

A NEW SPECIES OF THE GENUS *EUMERUS* MEIGEN, 1822 (DIPTERA: SYRPHIDAE) FROM DAURIA

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Summary. A new species of hoverfly, *Eumerus kochetkovi* sp. n., is described and illustrated based on males and females found on Kuku-Khadan Mountain in the Daurian Nature Reserve (East Siberia). New species differs distinctly from known *Eumerus* species by its entirely black abdominal terga, without pruinosity or yellow or red markings. New species is most similar to *Eumerus grunini* Barkalov et Mutin, 2024, which also has a uniformly black abdomen except for the yellow posterior margin of tergum IV, but easily distinguished from latter by its bare eyes.

Key words: hoverflies, *Eumerus*, taxonomy, new species, Zabaikalskii Krai, East Siberia, Russia.

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Резюме. С горы Куку-Хадан, расположенной в Даурском биосферном заповеднике (Восточная Сибирь), по самцам и самкам описан и иллюстрирован новый для науки вид мухи-журчалки, *Eumerus kochetkovi* sp. n. Новый вид хорошо отличается от известных представителей рода *Eumerus* полностью чёрными тергитами брюшка, без светлого опыления и жёлтых или красных пятен. Новый вид наиболее похож на *Eumerus grunini* Barkalov et Mutin, 2024, который также имеет одноцветно чёрное брюшко, за исключением жёлтого заднего края тергита IV, но легко отличается от последнего голыми глазами.

INTRODUCTION

The genus *Eumerus* Meigen, 1822 is one of the largest genera of Palaearctic hoverflies (Diptera: Syrphidae) (Stackelberg, 1961; Peck, 1988; Speight, 2024). Most of known species of this genus are distributed in the arid and semiarid regions of Central Asia and the Mediterranean. However, Mongolia and East Asia can also be considered a region of local endemism. Recently a few endemic species have been discovered in the Amur River basin (Barkalov & Mutin, 2004a, b; Mutin, 2025), and interesting findings continue to be made to this day. A new species with a unique set of characters that can be considered plesiomorphic is described here from East Siberia.

MATERIAL AND METHODS

All specimens of the new species were collected by sweep netting near Kuku–Khadan Mountain (745 m) in the Daurian Nature Reserve. Initially, they were placed on cotton pads for storage and transportation. Immediately before examination, they were softened in a desiccator and pinned with entomological pins. The male genitalia preparation was made using traditional technology after 24 hours of macerating in a 15% KOH solution. The morphological terminology follows Thompson (1999) with later additions (van Steenis et al., 2023). Photographs were taken with an Olympus SZX16 stereomicroscope and an Olympus DP74 digital camera and stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

The holotype and paratypes of the new species are deposited in the Federal Scientific Center of East Asia Terrestrial Biodiversity, Vladivostok, Russia (FCBV).

DESCRIPTION OF NEW SPECIES

Eumerus kochetkovi Mutin, sp. n.

<https://zoobank.org/NomenclaturalActs/4E0C010D-FD02-4DD0-94E1-445320ACC2D2>

Figs 1–6

TYPE MATERIAL. Holotype – ♂, **Russia**: Zabaikalskii Krai, Daurian Nature Reserve, Kuku-Khadan Mt., 29–30.V.2025, leg. D.N. Kochetkov (FCBV). Paratypes: 14♂, 11♀, with the same labels as the holotype [FSCV].

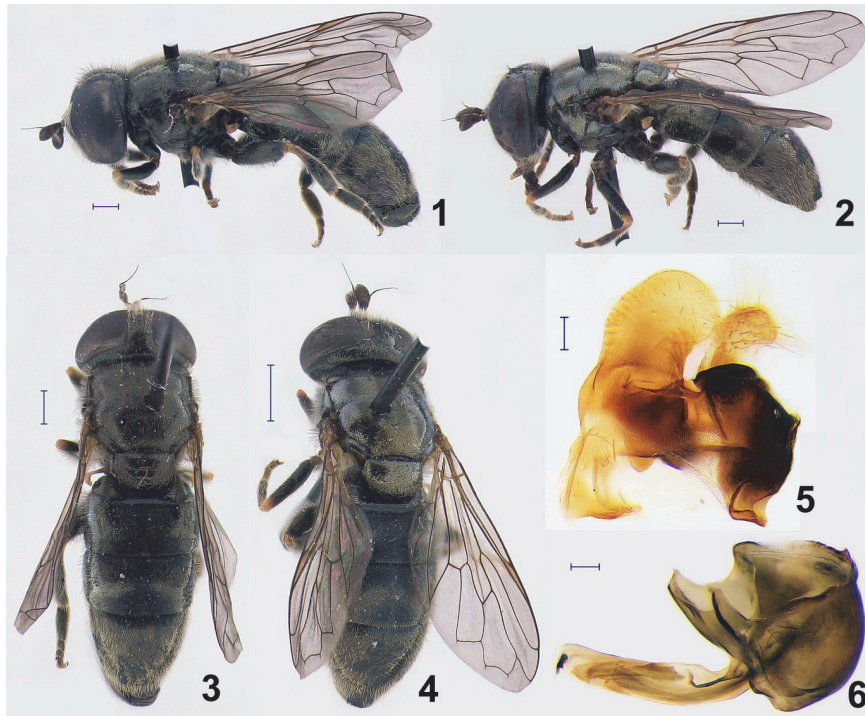
DESCRIPTION. Male. Body length 5.6–7.8 mm, wing length 4.0–5.4 mm. Face and frons dull black, weakly pruinose, with white short pile. Vertex and dorsal part of occiput shining black, with white erect pile. Ocellar triangle isosceles, longer than wider. Eye contiguity only half the height of frontal triangle; its length about 5–6 facets. Eye bare. Antennae dark-brown to almost black, except reddish postpedicel baso-ventrally. Postpedicel almost 1.5 times longer than its maximal width, convex dorsally and almost straight ventrally, with unclear fossette-like depression occupying apical third of outer surface.

Thorax mainly shining black with olive tinge, except weakly expressed submedial pruinose vittae on mesonotum, with whitish erect pile. Scutellum semi-round, with shorter pile and distinctly serrated margin. Wing membrane with dense microtrichia. Haltere whitish to grey.

Legs mainly black except yellow to reddish apex of pro- and mesocoxa, pro- and mesotrochanter, apical 1/6 of pro- and mesofemur, apex of metafemur, basal 1/3 and apex of tibiae, apical tarsomere of pro- and mesotarsus. Posterior surface of pro- and mesofemur with straight whitish pile; similar pilosity on main part of metafemur except basal third and whole posterior surface with shorter semi-recumbent pile; length of longest pile near half of maximal width of metafemur. Metafemur thickened; ratio of length to width on its middle part 3:1; anterior carina with 9–11 short setulae, 12–14 on the posterior carina. Metatibia without any baso-ventral carinae, thickened in apical half.

Abdomen. Terga entirely black, with mainly whitish pile except very short appressed black pile on postero-medial surface of terga II and III; dense white pile on shining lateral parts of terga II and III create triangular maculae; tergum IV entirely bronze-shiny covered by semi-recumbent whitish to goldish pile. Sterna II and III rectangular, brown, with erect white

pile. Sterna IV almost rectangular, with indistinct postero-lateral rounded lobes, blackish, covered by very short appressed white pile. Sternum VIII shiny black, with goldish pile. Genitalia as Figs. 5–6; posterior surstylar lobe large and wide, rounded at the top, smoothly curved towards the cerci; anterior surstylar lobe well developed, foot-shaped, widened apically; the cerci normal size, sickle-shaped. Hypandrium sharply narrow from basal massive part; its apical part almost straight.



Figs 1–6. *Eumerus kochetkovi* sp. n. 1–2 – habitus, lateral view; 3–4 – habitus, dorsal view; 1, 3 – male; 2, 4 – female; 5 – epandrium, lateral view; 6 – hypandrium, lateral view. Scale bars: 1–4 = 0.5 mm; 5–6 = 0.1 mm.

Female. Body length 5.8–8.2 mm, wing length 4.2–6.0 mm. Similar to male except characters of sexual dimorphism: frons shining with bronze tinge and densely punctate, weakly narrowing in anterior third; its width before ocellar triangle is 3.5–4 times less than head width; ocellar triangle equilateral.

DIAGNOSIS. The species differs from the majority of known *Eumerus* species by the combination of the following characters: complete absence of pruinosity on unicolored black abdominal terga, bare eyes (male holoptic), weakly visible pruinose submedial vittae on the scutum.

A distinctive feature of this species is the absence of any specific male characters typical for the species groups and individual species, such as modifications of legs or posterior margin of tergum IV as well as of specific characters of antennae, wing coloration, pruinosity or

pale (yellow to red) markings on the tergites, etc. The structure of the anterior lobe of the surstylus is similar to members of the *ornatus* group, but the cerci are simple, not enlarged or balloon-like. It is easily distinguished by its bare eyes from *Eumerus grunini* Barkalov et Mutin, 2024, which has the scutum without visible pruinose vittae and an entirely black abdomen except for the yellow posterior margin of tergum IV.

DISTRIBUTION. Russia: East Siberia, Transbaikal Region (Dauria).

HABITAT. All specimens were collected by sweep netting in the steppe (Figs. 7–8). The attractiveness of any particular flowering plant for these flies has not been established.

ETHYMOLOGY. The species is named in honor of Denis Nikolaevich Kochetkov, an employee of the Daurian Nature Reserve, who has helped actively in our study of Far Eastern hoverflies over a long time.



Figs 7–8. Kuku-Khadan Mountain, the Daurian Nature Reserve (photos of D. Kochetkov). 7 – the view of Kuku-Khadan Mountain; 8 – the steppe in spring on the mountain slopes.

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