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

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Summary. *Eumerus badkhyziensis* Mutin, **sp. n.** is described from Turkmenistan. The new species differs from its known congeners with red abdomen by unusual set of characteristics, including foremost the dichoptic bare eyes, wing without dark mark, lack of pollinose vittae on mesonotum and entirely pale pilose body.

Key words: Syrphidae, taxonomy, new species, description, Central Asia.

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Резюме. Из Туркмении описан *Eumerus badkhyziensis* Mutin, **sp. n.** Новый вид отличается от известных видов рода с красным брюшком необычным сочетанием признаков, прежде всего дихоптическими голыми глазами, крыльями без темных пятен и отсутствием продольных полос пыльцы на среднеспинке.

INTRODUCTION

The genus *Eumerus* Meigen, 1822 unites nearly 300 species, which live mainly in arid and semiarid regions of Eurasia and Africa (Stackelberg, 1961; Peck, 1988; Speight, 2016; Smit *et al.*, 2017; Pape & Evenhuis, 2019). The larvae of these hoverflies breed usually in bulbs and other succulent organs of the angiosperms, and some are known as pests of cultivated plants (Pérez-Bañón & Marcos-García, 1998; Ricarte *et al.*, 2017; Piwowarczyk & Mielczarek, 2018). The species diversity of the genus is the main reason of increased attention from taxonomists (Grković *et al.*, 2015, 2017; van Steenis *et al.*, 2017; Chroni *et al.*, 2018; Grković *et al.*, 2019a, b). There are some distinct species-groups within the genus, but other members of the genus are distinguished by a unique combination of characters as the species described below.

A single specimen of the new species was caught by A.S. Lelej in the depression of Ero-ylunduz Salt Lake, located in Bathyz Plateau within the nature reserve of the same name.

MATERIAL AND METHODS

The holotype of the new species is deposited in the Federal Scientific Center of East Asia Terrestrial Biodiversity, Vladivostok, Russia [FCBV] (formerly the Institute of Biology and Soil Science). The morphological terminology follows Thompson (1999).

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.

DESCRIPTION OF NEW SPECIES

Eumerus badkhyziensis Mutin, sp. n.

<http://zoobank.org/NomenclaturalActs/E251F7B6-2EB2-4879-A6EE-0BB055A3CABD>

Figs 1–5

TYPE MATERIAL. Holotype – ♂, **Turkmenistan**: Bathyz State Nature Reserve, Eroylan-landuz, 16.V 1990, leg. A. Lelej [FCBV].

DESCRIPTION. MALE. Body length (excluding antenna): 5,0 mm; wing length: 3,5 mm.

Head. Eyes bare, distinctly dichoptic. The shortest distance between eyes more than width of basoflagellomere. Ratio minimal width of frons: width of head 1,2: 7; ratio width of ocellar triangle: width of head 1,5: 7. Face dull black, with white pile. Frons and vertex shining black with a bluish tinge, covered white erect pile, which is shorter than width of flagellomere. Ocellar triangle isosceles-obtuse. Distance from anterior ocellus to level of posterior ocelli equal to distance from posterior ocellus to level of upper eye corners. Antenna mainly orange, weakly darkened dorsally, with scattered silvery pollinosity; basoflagellomere rather oval (ratio length: width 1,1: 1), with the distal part weakly pointed ventrally; arista orange and thickened basally, with brownish apical part (Fig. 5).

Thorax mainly shining black with a bluish tinge, except posterior and ventral plates of the mesothoracic pleuron brown, with white short pile. Mesonotum without pollinose vittae. Katepisternum with sparse short pile on upper half and some pile near ventral margin. Scutellum sub-rectangular, with rather broad rim.

Legs pale pilose. Coxae and trochanter brownish. Pro- and mesofemur mainly brown, except apical 1/3 yellow. Metafemur moderately thickened, mainly brown except apical ¼ orange, with row of 5–6 spines on anterior ridge and row of 3 spines on posterior ridge. Tibiae orange; metatibia rather flattened baso-ventrally, with subapical darkish annulus-like mark. Tarsi entirely yellow; setae on mesotarsus brownish.

Wing. Membrane hyaline, with microtrichia. Veins yellowish; pterostigma about same color as the wing. Vein R4+5 weakly curved. Halter white.

Abdomen whole reddish, with short appressed pale pile; 1st tergum darkened with a bluish tinge; 2nd, 3rd and 4th terga with pairs of white pollinose transverse maculae.

Genitalia (Figs 3, 4). The apex of posterior lobe of surstylus conically pointed. Hypandrium strongly thickened in basal part, then smoothly tapering apically.

FEMALE. Unknown.

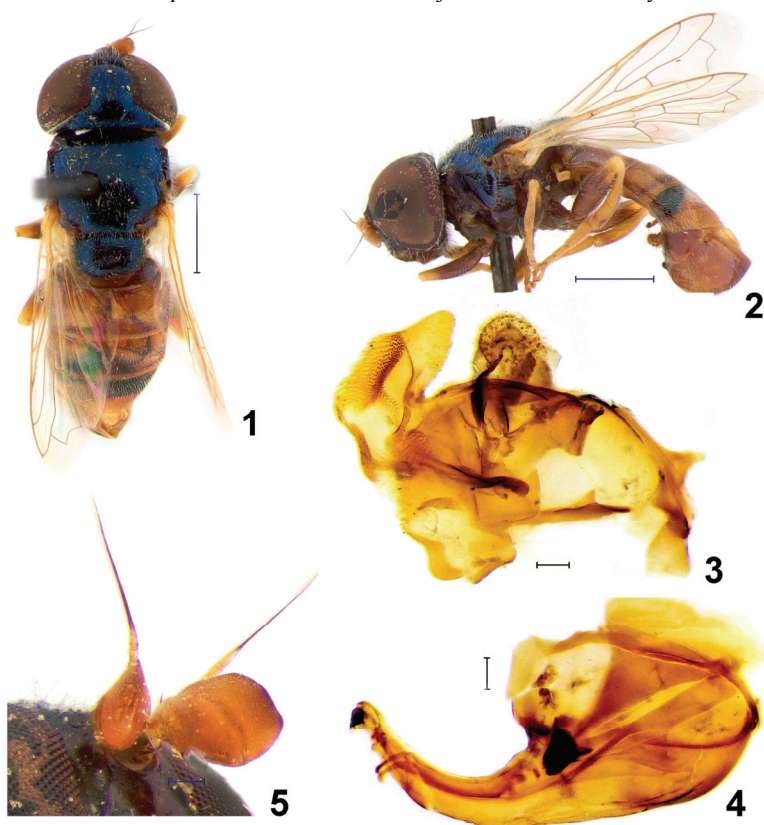
DIAGNOSIS. New species differs from other species of the genus with red abdomen by the following combination of external characters: bare dichoptic eyes, orange antennae, wing without dark spot, pale pilosity of whole body and legs mainly orange. Known Palaearctic species with distinctly dichoptic eyes and mainly red abdomen (*Eumerus alajensis* Peck, 1966, *E. arkitensis* Peck, 1969, *E. binominatus* Hervé-Bazin, 1923, *E. falsus* Becker, 1922, *E. kirgisorum* Peck, 1971, *E. nigrifacies* Becker, 1921, *E. pamirorum* Stackelberg, 1949, *E. selevini* Stackelberg, 1949, *E. tadjhikorum* Stackelberg, 1949) have more or less visible pilosity on eyes. Species with red or partly red abdomen, known only for females, have also pilose eyes (*E. griseus* Becker, 1921, *E. pavlovskii* Stackelberg, 1964, *E. palaestinensis* Stackelberg, 1949, *Eumerus rubescens* Villeneuve, 1912), which allows us to distinguish them from a new species. Genitalia of new species is similar to one of *E. sinuatus* Loew, 1855 by posterior lobe of surstylus conically pointed and the form of the hypandrium in outline, but mostly external characters of these species are very different.

The new species is very likely related to *E. falsus* Becker 1922. In the key to Palaearctic *Eumerus* species (Stackelberg 1961), the new species keys out to *falsus*. Both species share the following characters: dark wingspot absent, orange antennae, isosceles-obtuse ocellar triangle, mesonotum without vittae of white pollinosity, moderately thickened metafemur. The

male genitalia of *E. falsus* are not published, but from the description and photographs of specimens the two species can be separated by the following characters (*falsus* characters in parenthesis): eyes bare (eyes covered with hairs), body size 5 mm (10-12 mm), ratio vertex width at posterior ocelli: head-width 1: 3,5 (1: 4,5). *Eumerus falsus* is the replacement name for *Eumerus rubriventris* Becker, 1921 (= homonym of *rubriventris* Macquart, 1829) and *Eumerus latifrons* Sack 1932 and *Eumerus zurudnyi* Stackelberg 1949 are synonyms of it. The known distribution of *E. falsus* spans from Israel, Syria, Turkey, Iran to Turkmenistan and Tadjikistan (Stackelberg 1961), which would make the two species likely sympatric.

DISTRIBUTION. Turkmenistan (Bathyz State Nature Reserve, Eroyulanduz Depression).

ETHYMOLOGY. Species name is the Latin adjective from the Bathyz Plateau.



Figs 1–5. *Eumerus badkhyziensis* Mutin, **sp. n.**, holotype ♂. 1 – habitus, dorsal view; 2 – same, lateral view; 3 – epandrium, lateral view; 4 – hypandrium, lateral view; 5 – antennae, lateral view. Scale bar: 1, 2 = 1.0 mm; 3–5 = 0.1 mm.

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