

ON A NEW GENUS AND THREE NEW SPECIES
OF MYRMECOMORPHIC *MIRIDAE*
WITH TWO TAXONOMICAL NOTES
(HEMIPTERA)

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Mots-clés : *Hemiptera*, *Miridae*, *Gulacylapus*, *Bilirania*, *Mexicomiris*, genre nouveau, espèces nouvelles, Bornéo, Texas.

Résumé. — L'auteur décrit *Gulacylapus* n. gen., *G. carayoni*, n. sp. de Bornéo; *Bilirania borneensis*, n. sp., Bornéo, et *Mexicomiris texanus*, n. sp., Texas. Il y a inclus les illustrations des habitus, les genitalia mâles et des détails morphologiques. Des notes taxonomiques sur *Synthlipsis kirkaldy* et *Cyphopelta* Van Duzee sont aussi données.

Summary. — The author describes *Gulacylapus* n. gen., *G. carayoni*, n. sp., from Borneo; *Bilirania borneensis*, n. sp., Borneo and *Mexicomiris texanus*, n. sp., Texas. Illustrations of habitus, male genitalia and morphological details are included. Taxonomical notes for *Synthlipsis* Kirkaldy and *Cyphopelta* Van Duzee are also discussed.

Reviewing material from the reference collection the author found the new genus and new species mentioned above which are being described to be included in a paper to homage our friend Doctor Jacques Carayon, Laboratory of Entomology, National Museum of Natural History, Paris. Doctor Carayon is well know and respected all over the world for his researches on the biology and taxonomy of the Hemiptera. The author had the opportunity to become his friend and to enjoy his collaboration through many years. During the XIII International Congress of Entomology at Moscow (1968) a joint visit was made to Tashkent and Hiva, Uzbekistan. From his laboratory at Paris Doctor Carayon has given to the author excellent help and encouragement.

Illustrations on the text were prepared by Paulo Roberto Nascimento and Lilia Maria Gomide da Silva under the author's supervision.

***Gulacylapus* n. gen.**

Cylapinae, Cylapini. Body small, myrmicomorph, smooth, shining, pubescence fine, erect, spread.

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Head rounded on vertex (prominent), hind margin obsolete, neck very short, eyes distant from pronotum by a space equivalent to the width of one eye, not reaching gula inferiorly, clypeus vertical, jugum and lorium very small, gula with a characteristic foliaceous median carina (fig. 2), rostrum reaching beyond femur III, segment I in level with carina of gula; antenna cylindrical, inserted approximately at middle of internal margin of eye, segment I about as long as head wide, segment II about twice as long as I, segments III and IV shorter than first.

Pronotum strongly constricted at middle, calli fused and higher than posterior portion of disc, collar well visible; mesoscutum exposed, scutellum elongate, flat.

Hemelytra narrowed at middle portion, cuneus approximately twice as long as wide at base, embolium narrow, areola of membrane elongate (small areola obsolete), membrane translucent.

Legs long and slender, femur I thicker and larger than others, claws long, with a subapical tooth, parempodium bristle-like (fig. 3 and 4).

Type species of genus: ~~*Gulafurvus*~~ ^{*Gulacylapus*} *carayoni*, n. sp.

Differs from all other genera of Cylapini by the carina of the gula, very prominent and rounded vertex and by the constriction of the pronotum.

The generic name is after the characteristic carina of the gula.

***Gulacylapus carayoni*, n. sp. (fig. 1-8)**

Characterized by its color and by the morphology of the male genitalia.

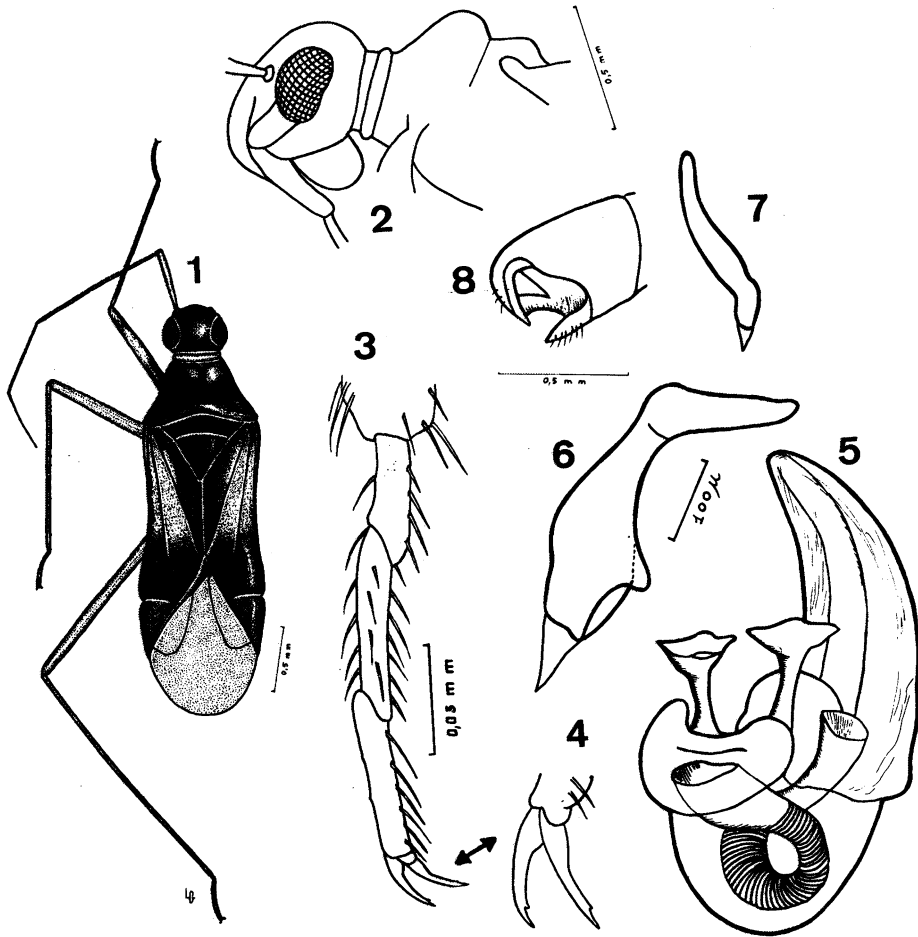


Fig. 1 to 8, *Gulacylapus carayoni* n. gen., n. sp.: Female, Holotype; 2, Head and pronotum seen from side; 3 and 4, Tarsus and claws; 5, Penis; 6, Left paramere; 7, Right paramere; 8, Pygophore seen from side.

Female: Length 3.0 mm, width 0.7 mm. **Head:** Length 0.4 mm, width 0.5 mm, vertex 0.26 mm. **Antenna:** Segment I, length 0.5 mm; II, 1.0 mm; III, 0.3 mm; IV, 0.4 mm. **Pronotum:** Length 0.5 mm, width at base 0.8 mm. **Cuneus:** Length 0.36 mm, width at base 0.16 mm (holotype).

General coloration brown with pale yellow areas; base of segment I of antenna, collar, transverse fascia at middle of hemelytra (including clavus) and membrane pale.

Underside of body dark brown, rostrum light castaneous, apex of femur I, apical portion of coxa I and coxa II pale, legs pale yellow.

Morphological characters as mentioned for genus.

Male: Similar to female in general aspect and coloration, vertex 0.24 mm.

Genitalia: Penis (fig. 5) of the Cylapini type, with a small basal plate, as seen in illustration. Left paramere curved (fig. 6) with a small basal lobe and blunt apex. Right paramere (fig. 7) elongate, slender. Pygophore (fig. 8) with dorsal and ventral appendages.

Holotype: female, Sandakan, Borneo, *Baker* col., in the collection of the United States National Museum of Natural History, Washington, D.C. — **Paratypes:** male and female, in the collection of the author.

The specific name is given in homage to Doctor Jacques Carayon in recognition for his work on the biology and taxonomy of the Hemiptera.

Biliranía borneensis, n. sp. (fig. 9-17)

Characterized by the color of the hemelytra and by the morphology of the male genitalia.

Female: Length 3.4 mm, width 1.4 mm. **Head:** Length 0.3 mm, width 0.9 mm, vertex 0.38 mm. **Antenna:** Segment I, length 0.2 mm; II, 1.1 mm; III and IV mutilate. **Pronotum:** Length 0.9 mm, width at the median constriction 0.24 mm, width at base 0.8 mm. **Cuneus:** Length 0.28 mm, width at base 0.20 mm (holotype).

General coloration brown, hemelytra with two silvery scale-like hairs and silvery pruinosity, the proximal fascia interrupted at the claval suture, the distal fascia continuous throughout, membrane fuscous, legs pale brown, second antennal segment darker towards apex.

Morphological characteristics as described for genus.

Male: Similar to female, slightly less robust, vertex narrower.

Genitalia: Penis (fig. 11-13) of the Phylini type, basal plate slender with elongate branches, vesica elongate, tapering towards apex, secondary gonopore not seen. Left paramere (fig. 14) with two elongate lobes and long dorsal setae. Right paramere (fig. 15) small, with a small apical lobe. Theca as seen in illustration.

Holotype: Female, Sandakan, Borneo, *Baker* col., in the collection of the United States National Museum of Natural History, Washington, D.C. **Paratypes:** 2 females and 1 male, same data as type, in the collection of the author.

The specific name is after the country where the specimens were collected. It approaches *Biliranía sumatrana* Schuh, 1984 from which it differs by color of the hemelytra, by the less flattened hind tibia, by the shape of the left paramere. In spite of the fact that the aedeagus of *sumatrana* has not been illustrated, the species of the genus show a characteristic shape on the distal portion of the secondary gonopore. All species described so far have revealed also to be geographically isolated.

Mexicomiris texanus, n. sp. (fig. 18-22)

Characterized by its coloration and by the morphology of the male genitalia.

Male: Length 5.4 mm, width 1.6 mm. **Head:** Length 0.4 mm, width 1.3 mm, vertex 0.66 mm. **Antenna:** Segment I, length 0.8 mm; II, 2.2 mm; III, 1.4 mm; IV, 1.0 mm. **Pronotum:** Length 1.3 mm, width at base 1.4 mm. **Cuneus:** Length 0.74 mm, width at base 0.50 mm (holotype).

General coloration brown with pale yellow to whitish areas; eyes, apex of segment II of antenna, segments III and IV dark brown, hind margin of pronotum and a triangular transversal fascia on endocorium (narrowed towards claval suture) whitish; the portion of clavus and endocorium before fascia lighter in color, the apical portion (after the fascia) dark brown; membrane fuscous.

Underside of body brown, segment III of abdomen with whitish hind margin, segment IV

white inferiorly, ostiolar peritreme pale, segments IV-IX of abdome dark brown, legs light brown.

Body covered with very short hairs, erect on the head, rostrum reaching apex of mesosternum, femora thicker at middle, hind tibiae noticeably curved, with about 14-15 spines on external margin, segment I of rostrum not exceeding the buccula, pronotum proeminet at middle, with a transverse depression behind median lobe, disc about as long as wide, noticeably narrowed at middle.

Genitalia: Vesica of aedeagus (fig. 20) with a large secondary gonopore, three small lobes provided with sclerotized teeth. Left paramere (fig. 21) curved, with dorsal setae and acute distal end. Right paramere (fig. 22) elongate, as shown in illustration.

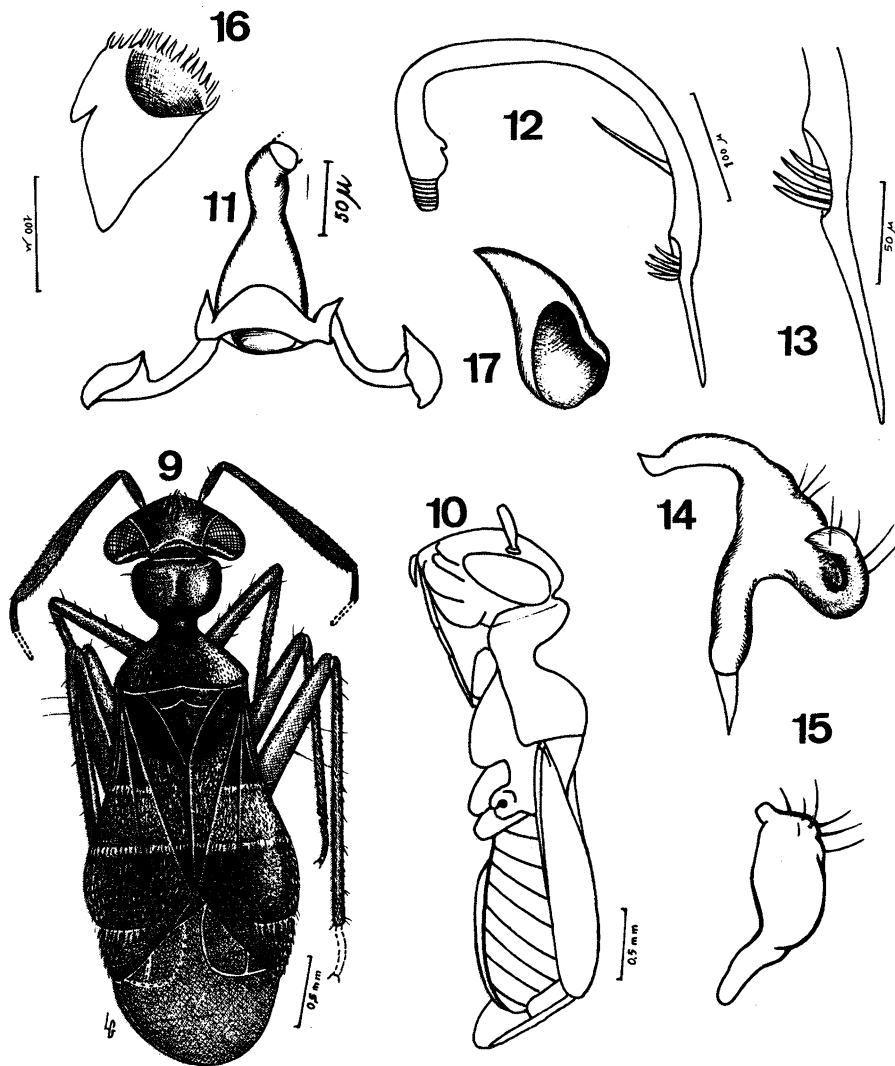


Fig. 9 to 17, *Bilirania borneensis*, n. sp.: Female, holotype; 10, Body seen from side; 11, 12, 13, Penis; 14, Left paramere; 15, Right paramere; 16, 17, Theca.

Female: Similar to male in general coloration and size, vertex 0.72 mm.

Host plant: *Prosopis* sp.

Holotype: Male, Ft. (Fort) Sam Houston, Texas Co. (County), Tex. (Texas), IV-6-1953, *B.J. Adelson* col., in the collection of the National Museum of Natural History, Washington, D.C. **Paratypes:** 2 males and 1 female, same data as type, in the collection of the Department of Entomology, Texas A & M University, College Station and of the author.

Differs from other species of the genus by the color of the hemelytra and by the morphology of the male genitalia.

The specific name is allusive to the State of Texas where the types have been collected.

***Cyphopelta* Van Duzee, 1910**

Cyphopelta Van Duzee, 1910: 81; *id.*, Knight, 1922 (to Capsini); Kelton, 1959: 37; Schuh, 1973: 316.

This is a mirid genus described by E.P. Van Duzee who states: ...«pertains to Reuter's new division *Cremnocephalaria* of the Capsidae». Knight mentioned the genus as belonging to the Capsini. Kelton pointed out through study of the male genitalia that it was «remarkably similar to those of the Mirinae». Schuh comments on the systematic

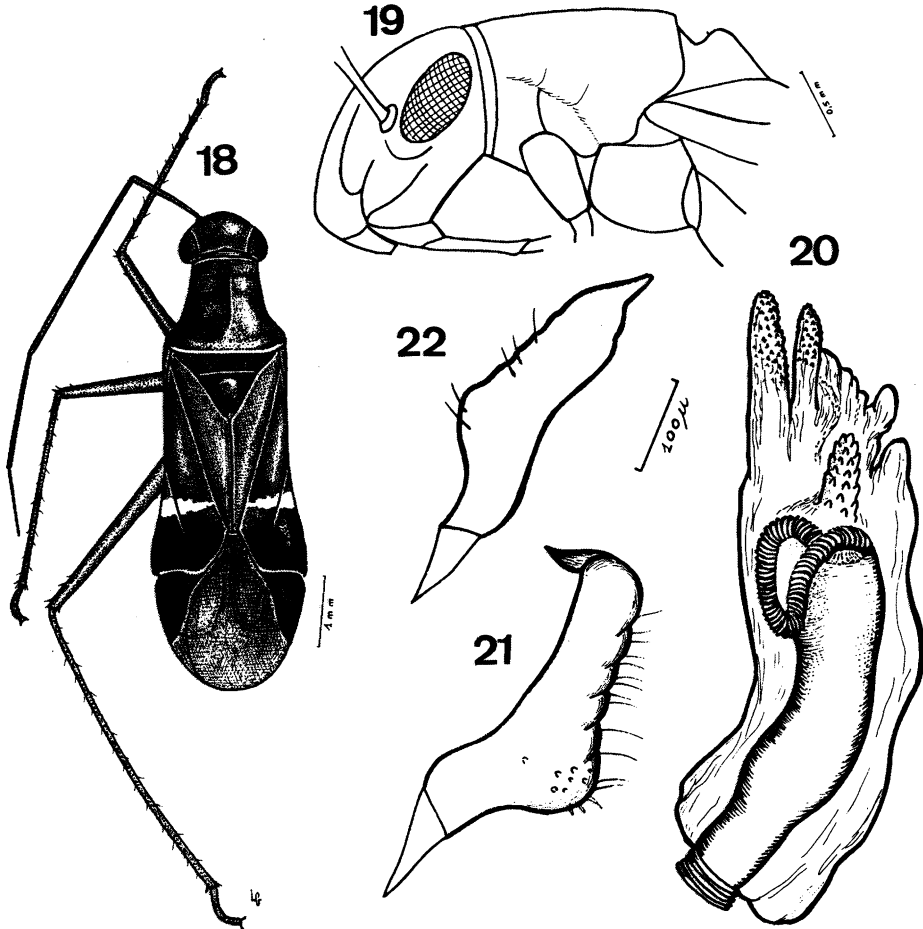


Fig. 18 to 22, *Mexicomiris texanus* n. sp.: Male, holotype; 19, Head and pronotum seen from side; 20, Vesica of aedeagus; 21, Left paramere; 22, Right paramere.

position and different placement of *Cyphopelta*. The correct placement of *Cyphopelta* in my interpretation is in the tribe Herdoniini Distant, 1904.

In Carvalho and Ferreira's key (1973) 1974 the genus runs to couplet 10 (for those genera without a scutellum with a distinct spine-like projection and also the hind margin of disc with a prominent projection). This couplet mentions eyes removed from anterior margin of pronotum or contiguous with it. *Cyphopelta* belongs to the groupe with eyes distant from pronotum by the width of one eye and without scale-like pubescence, thus easily separated from the three genera placed herein.

It is also close to *Mexicomiris* Carvalho & Schaffner, 1974 and from *Nuovoleonina* Schaffner & Carvalho, 1985. These two genera can be distinguished by the length of rostrum, vestiture of the body, especially of the hind tibiae and by the morphology of the vesica of aedeagus. Both genera can be differentiated from *Cyphopelta* by the distance of eyes and anterior margin of pronotum.

Synthlipsis Kirkaldy, 1908

Synthlipsis Kirkaldy, 1908: 786; *id.*, Carvalho, 1957 (as a synonym of *Trilaccus* Horvath, 1902).

This genus was described by Kirkaldy (monobasic) to include the species *chambersi* Kirkaldy, 1908 from Queensland, (Kuranda), Australia. Illustration of head, pronotum and antenna was given. A wide range of color of body (except for legs) has led the author to describe *Trilaccus annulipes* Carvalho, 1953. At the time the types species of *Synthlipsis* was not studied and all indications led the author to judge that both genera were synonyms.

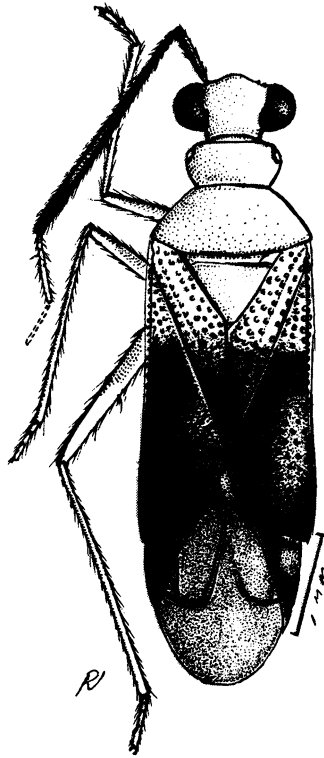


Fig. 23. *Synthlipsis ternatensis* (Distant, 1904): holotype.

Carvalho (1976: 4) treats *annulipes* as *Synthlipsis* and comments about a possible synonymy stating: « a study of a series of topotypes when available may possible indicate synonymy between *annulipes* Carvalho and *chambersi* Kirkaldy ».

Studies undertaken afterwards have proved that *Trilaccus* and *Synthlipsis* are different genera. Horvath genus remains with the species *foveatus* Distant, 1904; *marginatus* Distant, 1904; *nigroruber* Horvat, 1902 and *perversus* (Reuter, 1905).

During a recent stay in the British Museum of Natural History the author was able to study *Mertila ternatensis* Distant, 1904 and to verify that it is a species of *Synthlipsis* Kirkaldy. In the present work *ternatensis* is being treated as such and an illustration is presented to corroborate this affirmative (fig. 23).

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