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RESEARCH ARTICLE

A new species of the genus *Nematoproctus* (Diptera: Dolichopodidae) from Japan

Новый вид рода *Nematoproctus* (Diptera: Dolichopodidae) из Японии

O.P. Negrobov, T. Tago & O.O. Maslova

О.П. Негробов, Т. Таго, О.О. Маслова

Oleg P. Negrobov, Voronezh State University, 1 Universitetskaya Sq., Voronezh 394006, Russia. E-mail: negrobov@list.ru

Toshihiro Tago, Waseda, 3-chome, Misato, Saitama 331-0018, Japan. E-mail: tago-ke@za2.so-net.ne.jp

Olga O. Maslova, Voronezh State Pedagogical University, 86 Lenina Str., Voronezh 394043, Russia.

Abstract. A new species of Dolichopodidae, *Nematoproctus kumazawai* **sp. nov.**, is described from Japan. The new species is close to *N. longifilus* Loew, 1857 and can be distinguished from the latter by the mostly yellow antenna, yellow palpus, mid femur without ventral hairs, triangular cercus with the apex reaching the base of abdominal segment 4, and the apical part *M* almost straight.

Резюме. Описан *Nematoproctus kumazawai* **sp. nov.** – новый вид семейства Dolichopodidae из Японии. Новый вид близок к *N. longifilus* Loew, 1857, от которого отличается следующими признаками: антенны большей частью жёлтые, пальпы жёлтые, средние бёдра снизу без волосков, церки треугольные, их вершины достигают основания 4-го сегмента брюшка, апикальная часть жилки *M* почти прямая.

Key words: Dolichopodidae, *Nematoproctus*, Palaearctic, Japan, new species

Ключевые слова: Dolichopodidae, *Nematoproctus*, Палеарктика, Япония, новый вид

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Introduction

The genus *Nematoproctus* Loew, 1857 has an uncertain position in the system of the family Dolichopodidae. It is included by different authors in the subfamily Diaphorinae (Parent, 1938) or in the subfamily Rhaphiinae (Yang et al., 2006). Stackelberg & Negrobov (1976) published a revision of the Palaearctic *Nematoproctus* with a key to the Holarctic species. Four species of *Nematoproctus* were known from the Palaearctic region: *Nematoproctus daubichensis* Stackelberg et Negrobov, 1976, *N. distendens* (Meigen, 1824), *N. longifilus* Loew, 1857, and *N. praesectus* Loew, 1869. Six species are known from the Nearctic region: *N. cylindricus* (Van Duzee, 1924), *N. flavicoxa* Van Duzee, 1930, *N. jucundus* Van Duzee, 1927, *N. metallicus* Van Duzee, 1930, *N. varicoxa* Van Duzee, 1930, and *N. venustus* Melander, 1900. *Nematoproctus caelebs* Parent, 1926 was described from the Oriental part of China and *N. kubani* Olejníček, 2002 was described from Laos. After studying the type of *Sympycnus imperfectus* (Becker, 1918), this name was placed in the genus *Nematoproctus* and synonymized with *N. praesectus* Loew, 1869 (Maslova et al., 2008).

Material and methods

The material was collected by T. Tago in Kawaguchi city located in central part of the Kantō Plain in the southern Saitama Prefecture (Japan).

Morphological terminology follows J.M. Cumming & D.M. Wood (2009). The holotype and two paratypes are stored at the Osaka Museum of Natural History (Japan); two paratypes are stored at the Zoological Institute of the Russian Academy of Sciences (St Petersburg); one paratype is stored at the Voronezh State University.

Taxonomic part

Order **Diptera**

Family **Dolichopodidae**

Subfamily **Rhaphiinae**

Genus ***Nematoproctus*** Loew, 1857

***Nematoproctus kumazawai* sp. nov.**
(Figs 1–7)

Holotype. Male; **Japan**, *Saitama Prefecture*, Kawaguchi city, Funato-chou, 12.VII.2014 (T. Tago leg.).

Paratypes. Two males, with same data as in holotype (T. Tago leg.); 3 males, same locality, 4.V.2015 (T. Tago leg.).

Diagnosis. Face white with yellow tint. Antennae mostly yellow. Palpus yellow. Lower postocular setae white. Legs mostly yellow. Fore femur with short yellow anteroventral hairs. Vein *dm-cu* shorter than apical part CuA_1. Abdomen dark green.

Description. *Male*. Body length 2.2–2.3 mm; wing length 2.1–2.2 mm.

Head (Fig. 2). Frons violet shiny, without pollinosity. Eyes bare. Face white with yellow tint; width of face less than width of postpedicel. Antenna mostly yellow; apical part of postpedicel brown. Postpedicel short, with short hairs, triangular at apex, wider than long. Arista dorsal. Ratio of postpedicel length to its width and to length of arista as 0.7: 0.6: 4.2. Palpus yellow, with white hairs and black setae at apex. Proboscis brown. Lower postocular setae white.

Thorax dark green. Mesonotum shining, with grey pollinosity and two purple stripes between acrostichal and dorsocentral setae. Pleura with dense grey pruinosity. Propleura with black setae. Five pairs of dorsocentral setae. Acrostichal setae arranged in two rows. Two notopleural setae. Scutellum shining, brilliant with violet, with two long marginal setae and two hairs on each side of these setae.

Legs mostly yellow; mid coxa mostly brown, tips of legs darkened. Hind coxa with black setae. Fore femur with short yellow anteroventral hairs, which are shorter than width of femur. Fore tibia with two anterodorsal and one posterodorsal setae, and with a series of posteroventral hairs. Fore tarsus with short black hairs on dorsal side. Fore basitarsus ventrally with short black hairs. Ratio of length of fore tibia and tarsomeres (1st to 5th) as 4.8: 1.9: 1.3: 0.27: 0.6: 0.6. Mid femur with several short posteroventral setae, without long hairs. Mid tibia with two long and one short anterodorsal setae. Ratio of length of mid tibia and tarsomeres (1st to 5th) as 5.7: 3.0: 1.3: 1.1: 0.8: 0.5. Hind femur with one preapical seta, 2–3 short anterodorsal and one posterodorsal setae. Hind basitarsus without long setae. Ratio of length of hind tibia and tarsomeres (1st to 5th) as 7.3: 2.1: 2.1: 1.5: 0.8: 0.9.

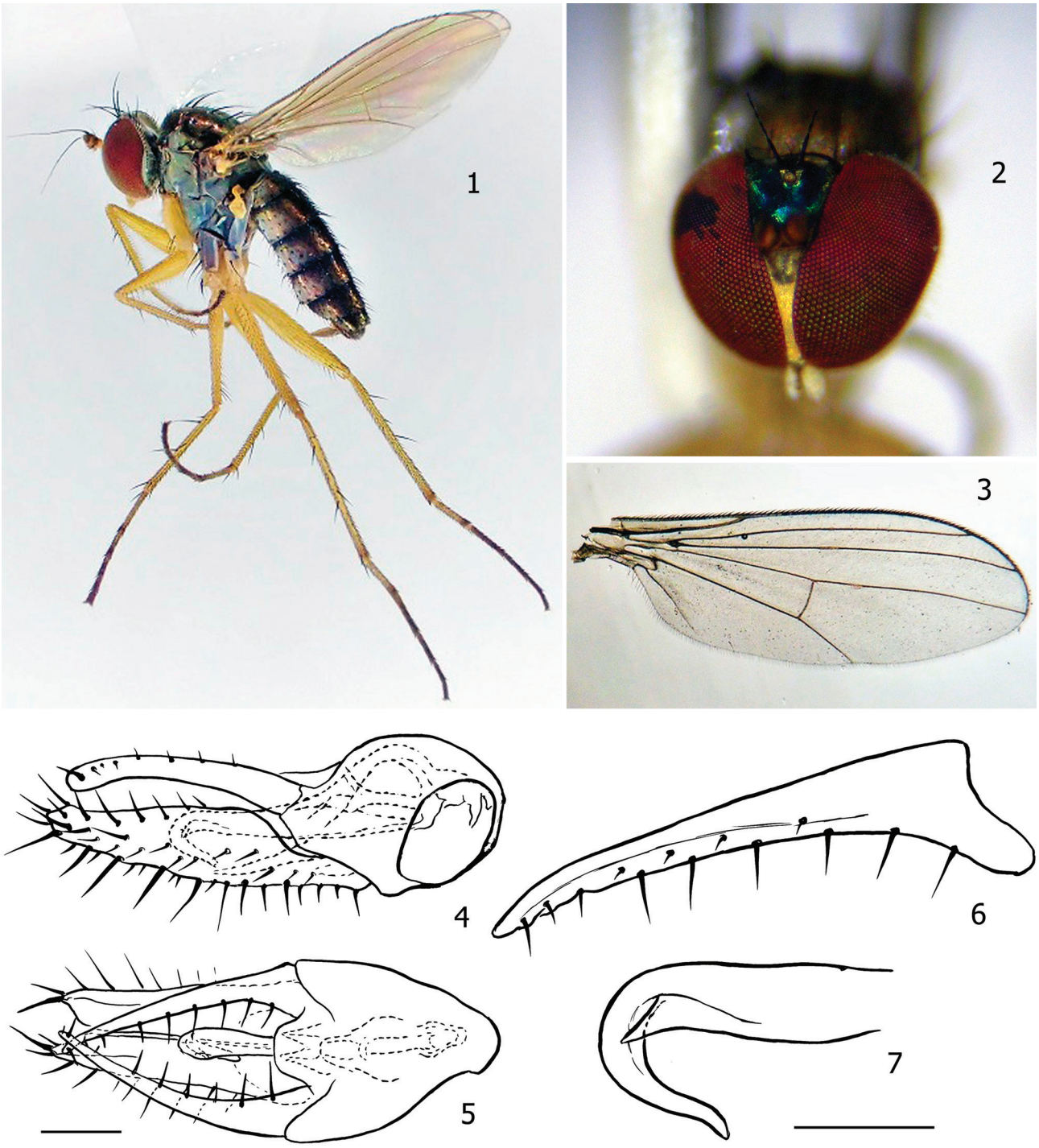
Wing (Fig. 3) hyaline. Ratio of costal section between R_{2+3} and R_{4+5} to that between R_{4+5} and M as 2.1: 1.7. R_{4+5} and M in apical part parallel. Ratio of posterior crossvein *m-cu* to apical part of CuA_1 as 1.5: 2.6. Halter yellow. Calypter with yellow hairs and black setae.

Abdomen dark green with bronze shine, with black stripes on posterior margins of tergites, with black hairs. Epandrium brown, oval. Surstylus yellow, longer than epandrium, about 5 times as long as wide (Figs 4–6). Hypandrium short oval. Cercus (Fig. 5) wide triangular, longer than epandrium, light yellow in basal part, with black border and long setae. Phallus (Fig. 7) hook-shaped, with a triangular process before apex.

Female unknown.

Comparison. According to the key of the Holarctic species (Stackelberg & Negrobov, 1976), the new species runs to *Nematoproctus longifilus* Loew, 1857 and can be distinguished from the latter by a number of characters, including the structure of the hypopygium. The key by Negrobov & Naglis (1916) can be modified as follows:

– Antenna yellow, apical part of postpedicel brown. Palpus yellow. Mid femur without ventral hairs. Cercus triangular, with the apex reaching the base of abdominal segment 4. Apical part of *M* almost straight ..... ***N. kumazawai* sp. nov.**
– Antenna black, only the scape yellow from below. Palpus silvery white. Mid femur with short ventral hairs. Cercus long, threadlike, with the apex reaching abdominal segment 3. Apical part of *M* curved . ..... ***N. longifilus***



Figs 1–7. *Nematoproctus kumazawai* **sp. nov. 1**, habitus; **2**, head, frontal view; **3**, wing; **4**, hypopygium, lateral view; **5**, hypopygium, ventral view; **6**, surstylus, ventral view; **7**, phallus, lateral view. Scale bars: 0.1 mm.

Etymology. The species is named in honour of the Japanese entomologist Dr. Tatsunori Kumazawa.

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