

Dushinckanus riegeri n. sp. from French Guyana (Heteroptera: Lygaeoidea: Rhyparochromidae)*

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Abstract

A new species of the genus *Dushinckanus* is described from French Guyana. The new species is illustrated and compared with the other species of the genus. A check list and a key to the species are given.

Kurzfassung

***Dushinckanus riegeri* n. sp. aus Französisch Guyana (Heteroptera: Lygaeoidea: Rhyparochromidae)**

Eine neue Art der Gattung *Dushinckanus* wird aus Französisch Guyana beschrieben. Die neue Art wird abgebildet und mit den anderen Arten der Gattung verglichen. Eine Checkliste und ein Bestimmungsschlüssel der Arten werden vorgelegt.

Key Words: Heteroptera, Rhyparochromidae, Myodochini, *Dushinckanus riegeri*, new species, French Guyana.

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Introduction

Dushinckanus BRAILOVSKY, 1979, is a small genus of Myodochini endemic to the Neotropical region and is represented currently by six species with a distribution range from Mexico to Argentina.

The first species of the genus, *D. ocellatus* BRAILOVSKY, 1979, was described based on material collected in Brazil (BRAILOVSKY 1979). Two years later the same author described a second species, *D. crassicornis* BRAILOVSKY, 1981, from Guatemala (BRAILOVSKY 1981). The genus was revised



Figure 1. *Dushinckanus riegeri* nov. sp., dorsal habitus.



Figure 2. *Dushinckanus riegeri* nov. sp., head, pronotum and scutellum.

by HARRINGTON (1987) who transferred *Myodocha inermiba* DISTANT, 1882, to *Dushinckanus* and described two species, *D. ashlocki* from Brazil and *D. camelopardus* from Ecuador. DELLAPÉ & MELO (2005) added a species from Argentina, *D. mesopotamicus* DELLAPÉ & MELO, 2005, and RENGIFO-CORREA & GONZALEZ OBANDO (2011) mentioned undetermined specimens of *Dushinckanus* from Colombia. A new species, *Dushinckanus riegeri* nov. sp., is here described based on material from French Guyana.

Dushinckanus riegeri new species (Fig. 1)

Description

Myrmecomorphic. Head, pronotum, scutellum and fore femur with long, erect hairs as long as the first antennomere. Hemelytra with short, sparse erect hairs. Head, mesosternum, metasternum and abdominal sternites with dense and decumbent golden pubescence.

Head (Fig. 2) prognathous, black, finely and densely punctuated. Antecular part longer than postocular part. Postocular part rounded, abruptly constricted into a short neck. Tylus longer than jugum, visible dorsally and slightly paler. Jugum reaching the middle of the first antennomere, its distal end rounded, free, not attached to the tylus. Ocelli not tuberculate, situated at the level of the posterior border of the eyes. Antenniferous

* Dr. CHRISTIAN RIEGER, honouring his 70th birthday.



Figure 3. *Dushinckanus riegeri* nov. sp., antenna lateral view.

tubercles prominent, parallel sided, with a small rounded tip directed laterally and upwards. Neck shorter than the first antennomere. Eyes brown, hemispheric, oval in lateral view, prominent, slightly short-stalked.

Antennae (Fig. 3) long, slender, amber, with erect hairs shorter than the diameter of the segments. First segment barrel shaped, broader than the segments II-IV and surpassing slightly the tylus; segment II distally slightly clavated; segment III as the precedent but apically darkened; IV thickened. Antennal segment length proportions: 1 : 2.31 : 2.13 : 3.31.

Rostrum (Fig. 4) with scattered erect setae, short, not surpassing the procoxae. First segment thickened, brown, reaching to the middle of the eye. Segments II and III yellow, IV yellow and darkened apically.

Pronotum (Fig. 2) with collar weakly developed. Fore lobe black, spherical, dull, with sparse and feeble punctures. Transverse impression with some small punctures and narrower than the fore lobe. Hind lobe shorter than fore lobe, trapezoidal, brown, with deep, black and sparse punctures; anteriorly and laterally not punctua-



Figure 4. *Dushinckanus riegeri* nov. sp., rostrum lateral view.



Figure 5. *Dushinckanus riegeri* nov. sp., hemelytra.



Figure 6. *Dushinckanus riegeri* nov. sp., membrane.

te. Scutellum black with brown tip, equilateral, sparsely punctuated and slightly swollen in the disc.

Hemelytra (Fig. 5) with deep, sparse, black punctures; light brown with one big white spot in the cuneal region and several few whitish longitudinal spots in the corium. Costal border impunctate, white, except for the distal region (dark-brown) and an elongate narrow black spot situated at the basis of the membrane. Clavus with four rows of punctures, three complete and one small incomplete. Endocorium with two long rows of punctures and one small row in the distal region. Exocorium with the punctures distributed irregularly. Membrane (Fig. 6) light brown, with a submedial broad dark spot, basally yellowish with a pale finger-like band directed backwards and with a distal, broad, oval, elongate lighter spot.

Legs yellow-orange, femora darkened. Fore femora (Fig. 7) incrassate, apically and the basal third whitish; fore trochanter orange; fore coxae dark. Fore femur with 3-5 big teeth and several distal small teeth forming two irregular rows. Fore tibia straight. Middle and hind femora not incrassate, with similar coloration than fore femur; basal half whitish. Middle and hind coxae and trochanters



Figure 7. *Dushinckanus riegeri* nov. sp., fore femur external view.

orange. Abdominal sternites brown with a white spot in the connexivum located at the level of the white band of the hemelytra.

Measurements (mm): Length 5.57. Head: width 1.19, length 1.21, eye width 0.23, interocular width 0.73, interocellar width 0.40; preocular length 0.61; postocular length 0.33. Length rostrum: I 0.66; II 0.58; III 0.40; IV 0.33.

Pronotum: Width collar 0.45; width transverse im-

pression 1.16; width fore lobe 1.11, length fore lobe 0.81; width hind lobe 1.62, length hind lobe 0.58. Hemelytral length 3.84.

Antenna: length antennal segments: I 0.38; II 0.88; III 0.81; IV 1.26. Length tibiae: fore 1.52; middle 1.44; hind 2.07.

Material studied

Holotype: 1 ♀, French Guyana; Matiti, Za Wababo, 1.-31.3.2013, Flight interception trap, J. L. GIUGLARIS leg. (coll. BAENA).

Etymology

The new species is dedicated to Dr. CHRISTIAN RIEGER as homage to his contribution to the knowledge of the European Heteroptera.

Discussion

The genus *Dushinckanus* may be separated into two groups of species by the shape of the head: The *ocellatus*- and the *crassicornis*-group. The former, characterized by the postocular length of the head longer than the interocular distance, includes three species: *D. ocellatus* BRAILOVSKY (Fig. 8), *D. inermibus* (DISTANT) and *D. camelopardus* HARRINGTON. The *crassicornis*-group, defined by the postocular length shorter or equal than the interocular distance is composed of four species:



Figure 8. *Dushinckanus ocellatus*, dorsal habitus.



Figure 9. *Dushinckanus crassicornis*, dorsal habitus.

D. crassicornis BRAILOVSKY (Fig. 9), *D. ashlocki* HARRINGTON, *D. mesopotamicus* DELLAPÉ & MELO and *D. riegeri* BAENA nov. sp.

Dushinckanus mesopotamicus may be separated from *D. riegeri* nov. sp. by its brachypterism and coloration of legs and hemelytra. The presence of a broad red annulus in the antennal segment IV and the short pilosity on pronotum, scutellum and hemelytra allows the separation of *D. ashlocki* from *D. riegeri* nov. sp. The ocelli widely separated, the interocellar distance eight times the ocellar diameter, the rostrum reaching the procoxae, the antennal segments III and IV without black and dense bristle-like hairs and the hemelytral pattern allows separating *D. riegeri* nov. sp. from *D. crassicornis*.

HARRINGTON (1980) could not include the genus *Dushinckanus* in his cladistic analysis of the Myodochini of the world. In the revision of the genus HARRINGTON (1987) discussed the phylogenetic relationships with the closest american genera and stated: "While *Dushinckanus* does have slender fore femora in common with *Myodocha*, its cladistic affinities lie instead in the lineage with *Distingphyses* SCUDDER, *Pephysena* DISTANT, *Tenuicornis* SLATER & HARRINGTON, and *Neopamera* HARRINGTON (internode 36-44 in HARRINGTON'S (1980) cladogram) 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". She also comments: "Thus, the first feature, slender fore femora with few spines, remain the best for recognition of the genus *Dushinckanus*. Among the necked genera of Myodochini, only members of *Tenuicornis*, *Myodocha* LATREILLE and *Dushinckanus*, all having Type IV male genitalia (HARRINGTON, 1980), have slender fore femora with the size as well as the number of spines reduced".

DELLAPÉ & MELO (2005) found that *D. mesopotamicus* have male genitalia type III of HARRINGTON'S revision (phallus with numerous spines on the conjunctiva and absence of holding sclerites) and concluded that the phylogenetic affinities of *Dushinckanus* should be revised, a point of view I share. Neither BRAILOVSKY (1979) nor HARRINGTON (1987) studied the male genitalia of *Dushinckanus* and in HARRINGTON'S revision no figures or descriptions of these structures are included. In HARRINGTON'S work, only in the quote: "Among the necked genera of Myodochini only members of *Tenuicornis*, *Myodocha* LATREILLE and *Dushinckanus*, all having type IV male genitalia", we find evidence for the type of phallus of *Dushinckanus*.

If this statement is based on the study of the genitalia of any of the known species, this contradicts the study of DELLAPÉ & MELO (2005) of the male genitalia of *D. mesopotamicus*. I suggest that the generic status of the two species-groups of *Dushinckanus* should be revised, and probably, a new genus for the *crassicornis*-group has to be erected.

Key to the species of *Dushinckanus*

BRAILOVSKY, 1979

This tentative key is based on HARRINGTON (1987) and modified to include the two species described thereafter.

- 1 Postocular region of head sloping gradually into a stalk-like neck; neck long and slender with postocular distance greater than interocular distance (head width); lengths of antennal segments II and III each exceeding the width of head; transverse pronotal impression shallow, complete, impunctate 2
- Postocular region of head rounded or dome-like, then abruptly constricted into a short neck; postocular length usually less than or subequal to the interocular distance; length of antennal segment III less than width of head, and length of antennal segment II less than or equal to width of head; transverse pronotal impression strongly incised, with deep punctures in depth of impression. 4
- 2 Anteocular region of head of the same length as postocular region. Ocelli very big, distinctly protuberant; interocular width slightly longer than the ocellar diameter *D. ocellatus* BRAILOVSKY, 1979
Brazil: BRAILOVSKY (1979); HARRINGTON (1987)
- Anteocular region of head shorter than postocular region. Ocelli small, not protuberant; interocular width longer or much longer than ocellar diameter 3
- 3 Posterior pronotal lobe with a distinct, narrow, continuous, yellow, transverse band on its anterior half; antennal segments II orange, lighter than other three segments which are each uniformly dark; length of antennal segment III less than three times the interocular distance; total length of antennal segments less than ten times the interocular distance. *D. inermibus* (DISTANT 1882)

Costa Rica: HARRINGTON (1987); Panamá: DISTANT (1882), HARRINGTON (1987)

- Yellow portion of posterior pronotal lobe not a continuous band, less apparent and present as mottling or as four diffuse patches that may run onto posterior one-half of posterior pronotal lobe; antennal coloration not as above, all four segments fairly uniform in color; length of antennal segment III more than three times the interocular distance; total length of antennal segments more than ten times the interocular distance *D. camelopadus* HARRINGTON, 1987 Ecuador: HARRINGTON 1987
- 4 Brachypterous; posterior half of the hemelytra occupied with a broad black band without white spots; middle and hind legs brown or dark brown; both lobes of pronotum black *D. mesopotamicus* DELLAPÉ & MELO, 2005 Argentina: DELLAPÉ & MELO (2005)
- Macropterous; hemelytra light brown, without broad black band on posterior half and with white spots; middle and hind legs light brown with tibiae yellow; lobes of pronotum differently coloured. 5
- 5 Head sometimes with long hairs on posterior postocular region; pronotum, scutellum and hemelytra without numerous, long, semi-erect hairs; antennal segment IV with a broad, striking, light red annulus that contrast with basal and distal dark areas *D. ashlocki* HARRINGTON, 1987 Brazil: HARRINGTON (1987)
- Head, pronotum, scutellum and hemelytra with numerous, long, semi-erect hairs; antennal segment IV uniformly coloured 6
- 6 Ocelli little separated; interocellar width four times the ocellar diameter. Antennal segments III and IV appearing somewhat incrassate with black dense bristle-like hairs. Rostrum long, reaching to the mesocoxae. Apical part of the membrane lighter with the veins darkened. *D. crassicornis* BRAILOVSKY, 1981

Guatemala: BRAILOVSKY (1981), HARRINGTON (1987); México, Panamá: HARRINGTON (1987)

- Ocelli widely separated; interocellar width eight times the ocellar diameter. Antennal segments III and IV without black dense bristle-like hairs. Rostrum short, reaching to the procoxae. Apical part of the membrane with one oval lighter macula *D. riegeri* BAENA nov. sp. French Guyana: BAENA (2014)

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