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## ***Cylapocoris braylovskiyi* and *C. vittatus* two new species of *Cylapocoris* Carvalho, 1954 (Hemiptera: Heteroptera: Miridae) from Costa Rica, Ecuador and Panama**

## ***Cylapocoris braylovskiyi* and *C. vittatus* dos especies nuevas de *Cylapocoris* Carvalho, 1954 (Hemiptera: Heteroptera: Miridae) from Costa Rica, Ecuador and Panamá**

**Andrzej Wolski**

Department of Biosystematics, Opole University, Oleska 22, 45–052 Opole, Poland. Correspondence: miridae78@gmail.com

### **ABSTRACT**

Two new species of the genus *Cylapocoris* Carvalho – *C. braylovskiyi* and *C. vittatus* are described from Ecuador and Panama. For *C. braylovskiyi* illustrations of the male genitalia and for *C. vittatus* scanning electron micrographs are given.

**Key words.** Heteroptera, Miridae, *Cylapocoris*, diagnosis, new species, Neotropics.

### **RESUMEN**

Se describen e ilustran dos especies nuevas del genero *Cylapocoris* Carvalho, 1954 (Hemiptera: Heteroptera: Miridae) *Cylapocoris braylovskiyi* especie nueva (Ecuador) y *C. vittatus* especie nueva (Costa Rica y Panamá).

**Palabras clave.** *Cylapocoris*, diagnosis, nueva especie, Neotropical.

*Cylapocoris* is a Neotropical genus described by Carvalho (1954) to accommodate two species – *C. pilosus* Carvalho and *C. tiquiensis* Carvalho. Subsequently, four species were added by Carvalho & Gomes (1971) and Carvalho (1976, 1982, 1989). The number of the known species was increased to fourteen by Wolski (2013).

In this paper, I describe two new species of *Cylapocoris*. A dorsal image of the adult is provided for each species. For *C. braylovskiyi* illustrations of the male genitalia and for *C. vittatus* scanning electron micrographs are given.

### **MATERIAL AND METHODS**

Observations were made using an Olympus SZX12 stereomicroscope and an Olympus BX50 optical microscope. Scanning electron micrographs were taken using Hitachi S-3400N Scanning Electron Microscopes. Measurements were taken using an eyepiece (ocular) micrometer; all measurements are given in millimeters. Dissections of male genitalia were performed using the technique mentioned by Kerzhner and Konstantinov (1999). The terminology of the male genitalic structures follows Konstantinov (2003) for the elements of the genital capsule and parameres and Cassis (2008) in using the term “endosoma” for the male intromittent organ. Terms for the elements of the parameres and endosomal sclerites in *Cylapocoris* are indicated in detail in a separate paper (Wolski 2013). The study was based on the material deposited American Museum of Natural History, New York, USA (AMNH) and Systematic Entomology Laboratory [SEL], ARS, USDA, c/o National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA (USNM).

### **RESULTS AND DISCUSSION**

#### ***Cylapocoris braylovskiyi* sp.nov**

(Figures 1, 2, 5–7)

<http://zoobank.org/1C88323E-A068-49E4-ACA6-BDBFDE13C1C1>

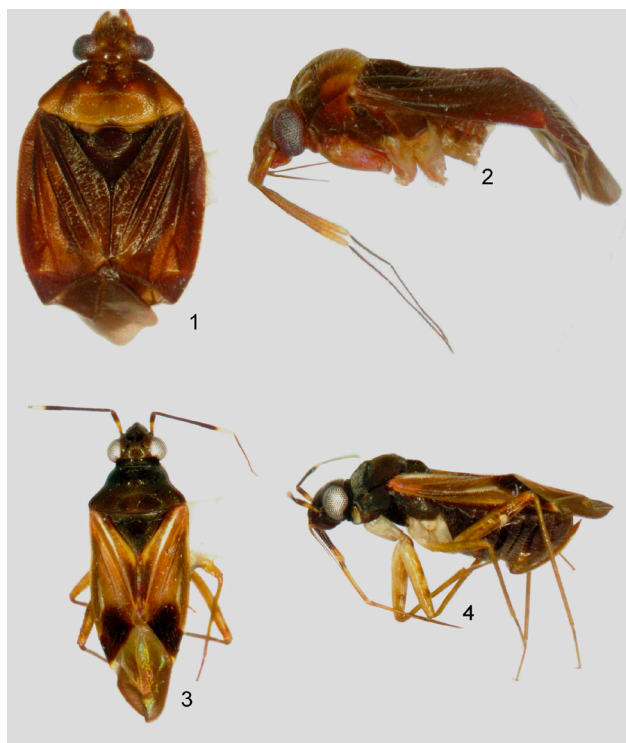
**Holotype** (male): Panamá: Provincia Chiriquí, Reserva La Fortuna, Estación Biológica, 3900 ft, 8°43'18"N, 82°14'17"W, malaise, 4–10.viii.1999, JB Woolley 99/080 (USNM).

**Etymology.** This species is named after Dr. Harry Brailovsky in recognition of his contributions to our knowledge of the Heteroptera, especially the family Coreidae.

**Diagnosis.** Recognized by the dark yellow pronotum, broadly tinged with brown anteriorly and with three indistinct brown stripes on posterior lobe (Fig. 1); mesoscutum, scutellum, and hemelytron dark brown, mesoscutum with two dark yellow patches medially (Fig. 1); endosoma with sclerotized portion of ductus seminis inside endosoma relatively long and with a single sclerite (LS) which is relatively large, cylindrical at basal half, tapering toward apex at apical half (Fig. 5).

Most similar to *C. costaricaensis* Wolski, *C. cucullatus* Wolski, *C. funebris* (Distant), *C. pilosus* Carvalho, and *C. plectipennis* Wolski in sharing the hemelytron entirely dark, without any pale patches (Fig. 1; Wolski 2013: figs. 2, 3, 5, 9). The present new species can, however, be easily distinguished by the coloration of pronotum and mesoscutum and by the shape of the male genitalia.

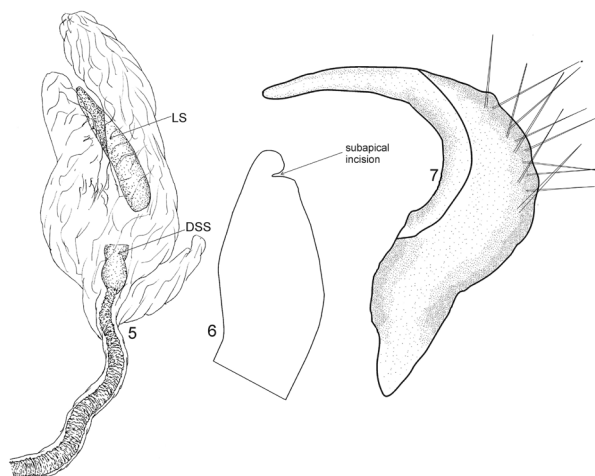
**Description. Male. Coloration** (Figs. 1, 2). Dorsum dark brown with brown and dark yellow areas. **Head.**



Figures 1–4. Dorsal and lateral view of *C. brailovskyi* (1, 2) and *C. vittatus* (3, 4).

Brown; antenna brown; segment I with narrow, indistinct dark yellow annulation near base; segment II with yellow annulation apically; segments III and IV dark brown; labial segment I brown, dirty yellow apically; remaining segments dirty yellow weakly tinged with dark brown. **Thorax.** *Pronotum.* Dark yellow, broadly tinged with brown anteriorly, posterior part with three indistinct, longitudinal brown stripes: two situated near lateral margins and one medially. *Mesoscutum and scutellum.* Dark brown. *Thoracic pleura.* Dark brown; scent gland dirty yellow. Dark brown; mesoscutum with two dark yellow patches medially. *Hemelytron.* Dark brown; membrane fuscous. *Legs.* Forecoxa brown; meso- and metacoxae dirty yellow; remaining segments missing. **Abdomen.** Dark brown. **Structure, texture, and vestiture** (Figs. 1, 2). Dorsum covered with dense semirecumbent and erect setae. **Head.** Covered with relatively dense, erect setae; antennal segment I and II covered with relatively long, semierect setae. **Male genitalia** (Figs. 5–7). *Aedeagus* (Fig. 5). Endosoma with sclerotized portion inside endosoma relatively long, its lateral margins strongly sinuate; endosomal sclerite LS relatively large, its basal half cylindrical, apical half tapering toward apex. *Left paramere* (Figs. 6, 7). **Apical process:** lateral view: thin, tapering toward apex; dorsal view: dorsal and ventral margins arcuate, subapical incision relatively deep. *Right paramere.* Lost during the dissection.

**Measurements.** Holotype (male). *Body.* Length: 4.4, width 2.4. *Head.* Length: 0.85, width: 1.1, interocular distance 0.45. *Antenna.* Length of segment I: 0.55, II: 1.45,



Figures 5–7. Male genitalia of *Cylapocoris brailovskyi*. 5. Endosoma (dorsal view); 6. Apical process of left paramere (dorsal view); 7. Left paramere (left lateral view).

III: 0.65, IV: 1.2. *Labium.* Length of segment I: 0.9, II: 0.85, III: 0.75, IV: 0.68. *Pronotum.* Length: 0.95, width of anterior margin: 0.85, length of lateral margin: 0.85, width of posterior margin: 1.95.

**Distribution.** Panama (Chiriquí Province).

**Comments.** The present new species will run to the couplet six in the key provided by Wolski (2013) to *C. plectipennis* from which it can be easily distinguished by the coloration of the pronotum and the presence of the LS endosomal sclerite only.

*Cylapocoris vittatus* sp. nov

(Figures 3–4, 8–9)

<http://zoobank.org/EF07DA61-94E6-4DF9-8D04-C31C87667AB5>

**Type material.** Holotype (female): Costa Rica, Cartago Province, Pejibaye, 22–24 March 1987, W. E. Steiner (USNM); paratypes: 1 female: Canal Zone: Barro Colorado, 13–VII 1924, N. Banks; 1 female: Santo Domingo de Colorados, Ecuador, 6 March 1973, M. A. Deyrup; 1 female: Santo Domingo de Colorados, Ecuador, 8 February 1973, M. A. Deyrup

**Etymology.** The specific name is taken from the Latin “vitta” meaning band, and refers to presence of the yellow stripes on the hemelytron (Fig. 3).

**Distribution.** Costa Rica (Cartago Province), Ecuador (Santo Domingo de los Tsáchilas Province), Panama (Colón Province).

**Diagnosis.** Recognized by the the pronotum narrowed anteriorly, impunctate, covered with sparse setae (Figs. 3, 8); hemelytron dark yellow tinged with dark brown and brown and with yellow stripes along medial fracture and R+M and anal veins (Fig. 3).





Figures 8, 9. Scanning electron micrographs of *Cylapocoris vittatus*. 8. Dorsal view; 9. Left lateral view.

Most similar to *C. castaneus* (Carvalho) and *C. laevigatus* Wolski in sharing impunctate pronotum (Figs. 3, 8; Wolski 2013: figs. 1, 6, 7). *C. vittatus* can, however, be easily distinguished by the shape of the pronotum and the dorsal coloration.

**Description.** *Female. Coloration* (Figs. 3, 4). Dorsum dark brown dirty yellow with yellow areas. **Head.** Dark brown; clypeus narrowly yellow apically; antennal segment I dark yellow to yellow, dark brown at apical one third; segment II dark brown with yellow annulation apically; segments III and IV dark brown; labium mostly yellow with blackish areas; segment I blackish at basal half; segment II narrowly blackish basally; segment IV tinged with black. **Thorax.** *Pronotum.* Dark brown. *Mesoscutum and scutellum.* Dark brown. *Thoracic pleura.* Dark brown; proepisternum and scent gland evaporative area yellow. *Hemelytron.* Corium dark yellow, weakly tinged with brown basally and laterally and relatively large, dark brown patch on apex of endocorium, R+M vein and medial fracture broadly yellow medially; clavus dark yellow, inner portion broadly tinged with dark brown, anal vein yellow; cuneus dark brown, narrowly yellow apically; membrane grey. *Legs.* Coxae white; remaining segments yellow, weakly tinged with brown. **Abdomen.** Dark brown, weakly tinged with yellow apically. **Structure, texture, and vestiture** (Figs. 3, 4, 8, 9). Head semideclivous, covered with relatively dense, semirecumbent setae; vertex incarinate posteriorly; antennal segment I cylindrical, weakly narrowed basally, covered with sparse, adpressed

setae; segment II weakly broadened toward apex, covered with sparse, semirecumbent setae, denser on apex. **Thorax.** *Pronotum.* Impunctate, covered with sparse, fine setae; lateral margin with weakly developed carina. *Mesoscutum and scutellum.* Covered with sparse, fine, erect setae; scutellum moderately convex. *Hemelytron.* Covered with moderately dense and long, semirecumbent setae; R+M vein, medial fracture, and anal vein convex; membrane with two cells; apex of major cell well removed from apex of cuneus, its distal angle acute.

**Measurements.** Female (n = 4, \*: holotype measurements). *Body.* Length: 3.7–3.8\*, width 1.2\*–1.4. *Head.* Length: 0.61\*–0.71, width: 0.75–0.8\*, interocular distance 0.38\*–0.4. *Antenna.* Length of segment I: 0.3–0.35\*, II: 1.0–1.1\*, III: 0.5–0.52\*, IV: 0.25\*. *Labium.* Length of segment I: 0.57–0.6\*, II: 0.58–0.65\*, III: 0.65–0.75\*, IV: 0.45–0.51\*. *Pronotum.* Length: 0.7\*–0.75, width of anterior margin: 0.6\*–0.7, length of lateral margin: 0.7\*, width of posterior margin: 1.1–1.25\*.

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