

## ***Dushinckanus mesopotamicus*, a new species of Myodochini from Argentina (Heteroptera: Lygaeoidea: Rhyparochromidae)**

PABLO MATÍAS DELLAPÉ & MARÍA CECILIA MELO

*División Entomología, Museo de Ciencias Naturales de La Plata, UNLP, Paseo del Bosque s/nº, 1900 La Plata, Buenos Aires, Argentina*  
*pdellape@museo.fcnym.unlp.edu.ar*

### **Abstract**

*Dushinckanus mesopotamicus*, a new myrmecomorphic species from Argentina, is described. The male genitalia are described and illustrated and the phylogenetic relationships of the genus are discussed.

**Key words:** Rhyparochromidae, Myodochini, *Dushinckanus mesopotamicus*, new species, Argentina

### **Introduction**

The genus *Dushinckanus* was erected by Brailovsky in 1979 to include an ant mimetic species, *D. ocellatus*, from Brazil. In 1981 the same author described another species, *D. crassicornis*, from Guatemala. Harrington (1987) revised the genus and described two new species, *D. ashlocki* from Brazil and *D. camelopardus* from Ecuador, and transferred *Myodocha inermiba* Distant to this genus.

In this contribution we describe a new species from Argentina, and thereby extend the geographic distribution of the genus.

Illustrations were made with a camera lucida on a Wild M-5 stereomicroscope. The photograph was taken with an Olympus C4000 digital camera attached to a Leyca Wild M3Z binocular stereomicroscope and the scanning electron micrographs with a Jeol 6360 LV. Measurements are given in millimetres.

## Results

### *Dushinckanus mesopotamicus* n. sp. (Fig. 1–6)

*Holotype*: Brachypterous male, Colonia Hocker, Colón, Entre Ríos, ARGENTINA, III-2003, D. L. Carpintero col., sweeping net. *Paratypes*: 2 males, 2 females, same data as holotype.

The holotype and paratypes are deposited in the entomological collection of the Museo de Ciencias Naturales de La Plata (Argentina).

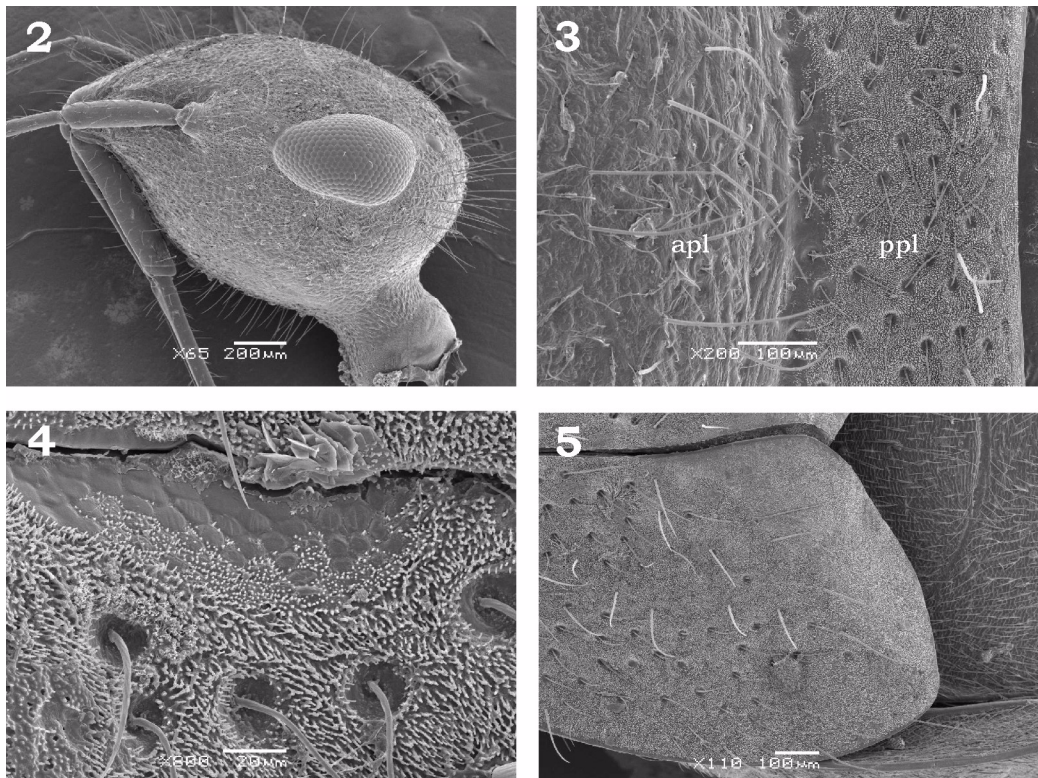


**FIGURE 1.** *Dushinckanus mesopotamicus* n. sp., male. Dorsal view.

**Description:** Total length 5.84 mm. Myrmecomorphic aspect (Fig. 1). Head: length 1.60; width 1.38; width of eye 0.23; interocular space 0.88; interocellar space 0.65; postoc-

ular distance 0.28. Head dark brown (Fig. 2), with abundant intermixed short and long erect decumbent silver setae; antennal tubercles slightly convergent; jugum with a poorly developed ridgelike carina; buccular juncture V-shaped. Eyes longitudinally oval. Ocelli small, not tuberculated, located before an imaginary line passing across the posterior border of eyes. Postocular portion of head rounded, abruptly constricted into a short neck. Antennae long, slender, brown except segment I paler, with short semidecumbent setae more abundant distally. Antennal length 3.70, ratio of segment lengths ca. 1: 2.82: 1.07: 3.12. Rostrum dark brown with scattered short erect setae, reaching posterior border of procoxa, length 2.15, ratio of segment lengths ca. 1: 1.08: 0.91: 0.74. Pronotum dark brown, intermixed short decumbent silver setae and long erect silver setae. Anterior lobe globose, surface irregular with shagreened areas; posterior lobe pruinose (Fig. 3). Lengths collar, anterior, and posterior pronotal lobe: 0.08, 1.00, 0.28, widths collar, anterior, and posterior pronotal lobe: 0.48, 1.05, 1.00. Scutellum pruinose, intermixed short decumbent and long erect silver setae; basal margins with semicircular shagreened areas (Fig. 4), extending narrowly to apex. Hemelytra: length 1.80; short almost reaching 5<sup>th</sup> tergum, pruinose (Fig. 5), intermixed short decumbent and long silver setae, and with a row of long silver setae on lateral margins; clavus with three rows of punctures and additional scattered punctures on distal half between inner and median rows; dark brown, paler medially; corium dark brown with anterior 2/3 paler, lateral margins and a triangular subapical macula whitish; membrane reduced to a small “flap”, sclerotized and pruinose (Fig. 5). Hind wings very reduced. Pleuron dark brown, punctate, with short decumbent silver setae; mesepimeron emergent; evaporative area extensive; metapleura slightly swollen. Legs brown to dark brown with reddish hues, except base of meso- and metafemora whitish. Short decumbent setae on distal part of tibia and tarsi, and long erect setae on trochanters, femora, and tibiae. Profemur with more abundant and longer setae. Procoxa with a short spine, profemur with a double row of spines restricted to apical half. Abdomen dark brown, globose, with abundant short decumbent silver setae, and long semierect and erect silver setae. Abdominal length 2.33, width 1.55. Pygophore (Fig. 6–7) rounded, anterior margin of dorsal aperture rounded, inner projections rectangular. Parameres as shown in Figs. 8 and 9. Phallus (Fig. 10): conjunctiva spined, with two large hornlike spines and two lobes spined apically adjacent to ejaculatory reservoir; vesica elongate.

Paratypes. Total length 5.28–6.00 (mean=5.72). Head: length 1.53–1.68 (mean=1.61); width 1.35–1.48 (mean=1.41); width of eye 0.23–0.28 (mean=0.25); interocular space 0.85–0.93 (mean=0.89); interocellar space 0.63–0.70 (mean=0.67); postocular distance 0.30–0.38 (mean=0.34); antennal length 3.38–3.60 (mean=3.48), ratio of segment lengths ca. 1: 2.74: 2.26: 3.08; rostrum length 2.30–2.35 (mean=2.33), ratio of segment lengths ca. 1: 1.10: 0.85: 0.69. Lengths collar, anterior and posterior pronotal lobe: 0.08, 0.95–1.00 (mean=0.98), 0.28–0.30 (mean=0.28), widths collar, anterior and posterior pronotal lobe: 0.43–0.50 (mean=0.47), 1.03–1.08 (mean=1.04), 0.93–1.05 (mean=1.00). Abdominal length 2.28–2.40 (mean=2.33), width 1.55–1.65 (mean=1.59).



**FIGURES 2–5.** *Dushinckanus mesopotamicus* n. sp. (2) Head, lateral view; (3) pronotum, dorsal view (apl: anterior pronotal lobe. ppl: posterior pronotal lobe); (4) scutellum, dorsal view; (5) hemelytra.

**Etymology:** The specific name refers to the area where the specimens were collected: “Mesopotamia” in Argentina, which includes the provinces of Misiones, Corrientes, and Entre Ríos.

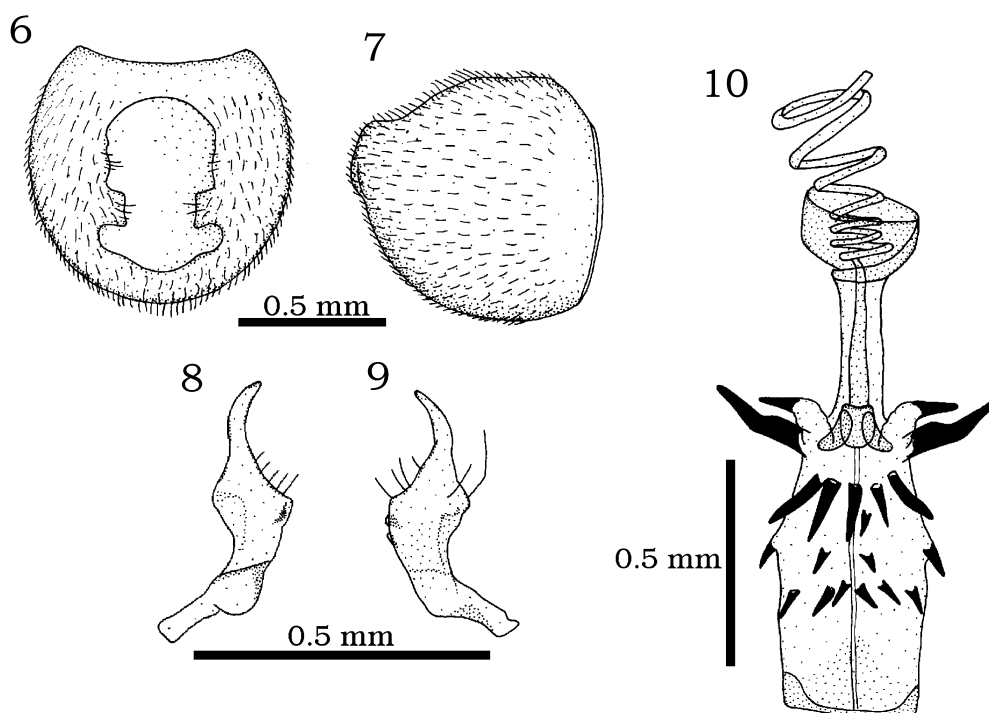
**Remarks:** *D. mesopotamicus* keys to couplet 2 in Harrington’s (1987) key to the species of *Dushinckanus*. *D. mesopotamicus* has long erect setae on head, pronotum, scutellum, and hemelytra as does *D. crassicornis*, but it can be easily distinguished by the slender antenna, the unpedunculate ocelli, and the overall coloration pattern.

## Discussion

Harrington (1980) revised the Myodochini of the world and proposed four lineages based on four types of male genitalia. Although there are no descriptions or figures of the male genitalia available in literature, *Dushinckanus* has been always related to those genera with Harrington’s Type IV male genitalia (without spines on the conjunctiva, with short holding sclerites). Brailovsky (1979) created *Dushinckanus* and related it to *Myodocha* Latreille

and *Pephysema* Distant by the slender, neck-shaped postocular cephalic area, and the interocular distance:postocular distance ratio; and to *Tenuicoris* Slater & Harrington, and *Heraeus* Stål by the ant-mimetic aspect. Harrington (1987) stated that the cladistic affinities of *Dushinckanus* lie: ...“ in the lineage with *Distingphyses* Scudder, *Pephysema* Distant, *Tenuicoris* Slater & Harrington, and *Neopamera* Harrington, based on the synapomorphy of a groove on the lateral surface of the preocular portion of the head beneath a carinate or ridge-like jugum”...; and she proposed *Pephysema* as sister group of *Dushinckanus* based on a characteristic stalklike neck.

The spined conjunctiva of *D. mesopotamicus*, the only species where the character has been studied, suggests that the phylogenetic affinities of this genus should be revised. The phallus of *D. mesopotamicus* allies it to the group of genera with Harrington's Type III male genitalia (presence of numerous spines on the conjunctiva and absence of holding sclerites), which includes *Perigenes* Distant, *Zeridoneus* Barber, *Froeschneria* Harrington, *Ligyrocoris* Stål and *Slaterobius* Harrington. The slightly swollen metapleura of *D. mesopotamicus* resembles those of species of *Slaterobius*; Slater *et al.* (1993) suggest two possible functions for this enlargement in *Slaterobius*, one related to the stridulatory mechanism (absent in *D. mesopotamicus*) and the other to the scent glands reservoirs, although it could also be associated with ant mimicry.



**FIGURES 6–10.** *Dushinckanus mesopotamicus* n. sp. (6, 7) Pygophore: (6) dorsal view, (7) lateral view; (8, 9) right paramere: (8) inner view, (9) outer view; (10) phallus, anterior view.

## Acknowledgments

We wish to acknowledge María del Carmen Coscarón for a critical reading of the manuscript. This work was funded by the Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina.

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