A new species of the genus *Cymatopus* (Diptera: Dolichopodidae) from Madagascar

Новый вид рода *Cymatopus* (Diptera: Dolichopodidae) с Мадагаскара

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A new species *Cymatopus madagascarensis* is described from Madagascar. It belongs to the *C. tibialis* group of species, being remarkably similar to Oriental *C. thaicus* Grootaert et Meuffels, 2001, and differs mainly in the morphology of the male fore tarsus.

Описан *Cymatopus madagascarensis* с Мадагаскара. Он относится к группе видов *C. tibialis* и очень похож на ориентальный вид *C. thaicus* Grootaert et Meuffels, 2001, отличаясь от него главным образом морфологией передней лапки самца.

Key words: Afrotropical Region, Madagascar, long-legged flies, Diptera, Dolichopodidae, *Cymatopus*, new species

Ключевые слова: Тропическая Африка, Мадагаскар, мухи-зеленушки, Diptera, Dolichopodidae, *Cymatopus*, новый вид

INTRODUCTION

The genus *Cymatopus* Kertesz, 1901 with 21 valid species was included in the subfamily Hydrophorinae Lioy, 1864 (e.g. Grichanov, 2011) or Aphrosylinae Aldrich, 1905 (Lim et al., 2009). Until recently it was known from Oriental and Australasian regions in addition to four Neotropical species of uncertain position (Masunaga & Evenhuis, 2012). Grootaert and Grichanov (2008) described the first Afrotropical species of *Cymatopus* from Madagascar. Re-examination of the paratypes of *C. stuckenbergi* Grootaert et Grichanov, 2008 revealed a second Afrotropical species of the genus, which is described in this paper. The new species is the first member of the nominotypical *C. tibialis* group of species (Grootaert & Meuffels, 2001) recorded in the Afrotropics.

MATERIAL AND METHODS

Morphological terminology mainly follows Cumming & Wood (2009). Body length is measured from the base of the antenna to the posterior tip of the epandrium. Wing length is measured from the base to the wing apex. The relative lengths of the tarsomeres are representative ratios and not measurements. The holotype of the new species was macerated in 10% KOH, kept in glycerol in a microvial, which was then mounted on pin and deposited in the collection of the Natal Museum, Pietermaritzburg, South Africa (NMSA). The specimen was studied and illustrated with a ZEISS Discovery V-12 stereomicroscope and an AxioCam MRc5 camera.

RESULTS

Order **DIPTERA**

Family **DOLICHOPODIDAE**

Subfamily **HYDROPHORINAE** or **APHROSYLINAE**

Genus ***Cymatopus*** Kertesz, 1901

Cymatopus madagascarensis (Figs 1–4)

Holotype. Male; **Republic of Madagascar**: "on beach, Fenerive, Madagascar, Dec. 1955, coll. B. Stuckenberg / *Cymatopus stuckenbergi* Grootaert, Grichanov, Paratype" (NMSA).

Description. Male. Head (Fig. 2). Frons, face, occiput, palpus, and proboscis with bronze-black ground colour; frons, occiput and proboscis grey pollinose. Face and palpus white pollinose; palpus and proboscis with short black hairs. Head with a row of strong black postocular setae, one pair of strong occipital, vertical and postvertical setae; ocellar tubercle with a pair of strong setae; ventral postcranium with sparse black irregular cilia supplementing postocular row; eyes haired. Face narrow, the narrowest above suture. Clypeus protruding. Ratio of epistome height to its minimal width to its maximum width to height of clypeus to height of palpus, 15/5/15/10/10. Antenna black; pedicel with short setae; postpedicel elongate-triangular, twice as long as high at base, with apical arista-like stylus and short hairs; stylus bisegmented, thickened at base, otherwise fine and almost bare (with broken tip).

Thorax black, slightly shining; pleura white pollinose. Mesonotum with a small posterior flattening behind level of 4th dorsocentrals. Five pairs of strong dorsocentral setae of about equal length; acrostichals absent. Proepisternum with two strong black setae; scutellum with two strong black setae and two minute lateral hairs.

Legs mostly dirty yellow, with black setation; mid and hind coxae, all tibiae and tarsi blackish brown. Fore coxa with black erect cilia and setae anteriorly; mid and hind coxae with one outer seta. All femora slightly swollen in basal half. All tarsi simple, with 5th segment slightly widened and flattened. Fore femur (Fig. 3) in basal two-thirds with a row of very short erect anteroventral setae, a row of about seven long strong posteroventral setae increasing in length distally, and with one subapical posteroventral cilium. Fore tibia (Fig. 4) with a leaf-like anterior process at basal third, ventral row of strong erect setae and a long apicoventral pedunculate spine. Mid femur without strong setae, with a subapical posteroventral cilium. Mid tibia with 2–3 short apical setae. Hind leg simple; hind tibia with 1–2 fine dorsal setae. Podomeres (from coxa to fifth tarsomere) lengths ratios: in fore leg, 54/87/70/77/32/24/15/15, in mid leg, 33/119/109/70/37/21/15/15, in hind leg, 23/122/99/82/49/24/15/15.

Wing greyish, simple, narrow, more than 3 times as long as wide. Veins brown; R_1 extending behind the first third of wing; R_{4+5} and M_{1+2} almost straight and parallel in apical part; ratio of crossvein *dm-cu* to distal part of CuA_1, 15/35. Lower calypter small, yellow, with fine light cilia; halters broken.

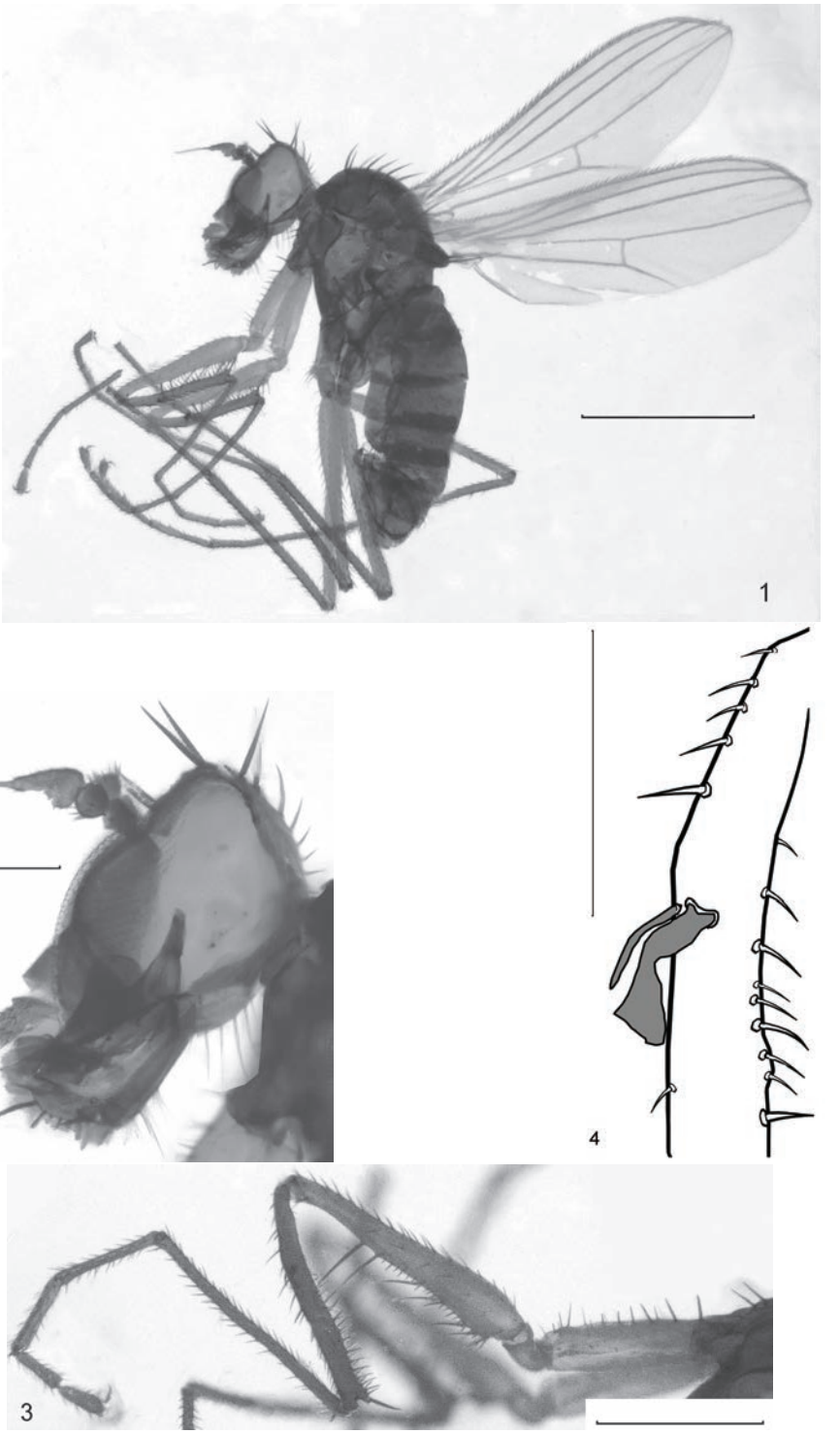
Abdomen black, with short black setae; sternum 4 with short black spinules. Six full terga developed; tergum 6 nearly as long as tergum 5, with white ventral extensions; tergum 7 reduced; segment 8 approximately half as large as epandrium. Hypopygium black, grey pollinose. Hypandrium broad, curved ventrally, with a strong lateral seta. Cerci broken. Surstylus (Fig. 5) black-brown, wide and short, with a hook-shaped seta on dorsal side of apex and several setae on distal margin.

Measurements (mm): body length 2.4, antenna length 0.5, wing length 2.4, hypopygium length 0.6.

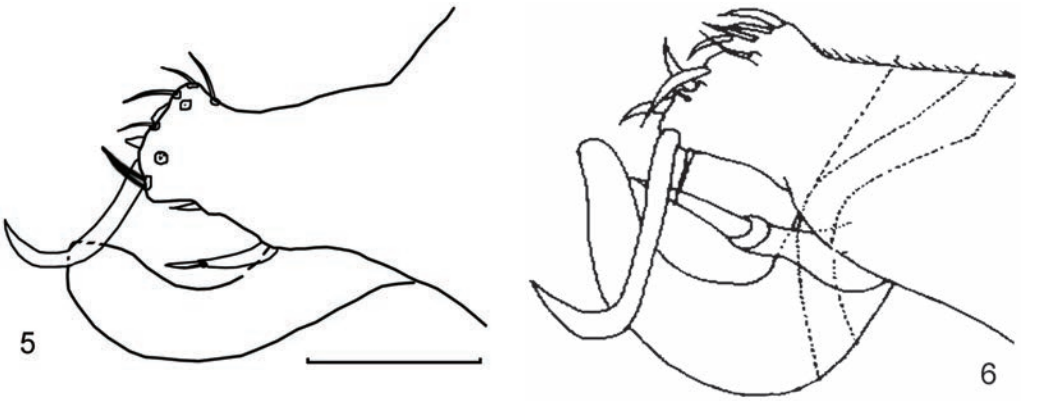
Female unknown.

Etymology. The species is named for the country of origin.

Diagnosis and remarks. The new species belongs to the nominotypical *C. tibialis* group of species with ornamented fore legs, being remarkably similar to the Oriental *C.*



Figs 1–4. *Cymatopus madagascarensis* (male). **1**, habitus; **2**, head; **3**, fore leg; **4**, basal part of fore tibia. Scale bars: 1 mm (1), 0.3 mm (2), 0.5 (3), 0.2 mm (4).



Figs 5–6. *Cymatopus* spp. (male), surstylus and postgonite. **5**, *C. madagascarensis* ; **6**, *C. thaicus* Grootaert et Meuffels [after Grootaert & Meuffels (2001)]. Scale bar: 0.1 mm.

thaicus as described and figured by Grootaert & Meuffels (2001). Both species have a black anterior process at the basal one-third of fore tibia (like other species of the group) and a short apical lobe on the fore tibia (male secondary sexual characters); fore tarsomere 4 is not excavated ventrally. Nevertheless, fore tarsomere 4 is laterally flattened in *C. thaicus*, bearing dorsally long hair-like setae and short hooked hairs, but being simple in *C. madagascarensis*. The other differences concern the leg coloration and podomere ratios. The ventral extensions of abdominal sternum 6, the shape and armament of the hypandrium and surstylus of hypopygium are almost identical in the two species (Figs 5–6; see also Grootaert & Meuffels, 2001: Figs 32 and 36). The other species of *C. tibialis* group slightly differ in the hypopygium morphology. The holotype of the new species was erroneously included in the type series of *C. stuckenbergi*, which belongs to the *C. longipilus* group of species with simple fore legs, but with long haired hind legs in males (Grootaert & Grichanov, 2008).

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