zoreva dentipes* (Fabricius, 1803) (Fig. 11) (O’Shea 1980, BRAILOVSKY & BARRERA 1982, PACKAUSKAS 2010).

In the present paper, three new genera and three new species are described and the number of genera known from the country thus increases to five, and the total number of species to six. A key to all known genera and species from French Guyana is provided.

Material and methods

The following abbreviations are used for the institutions cited here:

MNHN Museum National d’Histoire Naturelle, Paris, France
UNAM Colección Entomológica, Instituto de Biología,
Universidad Nacional Autónoma de México

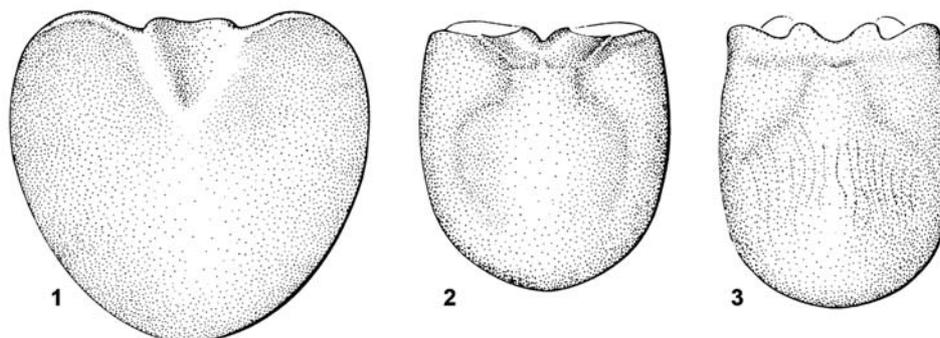
T a x o n o m y

Key to the known genera and species of Acanthocerini of French Guyana

- 1 Antenniferous tubercles not armed laterally with a spine. 2.
- Antenniferous tubercles armed laterally with a spine. 3.
- 2 Antennal segment I and II subequal; propleura with one hardened, discoidal, creamy-yellow protuberance; humeral angles with short apical projection. *Lacrimascellus bellatulus* **gen. et sp.nov.** (Fig. 6)
- Antennal segment II longer than I; propleura lacking hardened, discoidal, creamy-yellow protuberance; humeral angles conspicuously exposed, directed outwards. *Dalensocoris stictus* **gen. et sp.nov.** (Fig. 5)
- 3 Antennal segment III dilated ... *Golema histrio* (**Burmeister, 1835**) (Fig. 8)
- Antennal segment III cylindrical. 4.
- 4 Triangular process of pronotum absent; male hind femur ventrally with long, slender spine near middle third; armed dorsally near basal joint with a stout spine; hind tibiae ventrally armed with one row of stout spines. 5.
- Triangular process of pronotum elongate, stout, reaching anterior margin of scutellum; male hind femur ventrally lacking a long spine, and dorsally near the basal joint unarmed; hind tibiae ventrally unarmed.
..... *Brulecoris diaphorus* **gen. et sp.nov.** (Fig. 4)
- 5 Pronotal disk with wide, pale yellowish transverse fascia; pro-, meso-, and metathorax not entirely yellow.
..... *Zoreva dentipes* (**Fabricius, 1803**) (Fig. 11)
- Pronotal disk lacks a narrow or wide yellowish transverse fascia; pro-, meso-, and metathorax entirely yellow.
..... *Zoreva armator* (**Fabricius, 1803**)

Features common to the genera described

Head shorter than length of pronotum, moderately bending, dorsally flat, surpassing the antenniferous tubercles, smooth, without punctures; tylus unarmed, enlarged, almost globose, extending anteriorly to, and laterally higher than, juga; juga unarmed; mandibular plate unarmed. Pronotum wider than long, trapeziform, not very steeply declivent, and densely punctate with punctations small; collar wide; anterior border smooth, almost straight. Hemelytra macropterous, extending beyond apex of last abdominal segment; costal margin emarginated, almost parallel-sided, smooth; apical margin sinuous; apical angle narrow, extending beyond middle third of hemelytral membrane; clavus and corium densely punctate, punctation small, dense, occasionally fused. Connexivum raised above tergum, upper margin smooth.



Figs 1–3. Male genital capsule in caudal view. 1 – *Brulecoris diaphorus* sp.nov. 2 – *Dalensocoris stictus* sp.nov. 3 – *Lacrimascellus bellatulus* sp.nov.

***Brulecoris* gen.nov.**

Type species. *Brulecoris diaphorus* sp.nov., here designated.

Description. *Male.* Body medium-sized, elongate, very slightly flattened.

Head wider than long, nearly pentagonal, dorsal pubescence of short, scattered, black setae; antenniferous tubercles armed laterally with a stout spine, prominent, widely separated; antennal segment I slightly curved, thicker than segments II–IV; segments II and III cylindrical, IV fusiform; antennal segments I and II subequal, III the shortest, and IV shorter than I and II; ocelli close to eyes, on a hypothetical line drawn slightly behind posterior margin of eyes; ocellar tubercle protuberant, conspicuously raised; preocellar pit not visible; eyes protruding, in dorsal view hemispherical, in lateral view obovate, with upper margin located slightly below level of frons and vertex; postocular tubercle fairly exposed; vertex with deep longitudinal sulcus; bucculae short, quadrate, entire, punctate, not extending beyond antenniferous tubercles, meeting posteriorly and closed; rostrum reaching posterior border of mesosternum; rostral segment I stout, reaching posterior third of head.

Thorax. Pronotum. Frontal angles produced as a medium-sized conical lobe directed forwards; anterolateral borders obliquely straight, densely crenulate to nodulose; humeral angles thick at base, conspicuously exposed, directed outward and apically subacute; posterolateral borders sinuate, markedly nodulose; triangular process elongate, stout, reaching anterior margin of scutellum; posterior border almost smooth; calli barely raised, impunctate, with deep nodulose, submedial longitudinal furrow; prosternum with deep excavation; mesosternum with slight longitudinal mesial depression; metasternum not sulcate; metathoracic scent gland peritreme with a single fused auricle; scent gland peritreme wide open; evaporatorium poorly developed.

Scutellum triangular, longer than wide, flat, apically subacute; disk punctate.

Legs. Trochanters unarmed; fore-femur ventrally armed with two short subdistal spines; mid-femur armed ventrally with double row of medium-sized spines; hind femur incrassate on distal half, relatively slender proximally, and ventrally armed subdistally with double row of stout spines; femora dorsally and ventrally finely granulate; tibiae unarmed, sulcate.

Abdomen. Weakly dilated; posterior angle of connexival segments III–VII unarmed; abdominal spiracles circular, small, closer to upper margin of connexivum and remote from anterior margin.

Male genitalia. Genital capsule elongate; posteroventral edge with lateral angles straight, and middle third with shallow concavity turned in upon itself (Fig. 1).

Female. Unknown.

Etymology. Named after Stéphane Brule in recognition of his contributions to the heteropteroLOGY of French Guyana. The ending *-coris* designates a true bug; gender masculine.

Differential diagnosis. *Brulecoris* gen.nov. (Fig. 4), appears to be related to *Acanthocerus* Palisot de Beauvois, 1818 (Fig. 7), and *Golema* Amyot et Serville, 1843 (Fig. 8), in having the antenniferous tubercle armed laterally with a spine, body length greater than 8 mm and less than 20 mm, humeral angles sharply angulate, hind femur tuberculate or finely granulate both dorsally and ventrally, and pronotal disk punctate and not tuberculate.

In *Golema*, antennal segment III is dilated, the triangular process of pronotum absent, the hind femur conspicuously tuberculate dorsally, hind tibiae ventrally armed with one row of stout spines, the humeral angles produced slightly and laterally into a short spine, the calli markedly raised, the head subquadrate, the posterior margin of the metapleuron bearing a lobe in the male, and the body more robust. In *Brulecoris*, antennal segment III is cylindrical, the triangular process of the pronotum is elongate, stout, reaching the anterior margin of the scutellum, hind femur dorsally finely granulate, hind tibiae ventrally unarmed, humeral angles conspicuously exposed, directed outwards and apically subacute, calli barely raised, head pentagonal, posterior margin of metapleuron without a lobe in the male, and body medium-sized and elongate.

Acanthocerus is characterized by antennal segment III cylindrical, triangular process of pronotum with a short, acute spine or absent, hind femur dorsally tuberculate and ventrally lobulate near the basal joint or armed with two sharp elongate, lateral spines, hind tibiae ventrally armed with one row of short spines, humeral angles exposed as a short lateral spine, calli barely raised, head subquadrate to quadrate, posterior margin of metapleuron bearing a lobe in the male, and body medium-sized and robust.

***Brulecoris diaphorus* sp.nov.**

(Figs 1, 4)

Type material. Holotype: ♂, 'FRENCH GUYANA: Montagne des Chevaeux (automatic light trap), 04°43'0.12"N 52°25'0.12"W, 7.xii.2013, P. H. Dalens (UNAM).

Description of male (holotype). *Dorsal colour.* Head including ocellar tubercle yellow; ocelli and eyes pale reddish; antennal segment I yellow, II and III yellow with apical joint

dark orange, and IV dark reddish-brown; pronotal disk yellow, with dark brown punctures longitudinally aligned submedially as two dark, longitudinal bands; scutellum and clavus yellow and punctures dark brown; inner border of callar region black; corium yellow, with punctures dark reddish-brown to dark castaneous orange; endocorium with large, irregular, dark castaneous-brown maculae; hemielytral membrane dark brown; connexivum yellow; dorsal abdominal segments pale yellowish-orange.

Ventral colour. Ground colour yellow, with following areas dark to pale castaneous brown: apex of rostral segment IV, punctures of pro-, meso-, and metapleura, tiny granules on femora, posterior third of tibiae, and tarsi.

Measurements of male (mm). Total body length 15.03. Head length 1.48; width across eyes 2.04; interocular space 1.17; interocellar space 0.49; preocular distance 0.81; length of antennal segments: I – 3.16, II – 3.16, III – 1.93, IV – 2.10. Pronotum: length 3.03; width across humeral angles 5.20. Scutellum: length 1.67; width 1.36.

Female. Unknown.

Etymology. From the Greek *diaphoros*, meaning ‘different’, referring to the fact that this species differs markedly from others in its group; adjective.

Distribution. Known only from French Guyana.

***Dalensocoris* gen.nov.**

Type species. *Dalensocoris stictus* sp.nov., here designated.

Description. Body medium-sized, elongate, not flattened.

Head wider than long, subquadrate; antenniferous tubercles unarmed, prominent, widely separated; antennal segment I curved, thicker than segment II, which is cylindrical (antennal segments III and IV damaged); ocelli close to eyes, on a hypothetical line located slightly behind posterior margin of eyes; ocellar tubercle weakly raised; preocellar pit deep; eyes protruding, in dorsal view hemispherical, in lateral view elongated dorsoventrally, with upper margin located at almost the same level as frons and vertex; postocular tubercle forming a smooth contour with eye; vertex lacks a longitudinal sulcus; bucculae short, quadrate, entire, not extending beyond antenniferous tubercles, meeting posteriorly and closed; rostrum short, reaching posterior border of prosternum; rostral segment I stout, reaching middle third of head.

Thorax. Pronotum. Frontal angles not exposed; anterolateral borders obliquely straight, smooth, except anterior third crenulate to nodulose; humeral angles thick at base, conspicuously exposed, directed outwards and apically subacute; posterolateral borders sinuate, remarkably dentate; triangular process absent; posterior border smooth, slightly concave; calli barely raised, granulate, with deep submedial longitudinal furrow; prosternum with deep excavation; mesosternum and metasternum not sulcate; metathoracic peritreme with a single fused auricle; scent gland ostiole wide open; evaporatorium poorly developed.

Scutellum triangular, longer than wide, flat, apically subacute; disk transversally striate, scattered punctate.

Legs. Trochanters unarmed; fore-femur ventrally armed with two short subdistal spines; mid-femur armed ventrally with double row of medium-sized spines; hind femur incrassate, dorsally smooth and ventrally armed subdistally with double row of stout spines; tibiae sulcate; fore- and middle tibiae unarmed; inner face of hind tibiae with double row of tiny spines and one large, cone-shaped spine near middle third.

Abdomen. Weakly dilated; posterior angle of connexivial segments III and IV unarmed, V and VI armed with short, acute spine, and VII blunt; abdominal spiracles circular, small, closer to anterior margin, and remote from upper margin of connexivum.

Male genitalia. Posteroventral edge of genital capsule with lateral angles barely raised, and middle third with a concavity delimited laterally by two short lobes (Fig. 2).

Female. Unknown.

Etymology. Named after Pierre-Henry Dalens, in recognition of his contributions to the heteropterology of French Guyana. The ending *-coris* designates a true bug; gender masculine.

Differential diagnosis. Only two known genera of the tribe Acanthocerini featuring unarmed antenniferous tubercles have been described: *Sagotylus* Mayr, 1865 (Fig. 9), and *Schaeferocoris* O'Shea, 1980 (Fig. 10). *Dalensocoris* gen.nov., will be the third genus with that condition and is related to *Schaeferocoris* in having antennal segment I much longer than length of scutellum, frontal angles not exposed, lacking a conical projection, posterolateral margins of pronotum slightly nodulose, triangular process absent, fore- and mid-femur armed, and inner face of hind tibiae armed.

In *Schaeferocoris*, the total body length is over 21 mm, the callar region is prominent, the anterolateral margins of pronotum nodulose, the humeral angles slightly produced laterally into a blunt spine, antennal segment I longer than II and mesopleura and metapleura without yellowish-white, hardened protuberance. The total body length of *Dalensocoris* is less than 16 mm, the callar region barely raised, anterolateral margins smooth (except anterior third crenulate to nodulose), humeral angles conspicuously exposed, directed outward and apically subacute, antennal segment I shorter than II, and mesopleura and metapleura with large, yellowish-white, hardened protuberance.

***Dalensocoris stictus* sp.nov.**

(Figs 2, 5)

Type material. Holotype: ♂, 'FRENCH GUYANA, Montagne des Cheveaux, Poly Vie, 4-ii-2013, S. Brule (UNAM).

Description of male (holotype). *Dorsal colour.* Ground colour dull yellow, punctures dark reddish-brown to castaneous orange; ocelli shiny red; eyes reddish-brown; hemielytral membrane dark amber, translucent, with veins brown; connexivial segments III to VI dull yellow, VII dark brown; dorsal abdominal segments III to VI dull yellow, VII dark brown with posterior border dull yellow.

Ventral colour. Ground colour including rostral segments (apex of IV brown), metathoracic peritreme, legs, and genital capsule lustrous yellow to castaneous orange; punctures reddish-brown to castaneous orange; mesopleura and metapleura with large yellowish-white, hardened protuberance; metasternum dark castaneous orange.

Measurements of male (mm). Total body length 13.72. Head length 1.24; width across eyes 1.86; interocular space 0.86; interocellar space 0.32; preocular distance 0.80; length of antennal segments: I – 2.55, II – 2.72 (III and IV damaged). Pronotum: length 2.97; width across humeral angles 4.58. Scutellum: length 1.86; width 1.36.

Female. Unknown.

Etymology. Named for the yellowish-white, hardened spot on mesopleura and metapleura, from the Greek, *stictos*, meaning ‘spotted’; adjective.

Distribution. Known only from French Guyana.

Lacrimascellus gen.nov.

Type species. *Lacrimascellus bellatulus* sp.nov., here designated.

Description of male (holotype). Body medium-sized, elongate, not flattened.

Head wider than long, subquadrate; antenniferous tubercles unarmed, prominent, widely separated; antennal segment I curved, thicker than segments II to IV; segments II and III cylindrical and IV fusiform, conspicuously elongate; antennal segments I and II subequal, III the shortest, IV the longest; ocelli close to eyes, on a hypothetical line located slightly behind posterior margin of eyes; ocellar tubercle weakly raised; preocellar pit deep; eyes protruding, in dorsal view hemispherical, in lateral view obovate, with upper margin located almost at same level of frons and vertex; postocular tubercle forming a smooth contour with eye; vertex lacks a longitudinal sulcus; bucculae short, quadrate, entire, not extending beyond antenniferous tubercles, meeting posteriorly and closed; rostrum reaching anterior border of mesosternum; rostral segment I stout, short, reaching middle third of head.

Thorax. Pronotum. Frontal angles not exposed; anterolateral borders obliquely straight, smooth, except anterior third finely granulate; humeral angles thick at base, with short apical projection; posterolateral borders sinuate, dentate; triangular process absent; posterior border smooth, straight; calli not raised, granulate, with deep submedial longitudinal furrow; prosternum with deep excavation; mesosternum and metasternum not sulcate; metathoracic scent gland peritreme with a single fused auricle; scent gland ostiole wide open; evaporatorium poorly developed.

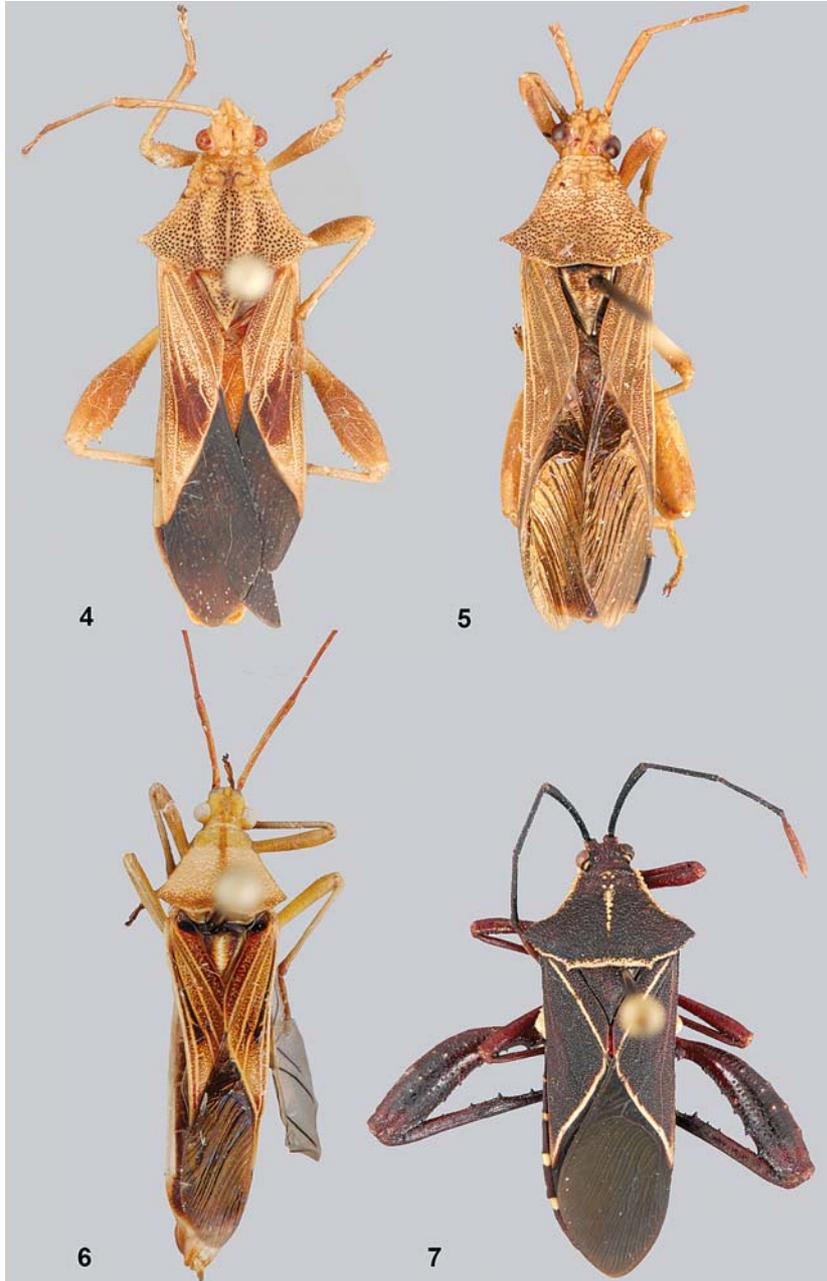
Scutellum triangular, longer than wide, flat, apically subacute; disk punctate.

Legs. Trochanters unarmed; fore- and mid-femora ventrally armed with two tiny subdistal spines; hind femur incrassate, dorsally smooth and ventrally armed subdistally with double row of tiny spines; tibiae sulcate; fore- and mid-tibiae unarmed; inner face of hind tibiae with double row of tiny spines.

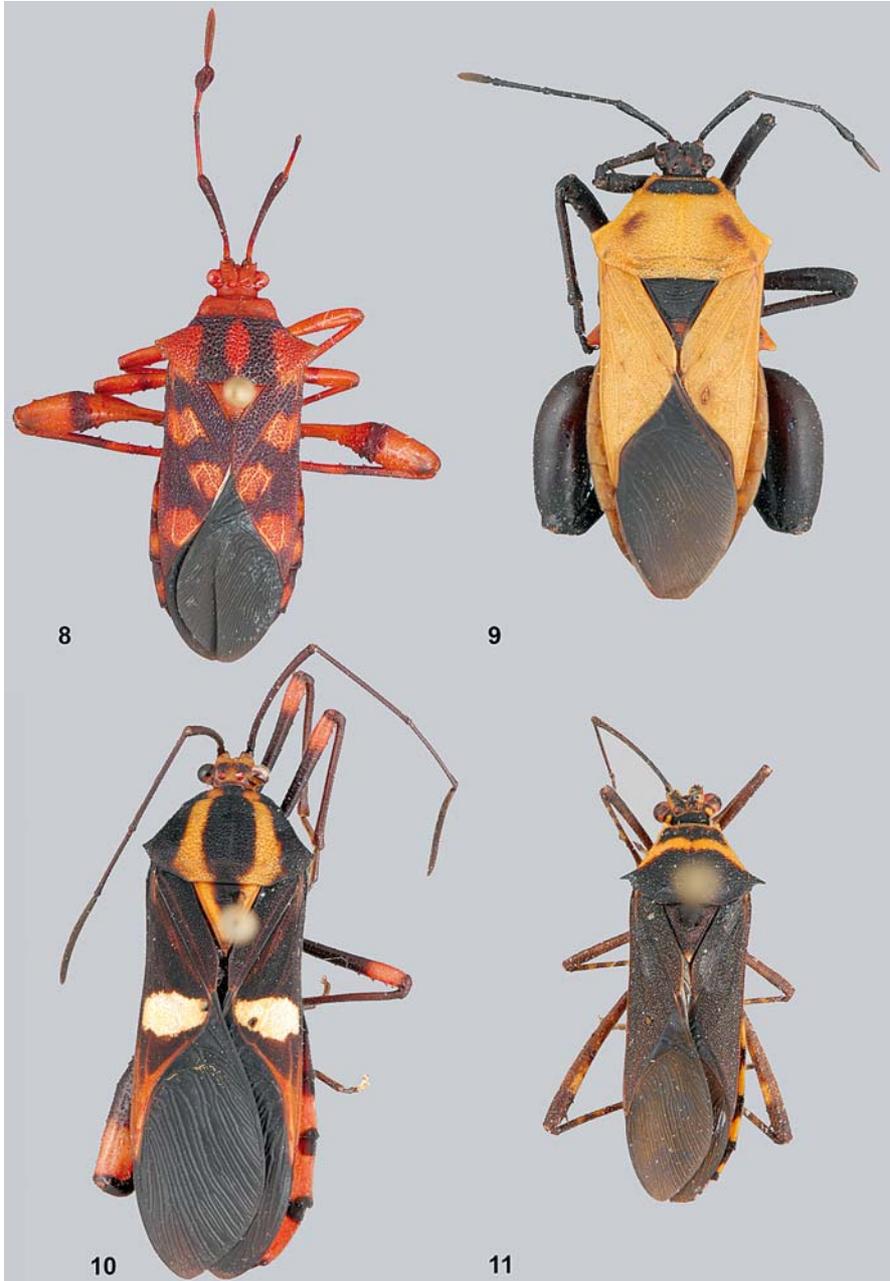
Abdomen. Not dilated; posterior angle of connexivial segments III unarmed, IV to VI armed with short, acute spine, and VII blunt; abdominal spiracles circular, small, closer to upper margin of connexivum than to anterior margin.

Male genitalia. Posteroventral edge of genital capsule with lateral angles entire, and middle third with deep quadrate concavity, delimited laterally by two short lobes (Fig. 3).

Female. Unknown.



Figs 4–7. Dorsal view. 4 – *Brulecoris diaphorus* sp.nov. 5 – *Dalensocoris stictus* sp.nov. 6 – *Lacrimascellus bellatullus* sp.nov. 7 – *Acanthocerus crucifer* Palisot de Beauvois, 1818.



Figs 8–11. Dorsal view. 8 – *Golema histrio* (Burmeister, 1835). 9 – *Sagotylus confluens* (Say, 1832). 10 – *Schaeferocoris ecuadorensis* O’Shea, 1980. 11 – *Zoreva dentipes* (Fabricius, 1803).

Differential diagnosis. *Lacrimascellus* gen.nov. (Fig. 6), with *Dalensocoris* (Fig. 2) here described, *Sagotylus* (Fig. 9), and *Schaeferocoris* (Fig. 10), are the only known genera of the tribe Acanthocerini with unarmed antenniferous tubercles. In *Schaeferocoris*, the anterolateral margins of the pronotum are entirely nodulose, the body longer than 21 mm, and mesopleura and metapleura, as in *Sagotylus*, lacking a yellowish-white, hardened protuberance, present in the other two genera, in which the body length is less than 16 mm, with the anterolateral margins smooth except the anterior third nodulose to granulate.

Lacrimascellus is distinguished by having the humeral angles with short apical projection, antennal segments I and II subequal, and the propleura with one discoidal creamy-yellow, hardened protuberance, absent in *Dalensocoris*, which has antennal segment II longer than I, and humeral angles conspicuously exposed, directed outward and apically subacute.

Etymology. From the Greek *lákryma*, meaning ‘tear’, ‘teardrop’, and *-coris* designating a true bug; gender masculine.

***Lacrimascellus bellatulus* sp.nov.**

(Figs 3, 6)

Type material. Holotype: ♂, ‘FRENCH GUYANA, Savane-Roche de la Haute, Kouisibo (automatic light trap), 2-ii-2013, leg. P. H. Dalens (MNHN). Paratype: 1 ♂, ‘FRENCH GUYANA, Bar 400 W Mt. Baroul (light trap), 2-III-2013, S. Brule (UNAM).

Description of male (holotype). *Dorsal colour.* Head lustrous yellow; ocellar tubercle pale red; eyes reddish-brown; antennal segments pale to dark castaneous orange; pronotum pale yellowish-orange with following areas pale to dark castaneous orange: anterolateral borders, and longitudinal stripe running along middle third of pronotal disk; posterior margin pale yellowish-white; scutellum pale yellow with lateral margins near to midline reddish-brown; clavus dark yellowish-orange with punctures dark reddish-brown, and clavicular vein pale yellow; corium pale yellowish-orange with punctures dark reddish-brown; exocorium with markedly dark-brown elongate spot; hemielytral membrane smoky, translucent; connexival segments III to VI yellow and VII dark brown with upper margin and anterior and posterior borders yellow; abdominal segments dark brown with a median yellow longitudinal stripe running from segment II to VI.

Ventral colour. Ground colour yellow; apex of rostral segment IV brown; pro-, meso-, and metapleura with one creamy-yellow, hardened callosity; tibiae yellow with apical third suffused with pale orange marks; tarsi lustrous castaneous orange; genital capsule lustrous castaneous orange and laterally yellow.

Measurements of male (mm). Total body length 13.55. Head length 1.24; width across eyes 1.92; interocular space 0.88; interocellar space 0.32; preocular distance 0.82; length of antennal segments: I – 3.16, II – 3.16, III – 2.10, IV – 4.34. Pronotum: length 2.79; width across humeral angles 3.78. Scutellum: length 1.55; width 1.30.

Female. Unknown.

Etymology. From the Latin *bellatulus*, meaning ‘pretty’, referring to the beautiful body of this new species; adjective.

Distribution. Known only from French Guyana.

Acknowledgments

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