Contribution to the knowledge of the genus *Cylloceria* (Hymenoptera: Ichneumonidae: Cylloceriinae) in Central America with description of a new species from Mexico

К познанию рода *Cylloceria* (Hymenoptera: Ichneumonidae: Cylloceriinae) Центральной Америки с описанием нового вида из Мексики

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Cylloceria tropicana **sp. nov.** is described from Southern Mexico and the hitherto unknown male of *C. alvaradoi* Gauld is described from Honduras. *Cylloceria arizonica* Dasch is reported for the first time from the state of Morelos in Mexico.

Описываются новый вид *Cylloceria tropicana* **sp. nov.** из Южной Мексики и ранее неизвестный самец *C. alvaradoi* Gauld из Гондураса. *Cylloceria arizonica* Dasch впервые приводится для штата Морелос в Мексике.

Key words: Ichneumon wasps, taxonomy, Neotropics, Central America, Mexico, Ichneumonidae, Cylloceriinae, *Cylloceria*, new species

Ключевые слова: наездники-ихневмониды, таксономия, Неотропики, Центральная Америка, Мексика, Ichneumonidae, Cylloceriinae, *Cylloceria*, новый вид

INTRODUCTION

The genus *Cylloceria* Schiødte, 1838, described from Europe (Schiødte, 1838), is moderately large, with twenty seven described species occurring in the Holarctic, Oriental and Neotropical Regions (Yu et al., 2005). Originally the genus was included within the broad concept of the Pimplinae, but H. Townes (1971) associated it with the *Helictes* Haliday, 1837 group of genera in the subfamily Microleptinae. Subsequently Wahl, based largely on larval morphology data, subdivided the group into several smaller groups, and *Cylloceria* was placed in a separate subfamily, Cylloceriinae (Wahl, 1986). The Nearctic species of this genus were revised by Dasch (1992), the Palaearctic species were reviewed by van Rossem (1987) and Humala (2002), while the Neotropic fauna is still poorly known; only the fauna of a small territory of Costa Rica was studied (Gauld, 1991). From this territory, four species of *Cylloceria* were described (Gauld, 1991). One species of *Cylloceria* is known also from Peru (Viereck, 1913), and one more was recently described from Mexico (Kasparyan & Ruíz-Cancino, 2003). Up to now only two species of the genus were known to occur in Mexico (Ruíz-Cancino et al., 2002), namely *C. arizonica* Dasch, 1992 and *C. mexicana* Kasparyan et Ruíz-Cancino, 2003. The reliable host records for *Cylloceria* in the literature are all from Tipulidae (Diptera).

MATERIAL AND METHODS

Specimen depositories are abbreviated as follows: TAMU – Texas A & M University (Wharton collection), Texas, College Station, USA; UAT – Universidad Autónoma de Tamaulipas, Cd. Victoria, Tamaulipas, Mexico; MZLU – Zoological Musum of Lund University, Sweden. The material was examined with MBS-10 and Leica MZ9.5 stereomicroscopes; images were taken with a Nikon CP4500 and Leica DFC-290, and combined using LAS software.

Order **HYMENOPTERA**

Family **ICHNEUMONIDAE**

Subfamily **CYLLOCERIINAE**

Cylloceria Schiødte, 1838

***Cylloceria tropicana* sp. nov.**
(Figs 1–4)

Holotype. Female; **México**, *Chiapas*, San Cristóbal, Reserva Huitepec, 16°46´06´´N, 92°41´04´´W, 2600 m, Malaise trap 97/072, 2–14 Aug. 1997, coll. Wooley, Gonzales & Galdamez (TAMU).

Diagnosis. This species is recognizable by the black hind femora, the absence of longitudinal dorsal carinae on the first tergite, and the rugulose metapleurum.

Description. *Female* (holotype). Body length 9.0 mm, fore wing length 8.7 mm. Head 1.2 times as wide as high; face 1.6 times as wide as high, 0.5 times as wide as head, scabrous, its lateral margins subparallel; central part of face somewhat protruding forming horseshoe-shaped protuberance (Fig. 2); frons more smooth, sparsely punctate. Clypeus convex along basal margin, remainder flattened, separated from face by groove, 2.3 times as wide as high, its apical margin truncate; malar space quite wide, as long as basal width of mandible, with distinct subocular strip; mandible stout, upper tooth wider and longer than lower tooth, basal half of mandible with rough punctures, bearing rufous hairs; ocelli of moderate size, in obtusely angled triangle; lateral ocellus connected to eye by fine groove; ocular-ocellar distance equal to greatest diameter of lateral ocellus; postocellar distance slightly exceeding greatest diameter of lateral ocellus; occipital carina complete; temple weakly convex, inflected posteriorly, finely punctate. Antenna slender, with 28 flagellomeres, basal flagellomeres strongly elongate, first flagellomere 12.0 times as long as centrally broad (Fig. 3).

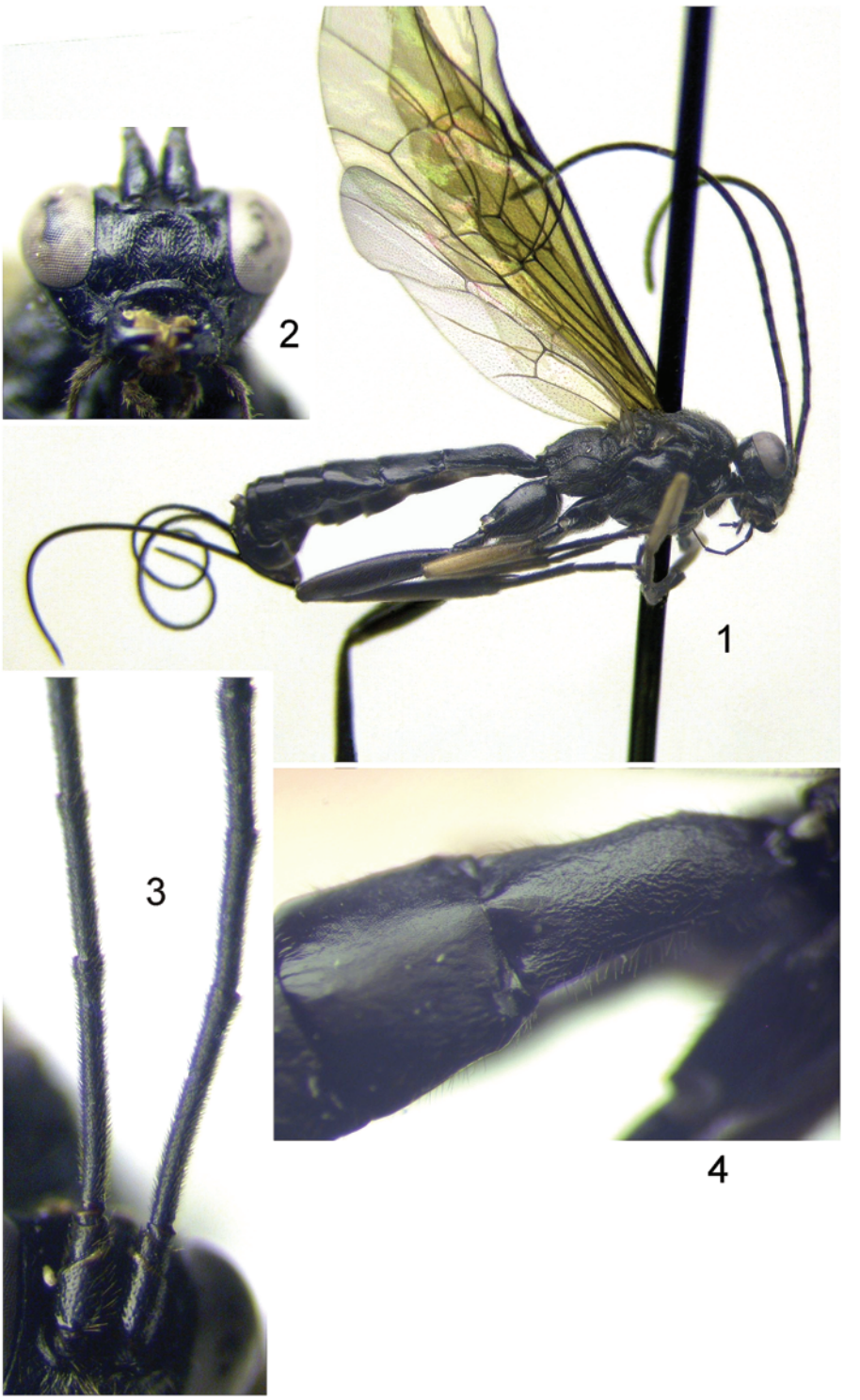
Mesosoma 1.68 times as long as high. Notauli deep, converging and meeting posteriorly on disk of mesoscutum. Epomia present. Scutellum weakly convex, with lateral carina only at base. Epicnemial carina complete, reaching anterior margin of mesopleurum. Mesoscutum rugulose, in profile abruptly rounded; mesopleurum smooth, with scattered punctures bearing brownish hairs. Sternaulus obsolete. Metapleurum coarsely rugulose. Propodeum scabrous; dorsal longitudinal carinae nearly parallel; posterior transverse carina somewhat developed centrally; propodeal spiracle ovoid.

Fore wing with vein *cu-a* basal to base of *Rs & M* by 0.25 times length of *cu-a*; *2r-m* about 0.6 times as long as second abscissa of cubitus. Hind wing with *Cu1* present, joining *cu-a* almost equidistant between *1A* and *M*, slightly closer to *M*.

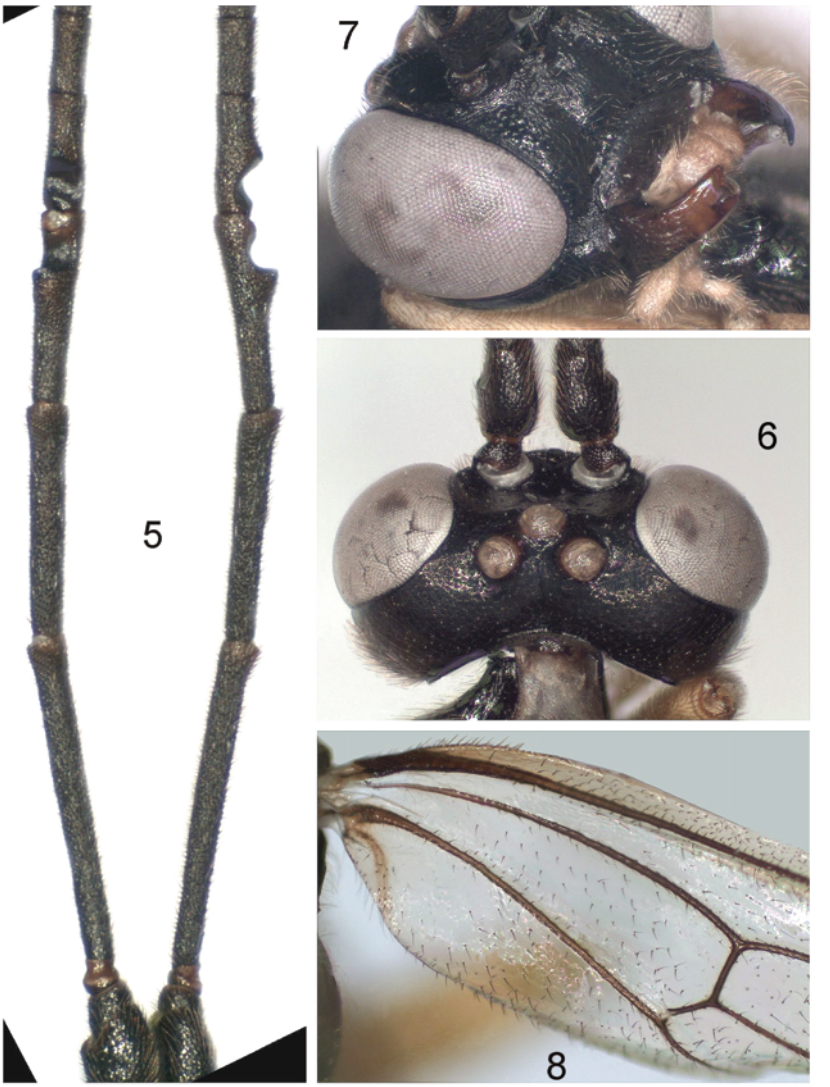
Legs of moderate size; hind femur 5.0 times as long as wide, hind basitarsus 0.4 times as long as hind tibia; claws simple, abruptly curved.

First tergite of metasoma 1.9 times as long as apically wide, coriaceous, lacking dorsomedian and dorsolateral carinae (Fig. 4); glymma present; spiracle at basal 0.4; sternite separated from tergite; sclerotized part of first sternite reaching 0.33 times length of tergite. Second tergite 0.9 times as long as apically wide, matt on basal 0.8, apically polished. Remaining segments of metasoma polished and slightly depressed. Ovipositor moderately long, 1.8 times as long as hind tibia, with subapical dorsal notch.

Body black; tips of mandibles reddish-brown; palpi, fore and mid legs except for



Figs 1–4. *Cylloceria tropicana* **sp. nov.**, female (holotype). **1**, General view; **2**, face; **3**, basal flagellomeres; 4, tergites 1 and 2 of metasoma.



Figs 5–8. *Cylloceria alvaradoi*, male: **5**, basal flagellomeres; **6**, head, dorsal view; **7**, malar space; **8,** base of hind wing.

coxae brownish yellow; hind femur black with only weak brownish stripe dorsally; hind tibia and tarsus dark brown. Wings moderately infumate; pterostigma and veins dark brown.

Male unknown.

Comparison. Cylloceria tropicana **sp. nov.** resembles the Neotropic *C. trishae* Gauld, 1991, differing from the latter by the fuscous hind femur, rugulose metapleurum (polished in *C. trishae*) and longer first flagellomere (9.5–10.0 times as long as broad in *C. trishae*). *Cylloceria mexicana*, recently described from Mexico, differs from the new species by the red hind femur and the reddish metasomal tergites. The Neotropic *C. tincochacae* Viereck, 1913, described from Peru on the basis of one male and still known

only from the holotype, is characterized by "the median longitudinal carinae of the propodeum converging posteriorly, and in the presence of two longitudinal carinae on the first dorsal abdominal segment betweeen the spiracles and the base of the segment" (Viereck, 1913). This description does not agree with the new species which lacks longitudinal dorsal carinae on the first tergite.

Etymology. The species named for its tropical distribution.

Cylloceria arizonica Dasch, 1992

Material examined. One female; **México**, *Morelos*, Coatlan del Rio, 18°44´22´´N, 99°25´54´´W, 1000 m, 4 March 2010, coll. A.E. Humala (UAT).

Distribution. U.S.A. and Mexico. Previous records of this species from Mexico are from Veracruz, Durango and Jalisco (Dasch, 1992).

Cylloceria alvaradoi Gauld, 1991 (Figs 5–8)

Material examined. One female, 3 males; **Honduras**, *Cortés*, Cusuco National Park, 5 km N Buenos Aires, 15°29´N, 88°13´W, oak-pine cloud forest, Malaise trap, 30 July 199, coll. R. Cave (MZLU). Acording to label co-ordinates, altitude of this locality is 1600–1800 m.

Description. *Male*. Body length 9.8–11.0 mm, fore wing length 8.0–9.0 mm. Antenna with 28 flagellomeres, basal flagellomeres strongly elongate, first flagellomere 12.0 times as long as centrally broad; tooth on 3rd flagellomere well developed (Fig. 5).

Head 1.3 times as wide as high; frons somewhat concave, polished; face 1.9 times as wide as high, 0.43 times as wide as head, punctured; inner eye orbits subparallel. Clypeus separated from face by groove, convex along basal margin, remainder flattened, apical margin truncate, its sculpture weaker than sculpture of face. Mandibles stout, upper tooth wider and longer than lower tooth, basal 0.7 of mandible with punctures, bearing rufous hairs. Malar space comparatively short, 0.5–0.6 times as long as basal width of mandible, with subocular strip of coriaceous sculpture (Fig. 7); ocelli quite large, in obtusely angled triangle; vertex with fine groove between middle ocellus and occipital carina; ocular-ocellar distance equal to postocellar distance, 0.8–0.9 times as long as greatest diameter of lateral ocellus (Fig. 6); occipital carina complete, temples weakly convex, inflected posteriorly, polished.

Mesosoma 1.48 times as long as high. Notaulus strong, extending onto disk of mesoscutum. Epomia present. Scutellum weakly convex, lateral carina at basal half. Epicnemial carina complete, reaching front edge of mesopleurum. Mesoscutum rugulose, in profile abruptly rounded. Mesopleurum smooth and polished, with scattered punctures bearing yellowish hairs. Sternaulus indistinct. Metapleurum rugulose. Propodeum coriaceous with subparallel dorsal longitudinal carinae; propodeal spiracle ovoid.

Legs of moderate size; hind femur 4.8 times as long as wide; hind basitarsus 0.37 times as long as hind tibia; claws simple, abruptly curved.

Fore wing with vein *cu-a* slightly basad to base of *Rs* & *M*, *2r-m* about 0.6 times as long as second abscissa of cubitus. Hind wing with *Cu1* present, distal abscissa joining *cu-a* slightly closer to *1A* (Fig. 8).

First tergite of metasoma 1.9 times as long as apically wide, coriaceous; sternite separated from tergite; glymma present; dorsal longitudinal carinae developed in basal half of tergite; dorso-lateral carinae complete; spiracle at basal 0.38 of tergite length; sclerotized part of first sternite reaching 0.25 times length of tergite. Second tergite 0.75 times as long as apically wide, finely punctate. Otherwise unsculptured, smooth.

Body black, mandibles and tegulae reddish brown; palpi, legs except for all coxae and hind trochanters yellowish. Wings slightly infumate, pterostigma and veins dark brown.

Distribution. Costa Rica and Honduras.

Note. Hithertho the male of this species, which is very similar to the female, was unknown.

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