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Review of the *Eumerus strigatus* (Fallén, 1817) species group (Diptera, Syrphidae) in the central and eastern parts of the Palaearctic. Part I. Checklist with description of new species

Обзор видов мух-журчалок (Diptera, Syrphidae) группы *Eumerus srtrigatus* (Fallén, 1817) центральной и восточной частей Палеарктики. Часть I: список видов с описанием новых для науки

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Ключевые слова: мухи-журчалки, *Eumerus*, группа *strigatus*, новые виды.

Abstract. The systematics and fauna of hoverflies of the genus *Eumerus* Meigen, 1822 (Diptera, Syrphidae) in the central and eastern parts of Palaearctic have been studied. This paper deals with species that are close to *E. strigatus* (Fallén, 1817). A total of 30 species have been registered, of which 8 species, *E. ampliotarsus* Barkalov et Mutin, **sp.n.**, *E. borisovi* Barkalov et Mutin, **sp.n.**, *E. dauricus* Barkalov et Mutin, **sp.n.**, *E. gulyaevi* Barkalov et Mutin, **sp.n.**, *E. iranicus* Barkalov et Mutin, **sp.n.**, *E. trilobatus* Barkalov et Mutin, **sp.n.**, *E. verae* Barkalov et Mutin, **sp.n.** and *E. ziminae* Barkalov et Mutin, **sp.n.**, are described as new to science. Six species are newly recorded for some regions, namely: *E. banaticus* Nedeljković et al. for Kazakhstan and the south part of European part of Russia, *E. basalis* Loew for Krasnodarskii Krai of Russia, *E. bicornis* Grković et al. for Turkmenistan, *E. consimilis* Šimić et Vujić for Azerbaijan, *E. montanum* Grković et al. for Kazakhstan and Krasnodarskii Krai of Russia, and *E. roborovskii* Stackelberg for Mongolia. Photographs of the external appearance and drawings of male genitalia, the fourth sternum and other characters important for species diagnoses are provided for all of the discussed species.

Резюме. Проведено изучение систематики и фауны мух-журчалок рода *Eumerus* Meigen, 1822 (Diptera, Syrphidae) центральной и восточной частей Палеарктики. Работа касается группы видов, близких к *Eumerus strigatus* (Fallén, 1817). Всего обнаружено 30 видов, 8 из которых: *Eumerus ampliotarsus* Barkalov et Mutin, **sp.n.**, *Eumerus borisovi* Barkalov et Mutin, **sp.n.**, *Eumerus dauricus* Barkalov et Mutin, **sp.n.** *Eumerus gulyaevi* Barkalov et Mutin, **sp.n.**, *Eumerus iranicus* Barkalov et Mutin, **sp.n.**, *Eumerus trilobatus* Barkalov et Mutin, **sp.n.**, *Eumerus verae* Barkalov et Mutin, **sp.n.** и *Eumerus ziminae* Barkalov et Mutin, **sp.n.** описываются как новые для науки. Шесть видов впервые приводятся для ряда регионов: *E. banaticus* Nedeljković et al. для Казахстана и юга Европейской части России, *E. basalis* Loew для Краснодарского края, *E. bicornis* Grković et al. для Туркменистана, *E. consimilis* Šimić et Vujić для Азербайджана, *E. montanum* Grković et al. для Казахстана и Краснодарского края и *E. roborovskii* Stackelberg для Монголии. Для всех видов даны фотографии габитуса, а также рисунки гениталий самцов, четвёртого стернита и других важных для видовой диагностики признаков.

Introduction

Hoverflies, or the syrphid flies (Syrphidae), represent a worldwide family of higher dipterans, one of the five most species-rich families in the order [Nartshuk, 2003]. The genus *Eumerus* Meigen has long remained one of the major, but poorly studied taxa within the Palaearctic [Speight et al., 2013]. It is only in the last two decades that there has been increased attention to the systematics, nomenclature and faunistics of this genus. Recently much has been written about the position of the genus under study in the family system and its ecological role in biocenoses, so we will not dwell on these matters [Ricarde et al., 2008; Speight et al., 2013; Markov et al., 2016; Grković et al., 2017, 2019; Ricarte et al., 2017; Gilasian et al., 2020, 2022; Hassan et al., 2022].

Prior to these works, the most complete synopsis of the Central Asian representatives of *Eumerus* Meigen was published by A.A. Stackelberg [Stackelberg, 1961], who summarised all the original descriptions published up to that time [Stackelberg, 1949, 1952] and produced an identification key for both males and females. Despite significant advances in the knowledge of the genus since the appearance of that work, it proved to be inaccessible to many scholars. In addition, the paper lacked illustrative material, especially drawings of male genitalia, which currently play a major role in species identification in the genus.

The first study describing a species group close to *Eumerus strigatus* (Fallén, 1817) could be Martin Speight's with coauthors paper [Speight et al., 2013: 25], in which he diagnosed the group by including five species. Although the diagnostic characters of this group were not specified, based on the identification key provided, it included *Eumerus consimilis* Šimić et Vujić, 1996; *E. funeralis* Meigen, 1822; *E. narcissi* Smith, 1928; *E. sogdianus* Stackelberg, 1952 and *E. strigatus* (Fallén, 1817). All of them possess "ventral surface of t_3 with a shallow, longitudinal ridge carrying short, black, procumbent spinules (clearly stronger than the surrounding, short, black pilis), in the basal half of its length" [Speight et all., 2013: 25, Fig. 5]. This character sufficiently distinguishes a large group, of which more individual species have been studied in later papers. For instance, Chroni et al. [2017] provided a molecular study of the genus. As a result, species groups have been diagnosed, including the *strigatus* group. In the paper by Steenis [2017] devoted to the description of two new species close to *Eumerus barbarus* (Coquebert, 1804), no description of the *strigatus* group was given. Only a description of a subgroup close to this species is given; it seems that this subgroup belonged completely to the *strigatus* group.

In the same year, Grković et al. [2017] described morphological characters of the *strigatus* group, but did not mention the main diagnostic group trait provided by Speight: viz., the presence of a series of short, procumbent spinules in the baso-ventral part of hind tibiae. Later Smit et al. [2020], while describing a new species from Bhutan, repeated the group diagnostic characters given in Grković et al. [2017], added diagnosis and an identification key to males of a subgroup of the species close to *E. bactrianus* Stackelberg, 1952.

Based on all the aforementioned works, the *strigatus* group can be diagnosed by the following morphological characters: (1) small flies, with completely dark abdomen, sometimes hind margin of IV tergite can be light, on II–III and often on IV abdominal terga there are oblique spots of grey markings (Fig. 17); (2) male eyes holoptic; (3) tibiae of hind pair of legs in their basal thirds with two rows of fine, recumbent black bristles (Fig. 5: p.s.); and (4) abdominal sternites without outgrowths and tufts of setae (in *E. verae* Barkalov et Mutin, sp.n., sternum IV with two medial tufts of pilis), IV sternite on posterior margin varies from completely straight to strongly excised, almost divided in two (Figs 6, 30, 54).

According to these characters, a large number of species fall into the group, which makes it possible to recognise three subgroups within it, namely: the *bactrianus*, the *barbarous* and the *strigatus* proper subgroups. Given the diversity of genitalia in the whole *strigatus* group, it is likely to be of polyphyletic origin; yet it is premature to classify it as a separate subgenus without genetic analyses of all the species.

In the present review, only a part of the species of this group that occur in the Crimea, the Caucasus, Central Asia and southern Siberia is considered. These include the following taxa: *Eumerus acuticornis* Sack, 1933; *Eumerus amoenus* Loew, 1848; *Eumerus ampliotarsus* Barkalov et Mutin, sp.n.; *Eumerus arnoldii* Stackelberg, 1952; *Eumerus bactrianus* Stackelberg, 1952; *Eumerus banaticus* Nedeljković, Grković et Vujić in Grković, van Steenis, Kočiš Tubić, Nedeljković, Hauser, Hayat, Demırözer, Đan, Vujić & Radenković, 2019; *Eumerus basalis* Loew, 1848; *Eumerus bicornis* Grković, Vujić & Hayat in Grković, van Steenis, Kočiš Tubić, Nedeljković, Hauser, Hayat, Demırözer, Đan, Vujić & Radenković, 2019; *Eumerus bilobatus* Barkalov, Mutin, Daminova et Rakhimov, 2020; *Eumerus borisovi* Barkalov et Mutin, sp.n.; *Eumerus consimilis* Šimić et Vujić, 1996; *Eumerus dauricus* Barkalov et Mutin, sp.n.; *Eumerus funeralis* Meigen, 1822; *Eumerus gulyaevi* Barkalov et Mutin, sp.n.; *Eumerus iranicus* Barkalov et Mutin, sp.n.; *Eumerus kondarensis* Stackelberg, 1952; *Eumerus montanum* Grković, Radenković et Vujić in Grković, Vujić, Chronib, van Steenis, Đana, 2017; *Eumerus reichardti* Stackelberg, 1952; *Eumerus roborovskii* Stackelberg, 1952; *Eumerus rushanicus* Stackelberg, 1952; *Eumerus sibiricus* Stackelberg, 1952; *Eumerus sogdianus* Stackelberg, 1952; *Eumerus strigatus* (Fallén, 1817); *Eumerus transcaspicus* Stackelberg, 1952; *Eumerus trilobatus* Barkalov et Mutin, sp.n.; *Eumerus tugajorum* Stackelberg, 1952; *Eumerus turanicola* Stackelberg, 1952; *Eumerus turanicus* Stackelberg, 1952; *Eumerus verae* sp.n.; *Eumerus ziminae* Barkalov et Mutin, sp.n.

Material and methods

The present study is primarily based on the materials collected in 2014–2023 years during joint Russian-Tajik entomological expeditions, in accordance with the agreement on scientific co-operation between the Institute of Systematics and Ecology of Animals, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, and E.N. Pavlovsky Institute of Zoology and Parasitology, National Academy of Sciences of Tajikistan, Dushanbe. Insects were collected using Malaise traps, yellow pan traps and individually trapped with a net. These three techniques allowed us to obtain a representative set of specimens in a short time that made it possible to judge about the species composition of hoverflies in a study area. Most representative materials were obtained using yellow pan traps and individual trapping. This is due to the ethological features of the genus under study, of which many species do not fly above 0.5 m, while others most often sit on leaves of small plants, stones and/or the ground. The material studied is deposited at the following collections in Russia: Siberian Zoological Museum of the Institute of Systematics and Ecology of Animals Novosibirsk (SZMN), Zoological Institute, Saint-Petersburg (ZIN), Zoological Museum of the Moscow University, Moscow (ZMMU); Federal Scientific Center of East Asia Terrestrial Biodiversity, Vladivostok, Russia (STBV); Entomological collection of the Samarkand State University, Samarkand (SSU); private collection of V.A. Mutin, Komsomolsk-na-Amure (PMC); private collection of D.B. Daminova, Tashkent, Uzbekistan (PDC).

The available types of the species described by A.A. Stackelberg deposited in ZIN (St. Petersburg) has been re-examined as well. Significant materials from different regions of Kyrgyzstan were given to us for study by D.A. Milko, and from Uzbekistan by M.R. Rakhimov. For species identification, the key to Palaearctic species of *Eumerus* Meigen [Stackelberg, 1961] was used. When it was difficult to identify a species, the aforementioned revisions and descriptions of individual subgroups were used. We also compared our specimens with the descriptions and specimens from the SZMN collection. When identifying species, male genitalia are of the greatest importance, so we have provided drawings of the male genitalia for all species. In addition, drawings of the ocellar triangles, antennae and sternites IV of males have been given. Females have fewer characteristic features and are still unknown for several species.

Figures were made using an ocular grid and graph paper. Photos were taken with a Zeiss Stemi 2000 stereoscopic microscope.

When drawing abdominal sternites dry specimens were used, often with genital segments removed. Wherein in the figures the sternites are shown in the projection in which they were, without correcting the possible asymmetry of their parts. The list of publications includes only those papers that mention species from the examined areas.

Body length was measured dorsally from the anterior margin of the lunule to the tip of the abdomen. Wing length was measured from the tip of the wing to its base. The male genitalia were dissected and prepared for study following Hippa [1968]. Morphological terminology follows Thompson [1999], with the exception of leg numbering. Parts of the male genitalia are given according to Grković et al. [2019]. The following abbreviations have been adopted in this work: f — femur (f_1 — fore femur, f_2 —mid femur, f_3 — hind femur); t –tibia (t_1, t_2, t_3 respectively); ta — tarsus (ta_1, ta_2, ta_3 respectively); surnames of A.V. Barkalov, V.K. Zinchenko, A.A. Stackelberg and V.V. Gussakovskij in the list of material are given as follows: B., Z., A. Stack, V. Guss. respectively; surnames of all others collector are given completely.

In the following text, collecting regions in the Republic of Tajikistan are abbreviated as follows: ***Iskanderkul:*** Iskanderkul' Lake, environs Zmeinoe Lake 39°05' N, 68°22' E, h~2212 m a.s.l; ***Tigrovaya Balka:*** Tigrovaya Balka Reserve, 37°18' N, 68°31', h~334 m a.s.l; ***Kondara:*** Kondara Gorge 38°48' N, 68°48' E, h~1185–1225 m a.s.l.; ***Shakhriston:*** Shakhriston area 39°38' N, 68°49' E, h~2217 m a.s.l.; ***Dushanbe:*** Dushanbe, Institute of Zoology and Parasitology of the Republic of Tajikistan, 38°32' N, 68°49' E, h~754 m a.s.l.; ***Kalon:*** 3 km NE Kalon village, Siekukh, 39°03' N, 68°52' E, h~2433 m a.s.l.; ***Sary-Dshangal:*** Environs of Sary-Dshangal village 38°39' N, 70°29' E, h~1945 m a.s.l.; ***environs Tavildara:*** 4–6 km S. Tavildara 38°39' N, 70°31' E, h~1965 m a.s.l.; Gorno-Badakhshan Autonomous Region: ***Barchadev:*** 3–7 km along the gorge Bidjondara from Barchadev village, 37°17' N, 71°31' E, h~2640–2748 m a.s.l.; ***Khorog:*** Khorog town, Pamir Botanical Garden 37°28'N, 71°35'E, h~2245 m a.s.l.; ***Khuf:*** Khuf river, Kasarak tract, 37°48' N, 71°41' E, h~3180 m a.s.l.; ***Bogevdara:*** environs of Bogevdara village, 37°38' N, 71°43' E, h~2700 m a.s.l.; ***Basid:*** Basid village, 38°07' N, 72°10' E, h~2353 m a.s.l.

Nomenclatural acts introduced in the present work are registered in ZooBank (www.zoobank.org) under urn:lsid:zoobank.org:pub: urn:lsid:zoobank.org:pub:E171F577-D6FB-4EE7-9B3F-91C69EC1387E.

Results

Description of new species

Eumerus ampliotarsus Barkalov et Mutin, **sp.n.**
Figs 1–8, 65.

Urn:lsid:zoobank.org:act:0645FAFC-5C22-4CDD-92DB-35BCEAA6CA4C.

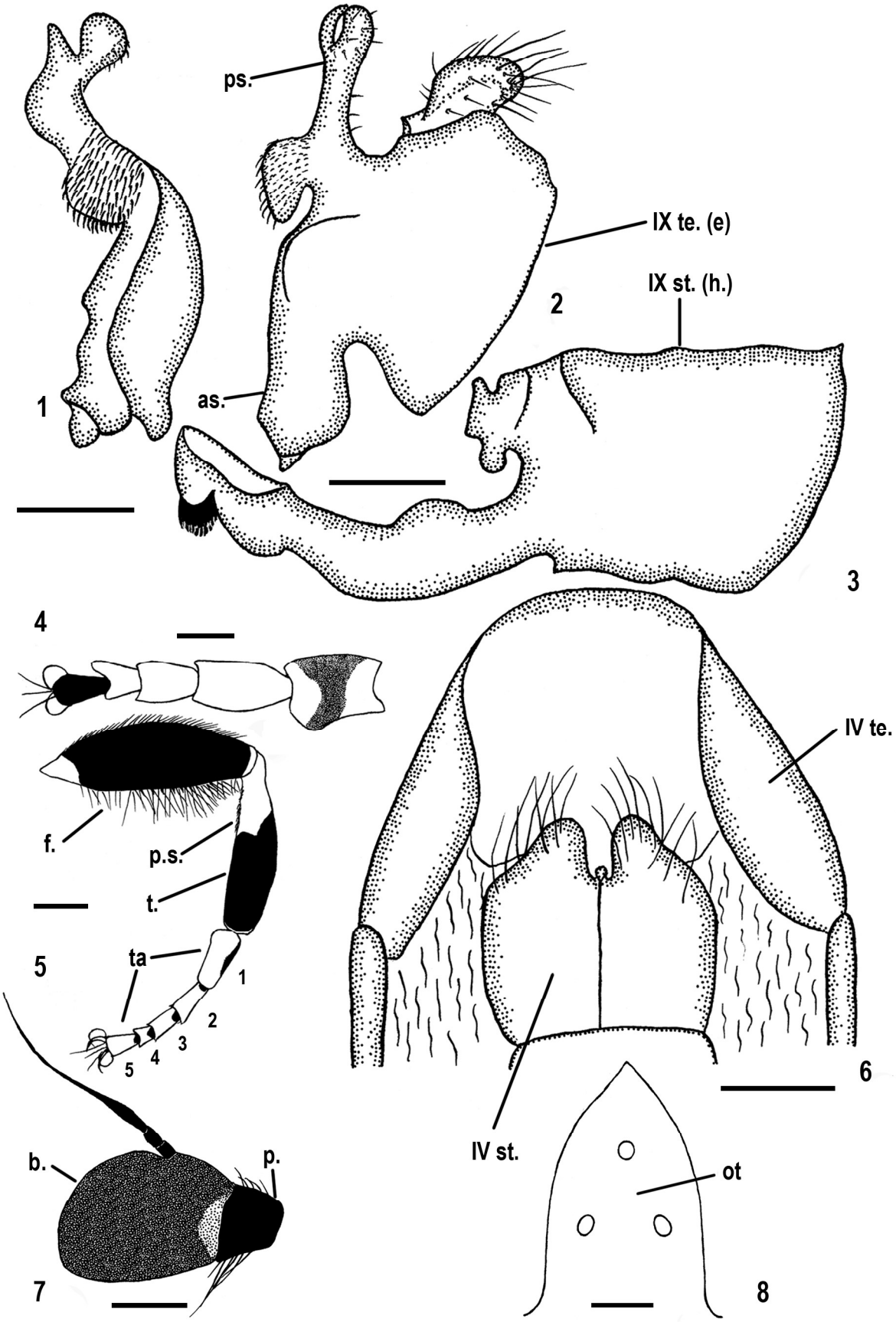
Material. **Kazakhstan,** ***Tien Shan mountains:*** holotype, ♂, Aksu-Dzhabagly Reserve, 23.V.1966, L. Zimina leg. (ZMMU); paratype: 1♂ — same data (ZMMU).

Diagnosis. The new species belongs to the *bactrianus* species subgroup, where differs from all members by set of following features: basoflagellomere black (Fig. 7), hind basitarsus short and broadened in apical half (Fig. 4), lateral prolongation of bifurcated surstylus distinctly broader than main prolongation (Fig. 1, 2).

Description. *Male* (Fig. 65). Head. Face weakly broadened ventrally, covered with silver tomentum and comparatively long, erect yellow pilis, genae with same tomentum and pilis. Frons with silver tomentum and white pilis. Antennae black, basoflagellomere with dense grey tomentum, finely brownish basally, arista black (Fig. 7). Eyes holoptic, line of contact almost equal of frons length, covered with dense, comparatively long white pilis. Vertex broad shiny with big spot of grey tomentum before anterior ocellus and with two small spots near posterior ocelli, covered with yellow pilis near and after ocellar triangle and with black pilis on ocellar triangle; ocellar triangle equilateral (Fig. 8). Occiput shiny with yellow pilis.

Thorax. Scutum and scutellum shiny with distinct copper reflection; postpronotum and lateral sides of scutum shiny without tomentum; two central longitudinal stripes of grey tomentum narrow and don't reach of hind margin of scutum; pilis erect mostly yellow, on central part of scutum with spot of black pilis. Pleurae black with grey tomentum, with glossy-shiny spots on posterior parts of katepisternum, anepisternum and katepimeron; pilis yellow. Legs: coxae and trochanters black; f black with narrowly yellow tips, covered with yellow pilis, f_3 moderately swollen, in apical half with short black ventral spurs, ventral pilis longer in apical half (Fig. 5); t with yellow basal 1/3–1/2 and extreme tips and black in apical part, t_3 in ventral 1/3 with short, black, procumbent spinules (Fig. 5: p. s.); ta_1 and ta_2 yellow with brown apical segment, ta_3 with yellow segments 2–3 and brown segments 1, 5; hind basitarsus short and broadened in apical half (Fig. 4). Wings covered with microtrichia except small spots in basal parts of cells BM and R.

Abdomen black, shiny with bright copper reflection; terga II–IV with distinct oblique spots of grey tomentum, pilis erect yellow on sides of terga and short depressed black medially; sternum IV raised making short keel, with deep central cut on posterior side, covered with long yellow pilis (Fig. 6); sternum VI with yellow pilis. Genitalia: lateral prolongation of bifurcated surstylus distinctly broader than main prolonga-


ps.
IX te. (e)
IX st. (h.)
2
1
as.
3
4
IV te.
f.
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tion; interior accessory lobe of posterior surstylus with dense short pilis (Fig. 1, 2).

Size: body length 8.3–8.6 mm, wing length 5.8–6.1 mm.

Female unknown.

Etymology. The name of the species reflects its morphological feature, an extended hind basitarsus.

Eumerus borisovi Barkalov et Mutin, **sp.n.**

Figs 9–18, 66.

Urn:lsid:zoobank.org:act:55620F51-9E85-49B5-B7DC-9525C6297B4F.

Material. **Armenia**, ***Tavush Province:*** holotype, ♂, Savkar, Idzhevanskij district, 24.VII.1969, V. Richter leg. (ZIN); paratypes: 1♀ — same data (ZIN); 1♂ —Parzlich Lake, near Dilizhan, 22.VII.1969, V. Richter leg. (ZIN); ***Gegharkunik Province:*** 1♂ — 7 km from Ardanysh, shore of Sevan Lake, 1.VI.1961, V. Richter coll. (SZMN).

Diagnosis. The new species belongs to the *bactrianus* species subgroup. It is very close to *E. turanicus* Stackelberg in many morphological characters, but differs in yellow fore and mid trochanters and coxae and construction of male genitalia in which posterior lobe of hypandrium much longer and slender, cerci are another form (Figs 9, 10). Sternum IV also differs (Fig. 12).

Description. *Male* (Fig. 66). Head. Face distinctly broadened ventrally, covered with silver tomentum and semierect silver pilis; genae black without tomentum. Frons with silver tomentum and with rare pilis. Antennae mostly brownish, basoflagellomere with antero-ventral angle, orange basally and dark-brown apically (Fig. 15); arista black. Eyes with comparatively long white pilis, line of eyes connection slightly shorter length of frons. Vertical triangle broad, shiny, with grey tomentum before anterior ocellus, covered with dense black pilis; ocellar triangle equilateral (Fig. 14). Ocellus shiny, covered with white pilis.

Thorax. Scutum shiny-black with greenish reflection, covered with short, erect yellow and black pilis, lateral sides shiny without tomentum. Scutum with two narrow medial stripes of grey tomentum, not reaching of its hind margin. Scutellum shiny, with yellow pilis, its lateral rim bordered with obvious marginal dens. Pleurae black, covered with grey tomentum and white pilis. Legs: fore and mid coxae and trochanters yellow, hind coxa black, hind trochanter yellow without spur; f mostly black with yellow extreme base and tips, f_3 with distinct black ventral spurs in apical half, the longest pilis are in its middle part (Fig. 13); t yellow on basal half and on tips and blackish in apical part; t_3 in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding pilis (Fig. 13); ta yellow, finely darkened dorsally; basitarsus of ta_3 in length equal 2–4 segments combined. Wings hyaline with black veins, almost completely covered with microtrichia, only basis of cells R and BM without microtrichia.

Abdomen narrow, with almost parallel sides, completely black, covered with longer, erect yellow pilis laterally and short, depressed medially; tergum IV with black pilis anteriorly and yellow posteriorly, tergum VI with yellow pilis; terga II–IV with two distinct grey spots (Fig. 17); sternum IV with deep cut posteriorly (Fig. 12). Genitalia as in Figs 9, 10.

Size: body length 6.5–7.8 mm, wing length 5.1–5.8 mm.

Female. Similar with male except characters connected with sexual dimorphism. Antennae colored as in male but reddish-brown basal spot on basoflagellomere brighter and bigger (Fig. 16). Frons comparatively broad, slightly narrower medially, coarsely punctured, shiny black, with narrow stripes of grey tomentum along margins of eyes, covered with erect yellow pilis; ocellar triangle equilateral (Fig. 18), covered with black pilis; occiput with yellow pilis. Eyes covered with short, dense white pilis. Scutum and scutellum same as in male, but medial stripes of grey tomentum on scutum broader and more distinct. Pleurae, legs and wings as in male. Abdomen slightly broader than in male, coloration of pilis and form of grey spots same as in male.

Size: body length 7.0 mm, wings length 6.2 mm.

Etymology. The new species named after Russian odonatologist Sergei Nikolaevich Borisov.

Eumerus dauricus Barkalov et Mutin, **sp.n.**

Figs 19–27, 67, 68.

Urn:lsid:zoobank.org:act:6AEB221C-68EB-4E88-8448-711BFE8BED07.

Material. **Russia**, ***Zabaikalskii Krai:*** holotype, ♂, Daursky Reserve, Adon-Chelon, 4–7.VII.2022, D. Kochetkov leg. (SZMN). Paratypes: 2♀♀ — the same data (SZMN, PMC).

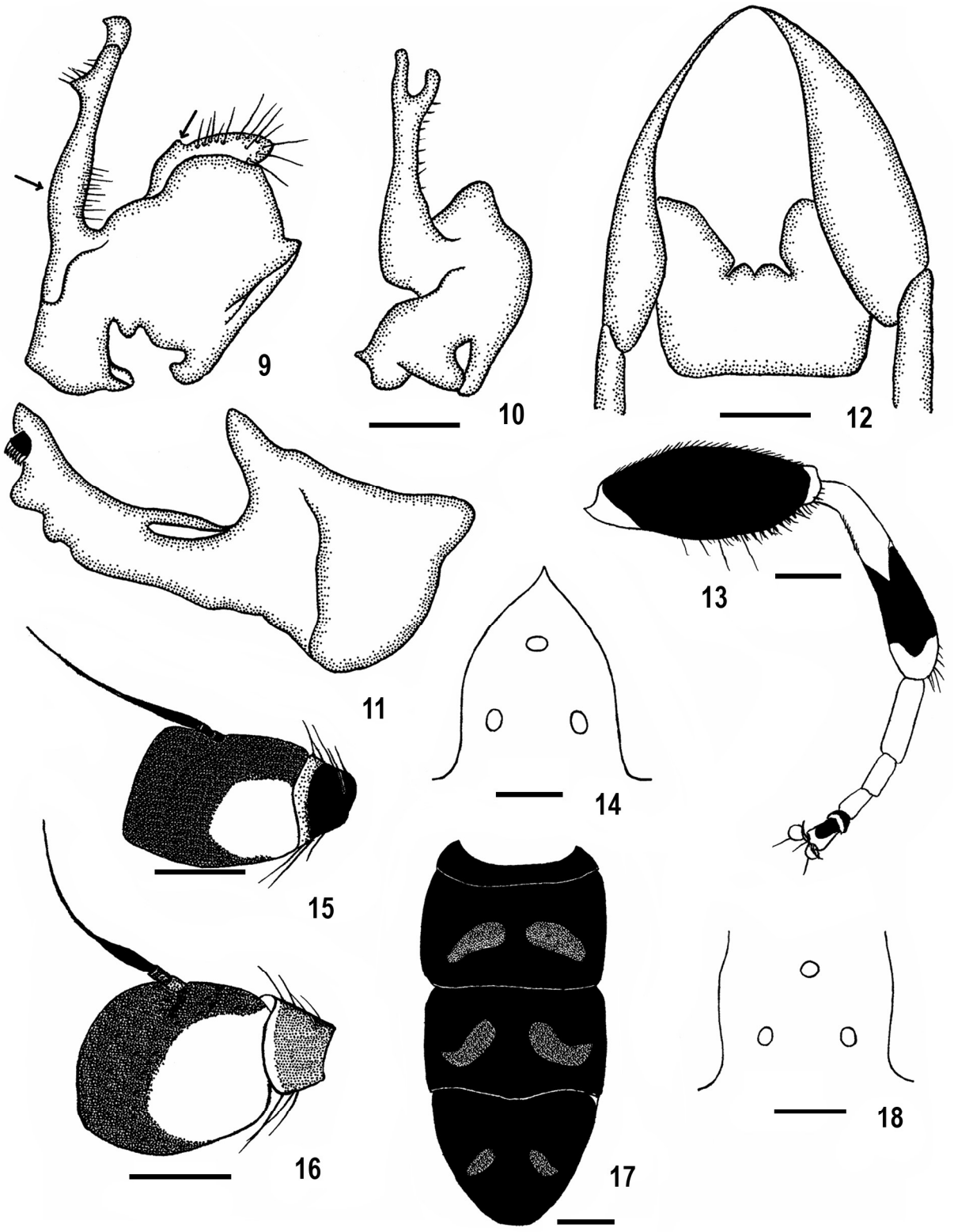
Diagnosis. The new species is close to the species having an equilateral vertical triangle, especially to *E. roborovskii* Stackelberg, but differs in having a broader basoflagellomere (length/width ratio approximately 1.4) (Fig. 21) and the posterior surstylus straight apically (Fig. 19). In *E. roborovskii* Stackelberg, length/width ratio approximately 2 and the posterior surstylus with a beak-shaped apex. The posterior surstylus is somewhat similar to that of *E. funeralis* Meigen, but there are a number of differences.

Description. *Male* (Fig. 68). Head. Face with parallel sides, covered with white pilis (face like a frons fell into water, so tomentum not visible). Eyes with short, rare pilis, line of its connection shorter than length of frons. Antennae mostly black, basoflagellomere irregular form, elongated, brownish near connection with pedicel and in basal part (Fig. 21), covered with dense silver tomentum. Vertex broad, ocellar triangle equilateral (Fig. 26), covered with mostly black pilis, some white pilis before triangle. Dorsal part of occiput with white pilis.

Thorax. Postpronotum scutum and scutellum shiny black, without any tomentum, covered with short white pilis. Pleurae except shiny hind parts of anepisternum and anepimeron covered with grey tomentum and white pilis. Legs mostly black, f with extreme tips yellow, f_3 finely swollen, the longest yellow pilis are in apical 1/3 (Fig. 23); t yellow in basal 1/3–1/2 and in tips and black in another parts, t_3 swollen in apical half, in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding pilis (Fig. 23); ta blackish dorsally with yellowish tips of segments. Wings brownish, completely covered with microtrichia.

Figs 1–8. Details of *Eumerus ampliotarsus* Barkalov et Mutin, sp.n., male morphology: ventral (1, 6), dorsal (4, 8) and lateral view (2, 3, 5, 7). 1, 2 — epandrium; 3 — hypandrium; 4 — hind tarsus; 5 — hind leg; 6 — IV sternum and tergum; 7 — 2–3 segments of antenna; 8 — ocellar triangle. Designations: as. — anterior surstylus, b. — basoflagellomere, e. — epandrium, f. — femur, h. — hypandrium, ot. — ocellar triangle, p — pedicel, ps. — posterior surstylus, p. s. — procumbent spinules, st. — sternum, t. — tibia, ta. — tarsus, te. — tergum. Scale bar: 0.23 mm for Figs 4, 6–8; 0.28 mm for Figs 1–3; 0.48 mm for Fig. 5.

Рис. 1–8. Детали строения самца *Eumerus ampliotarsus* Barkalov et Mutin, sp.n.: снизу (1, 6), сверху (4, 8) и сбоку (2, 3, 5, 7). 1, 2 — эпандриум; 2 — эпандриум; 3 — гипандриум; 4 — задняя лапка; 5 — задняя нога; 6 — IV стернит и тергит; 7 — 2–3 членики усика; 8 — глазковый треугольник. Обозначения: as. — передний сурстиль, b. — базофлагелломер, e. — эпандриум, f. — бедро, h. — гипандрий, ot. — глазковый треугольник, p — педисел, ps. — задний сурстиль, p. s. — прижатые щетинки, st. — стернит, t. — голень, ta. — лапка, te. — тергит. Масштаб: 0,23 мм для рис. 4, 6–8; 0,28 мм для рис. 1–3; 0,45 мм для рис. 5.



Figs 9–18. Details of *Eumerus borisovi* Barkalov et Mutin, sp.n. morphology: male (9–15, 17) and female (16, 18) in ventral (10, 12), dorsal (14, 17, 18) and lateral view (9, 11, 13, 15, 16). 9, 10 — epandrium; 11 — hypandrium; 12 — IV sternum and tergum; 13 — hind leg; 14 — ocellar triangle; 15, 16 — 2–3 segments of antenna; 17 — abdomen; 18 — ocellar triangle. Scale bar 0.23 mm for Figs 9–12, 14–16, 18; 0.45 mm for Fig. 17; 0.54 mm for Fig. 13.

Рис. 9–18. Детали строения *Eumerus borisovi* Barkalov et Mutin, sp.n.: самец (9–15, 17) и самка (16, 18) снизу (10, 12), сверху (14, 17, 18) и сбоку (9, 11, 13, 15, 16). 9, 10 — эпандриум; 11 — гипандриум; 12 — IV стернит и тергит; 13 —задняя нога; 14 — глазковый треугольник; 15, 16 — 2–3 членики усика; 17 — брюшко; 18 — глазковый треугольник. Масштаб: 0,23 мм для рис. 9–12, 14–16, 18; 0,45 мм для рис. 17; 0,54 мм для рис. 13.

Abdomen narrow, covered with white erect pilis on sides of terga and short depressed black pilis on central parts of terga; tergum IV with yellow pilis; grey tomentose spots almost invisible on terga II–III and absent on tergum IV; sternum IV with deep notch (Fig. 20). Genitalia as in Fig. 19.

Size: body length 5.8 mm; wing length 4.8 mm.

Female (Fig. 67). Face with fine grey tomentum and silver pilis. Frons narrow shiny, with narrow stripes of grey tomentum along eyes. Antennae mostly black, only basoflagellomere along line of contact with pedicel and medially reddish (Fig. 27). Ocellar triangle equilateral (Fig. 25).

Mesonotum shiny-black, without longitudinal stripes of grey tomentum, covered with short yellow pilis. Pleurae as in male. Legs as in male, but 1–3 segments of ta_2 yellow; hind leg as in Fig. 22.

Abdomen black with fine blueish reflection, pilis as in male, terga II–III with couples of oblique spots of grey tomentum; tergum IV without such spots.

Size: body length 7–8 mm; wing length 5.3–5.6 mm.

Etymology. The species is named after the type locality.

Eumerus gulyaevi Barkalov et Mutin, **sp.n.**

Figs 28–36, 69–70.

Urn:lsid:zoobank.org:act:2DE0300D-88D7-4BCE-98F6-BA438B812DBE.

Material. **Tadjikistan,** ***Varzob Gorge:*** holotype, ♂, 3 km NW Kallon village, 39°06′ N, 68°87′ E, h~2358 m a.s.l., 4.VII.2018, B. leg. (SZMN); paratypes: 5♂♂ —7 km NW Kallon village, h~2440 m a.s.l. 5.VII.2018, B. leg.; 9♂♂, 8♀♀ — 5 km NW Kallon village, h~2484 m a.s.l., 7–12.VII.2017, B. leg.; 1♂ — 3 km NW Kallon village, h~2440 m a.s.l., 1–4.VII.2017, B. leg.; 3♂♂ — 5 km NW Kallon village, h~2356 m a.s.l., 29.VI.2018, 1.VII., 3.VII.2018, B. leg.; 3♂♂, 1♀ — 3 km NW Kallon village, h~2440 m a.s.l., 1–4.VII.2018, B. leg.; 1♂, 1♀ — 3–3.6 km NW Kallon village, Siakukh, 39°04′ N, 68°52′ E, h~2342 m a.s.l., 11, 12.VI.2022, Z. leg. (SZMN); ***Varzob District:*** 1♂ — Gafil'abad, upper river Luchob, h~2500 m a.s.l., 18.VIII.1940, V. Guss. leg. (ZIN); 1♂, 4♀♀ — S slope Gissar mountain ridge, Khodzha-Obi-Garm, 2–11.VIII.1944, Nikolskaya leg (ZIN); ***Sughd Province:*** 1♂ — Kondara, h~1100 m a.s.l., Varzoba, 14.IX.1945, V. Guss. leg. (ZIN). **Uzbekistan,** ***Surxondaryo Region:*** 1♂ — Derbent, 12–14.IX.2017, M. Prozhalykin leg. (PMC).

Diagnosis. The new species is most similar to *E. bilobatus* Barkalov, Mutin, Daminova et Rakhimov, 2020, from which it differs in shorter pilis on eyes, intensely darkened ta, completely black tergum IV and more pronounced branching of the upper lobe of the surstylus. The female differs in a contrast coloration of basoflagellomere, intensely darkened ta_1 and ta_3. From outwardly similar *E. turanicola* Stackelberg, 1952, in which the ocelli also form an isosceles triangle, it easily differs in the structure of male genitalia (Fig. 28, 29), predominantly dark colour of ta_1 and antennae (Fig. 32) (in *E. turanicola* Stackelberg ta and basoflagellomere are completely yellow), the absence of a notch on the posterior margin of sternum IV of male (Fig. 30), and in the presence of black pilis on abdominal terga (in *E. turanicola* Stackelberg abdominal terga are almost completely covered with pale pilis).

Description. *Male* (Fig. 70). Head. Face and frons with grey tomentum and white pilis. Scapus and pedicel black, basoflagellomere big, longer than its width (ratio 4:3) with apico-ventral angle, reddish in basal 1/2–1/3 and dark-brown in apical part (Fig. 32). Arista black. Eyes holoptic, covered with short light pilis, line of their connection approximately equal frons length and equal 6 ommatidies. Vertex mostly shiny black, with a spot of grey tomentum near anterior ocellus and with couple of small spots of tomentum behind ocellar triangle; covered with rare white pilis. Ocellar triangle isosceles (Fig. 33).

Thorax. Scutum shiny-black, often with bronze tide, with couple of narrow stripes of grey tomentum, which don't reach scutellum (Fig. 31), pilis short whitish. Scutellum with comparatively long light pilis. Pilis on pleurae longer white. Fore legs mostly black except yellow tips of f and basal 1/3–1/2 of t; segments of ta blackish dorsally with yellow tips. Mid legs mostly black, except yellow tips of f, basal ½ of t and 1–3 segments of ta. Hind legs mostly black, except yellow basal half of t, tip of basitarsus and 2–3 segments of ta, t_3 in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding, short, pilis (Fig. 35); f_3 swollen with 2 rows of short, strong bristles, covered with light pilis longer ventrally, their length is barely more than half of f thickness. Hind trochanters conically pointed apico-ventrally. Wings translucent completely covered with microtrichia.

Abdomen. Terga black with pair of almost crescent-shaped spots of white tomentum on terga II–IV, mostly in short pale pilis, except for postero-medial part of tergum II, medial surface of tergum III, and anterior-medial part of tergum IV in short black adpressed pilis. Sterna brown, sternum IV with straight posterior margin (Fig. 30), sternum VI with pale pilis. Genitalia as in Figs 28, 29.

Size: body length 6.0–8.0 mm, wing length 4.5–6.5 mm.

Female (Fig. 67). Face with dense grey tomentum and white pilis. Frons slightly lustrous, with narrow stripes of white tomentum along eyes and usually with diffuse band of tomentum in front of fore ocellus, covered with short white pilis. Vertex shiny-black, with barely noticeable spots of pale tomentum at margin of eyes behind hind ocelli. Ocellar triangle almost equilateral (Fig. 34). Scapus and pedicel black, basoflagellomere oval, longer than wide, contrastingly bicoloured, orange-red in basal part and black dorso-apically and sometimes along ventral margin (Fig. 36).

Scutum bronze-black, with pair of narrow strips of grey tomentum not reaching scutellum, covered with short erect light pilis. Legs mostly black, excluding yellow tips of f_1 and f_2, basal 1/2 of t, and 1–3 segments of ta_2; ta_1 and ta_3 more or less dark dorsally.

Terga shiny black, with pair of narrow spots of pale tomentum on terga II–IV, pilis as in male.

Size: body length 7.2–7.8 mm, wing length 5.2–5.8 mm.

Etymology. The new species is dedicated to the late our friend and famous Russian helminthologist Vladimir Dmitrievich Gulyaev.

Eumerus iranicus Barkalov et Mutin, **sp.n.**

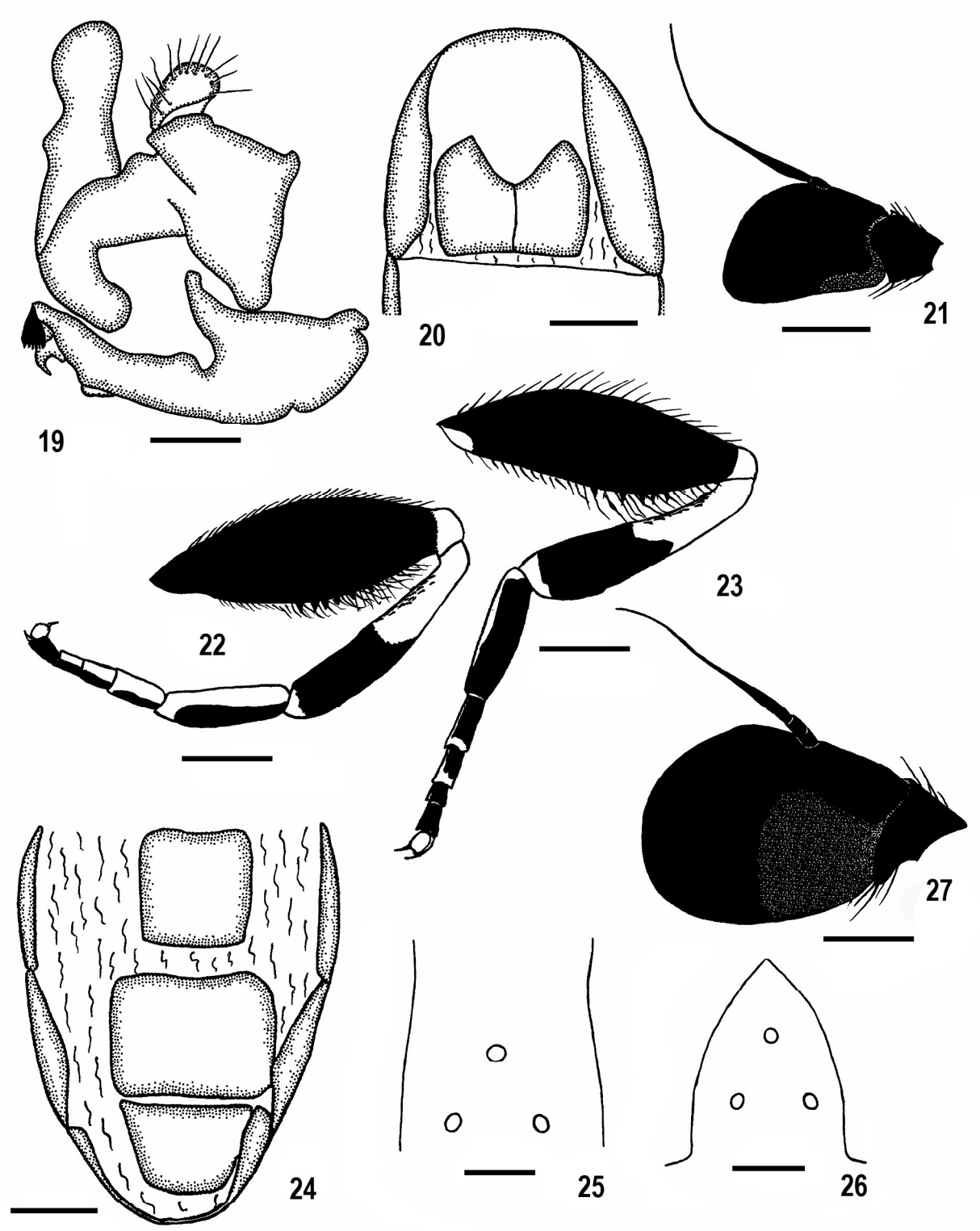
Figs 37–42, 71.

Urn:lsid:zoobank.org:act:02355453-F8CD-4954-8118-2F02D38A13DA.

Material. **Iran,** ***Golestan province:*** holotype, ♂, «P.M. Golestān, Ālmeh. 1600 m, 28–30.IX.2000, Gil./Gh» (ZIN).

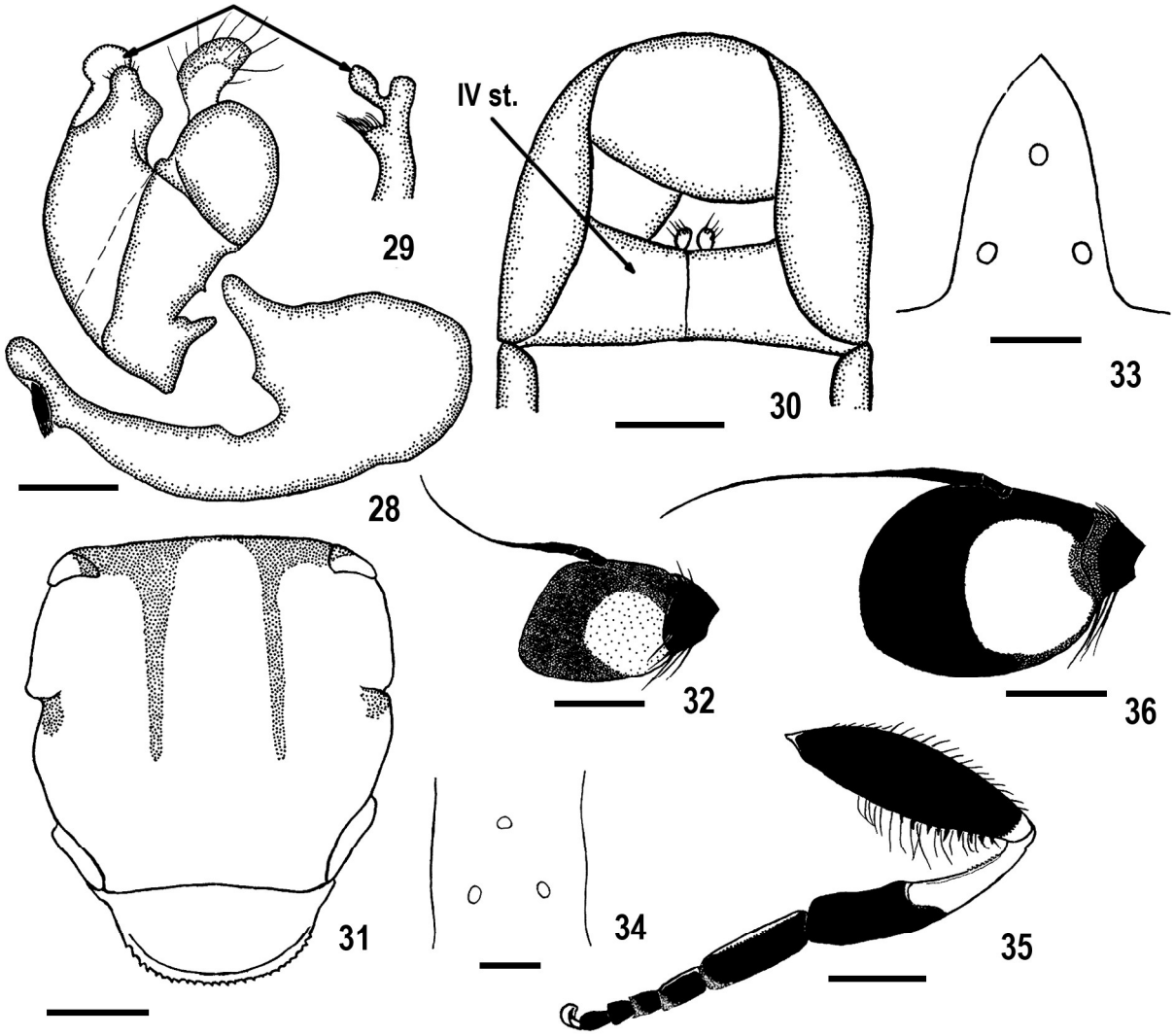
Diagnosis. The male of the new species is close to that of *E. verae* Barkalov et Mutin, sp.n., having the same equilateral ocellar triangle, light pubescence of vertex, completely orange basoflagellomere, yellow ta and presence of a notch on the posterior margin of sternum IV (Fig. 38), but differs completely yellow t_3, almost bare eyes and another structure of surstylus. From the male of *E. turanicus* Stackelberg, in which ocellar triangle also equilateral and hind rim of sternum IV with also deep notch, the new species differs in the absence of black pilis on vertex, completely yellow basoflagellomere, yellow t_3 and the construction of genitalia.

Description. *Male* (Fig. 71). Head. Face and frons with white tomentum and white pilis. Eyes holoptic, line of their connection shorter frons length and equal length of 6 ommatidies, covered with very small, almost indistinct pilis.



Figs 19–27. Details of *Eumerus dauricus* Barkalov et Mutin, sp.n. morphology: male (19–21, 23, 26) and female (22, 24, 25, 27) in ventral (24), dorsal (25, 26) and lateral view (19–23, 27). 19, — genitalia; 20 — IV sternum and tergum; 21, 27— 2–3 segments of antenna; 22, 23 — hind leg; 24 — II–IV sterna of female; 25, 26 — ocellar triangle. Scale bar: 0.23 mm for Figs 19, 21, 25–27; 0.36 mm for Fig. 24; 0.45 mm for Figs 20, 22, 23.

Рис. 19–27. Детали строения *Eumerus dauricus* Barkalov et Mutin, sp.n.: самец (19–21, 23, 26) и самка (22, 24, 25, 27) снизу (24), сверху (25, 26) и сбоку (19–23, 27). 19, 20 — гениталии; 21 — 2–3 членики усика; 22, 23 — задняя нога; 24 — II–IV стерниты брюшка; 25, 26 — глазковый треугольник; 27 — 2–3 членики усика. Масштаб: 0,23 мм для рис. 19, 21, 25–27; 0,36 мм для рис. 24; 0,45 мм для рис. 20, 22, 23.



Figs 28–36. Details of *Eumerus gulyaevi* Barkalov et Mutin, sp.n. morphology: male (28–33, 35) and female (34, 36) in ventral (29, 30), dorsal (31, 33, 34) and lateral view (28, 32, 36, 35). 28 — genitalia; 29 — tip of epandrium; 30 — IV sternum and tergum; 31 — mesonotum; 32, 36 — 2–3 segments of antenna; 33, 34 — ocellar triangle; 35 — hind leg. Scale bar: 0.23 mm for Figs 28, 29, 32–34, 36; 0.45 mm for Figs 30, 31, 35.

Рис. 28–36. Детали строения *Eumerus gulyaevi* Barkalov et Mutin, sp.n.: самец (28–33, 35) и самка (34, 36) снизу (29, 30), сверху (31, 33, 34) и сбоку (28, 32, 36, 35). 28 — гениталии; 29 — вершина эпандрия; 30 — IV стернит и тергит; 31 — среднеспинка; 32, 36 — 2–3 членики усика; 33, 34 — глазковый треугольник; 35 — задняя нога. Масштаб: 0,23 мм для рис. 28, 29, 32–34, 36; 0,45 мм для рис. 30, 31, 35.

Vertex shiny-black, without distinct spots of light tomentum, covered with light pilis; ocellar triangle equilateral (Fig. 40). Scapus and pedicel brown basally, apical part of pedicel and basoflagellomere orange-yellow; basoflagellomere elongated (Fig. 41), arista brown, orange basally.

Thorax. Scutum shiny-black, covered with light pilis without grey vittae of tomentum. Trochanters brown, f mostly black except yellow tips; t yellow, except blackish postero-ventral spots on t_1 and t_2; t_3 in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding, short, pilis (Fig. 45); ta yellow, basitarsus of ta_3 longer than 2 and 3 segments united (Fig. 39). Wings translucent, densely covered with microtrichia.

Abdomen. Terga shiny-black with blueish reflection, covered with light pilis, terga II–IV with a pair of crescent-shaped spots of light tomentum. Sternum IV with deep notch along posterior margin (Fig. 38), sternum VI with pale pilis. Genitalia as in Figs 37.

Size: body length 7.8 mm, wing broken.

Female unknown.

Etymology. The new species is named after the country from which it was collected.

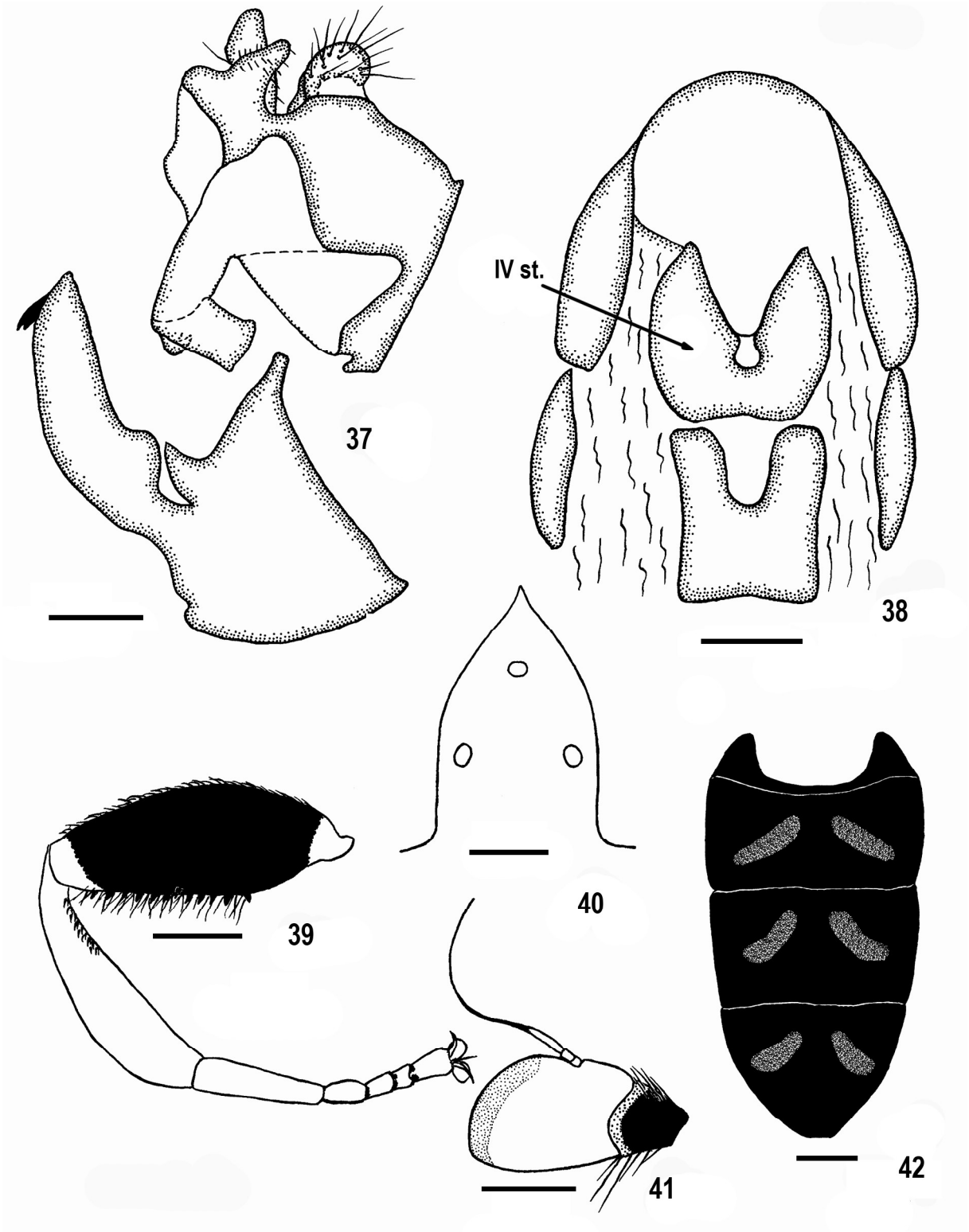
Eumerus trilobatus Barkalov et Mutin, **sp.n.**

Figs 43–50, 72.

Urn:lsid:zoobank.org:act:DF97B535-9293-4AA1-A198-21FC38D7BEBB.

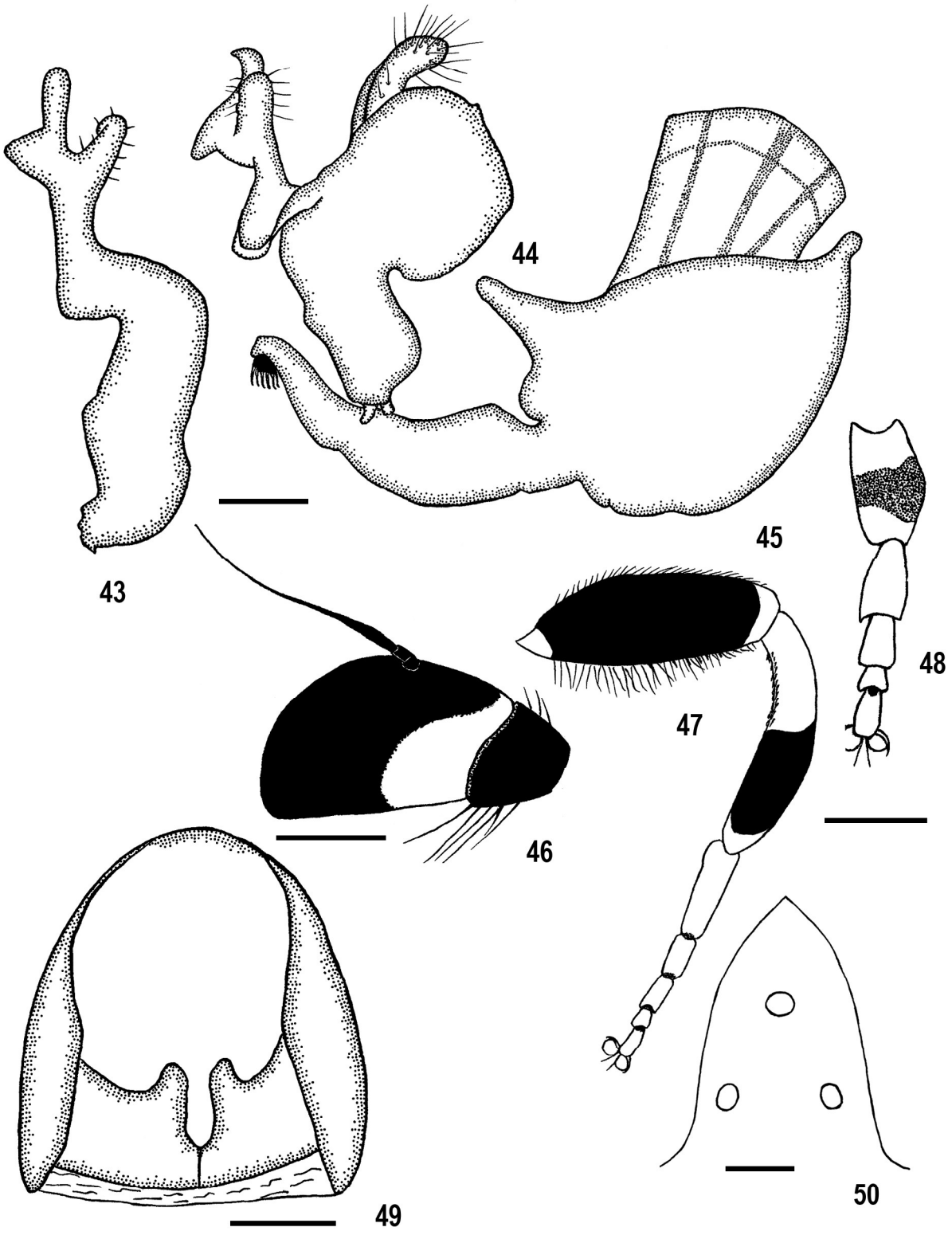
Material. **Turkmenistan,** ***Balkan Province:*** holotype, ♂, «Turkmenia, environs Kara-Kala, Ioldere gorge, 11.V.1969, Shibanova leg.» (ZIN); paratype: **Kyrgizstan,** ***Batken Province:*** 1♂ — «20 km N Lyajlyak, 1.X.1968, L. Pritykina leg.» (ZMMU).

Diagnosis. The new species close to *E. turanicus* Stackelberg in many characters including construction of male genitalia, but differs in follows – vertex covered with white pilis, tergum IV completely covered with white pilis, posterior surstylus divided on tree lobs (Fig. 43, 44). In *E. turanicus* Stackelberg vertex with



Figs 37–42. Details of *Eumerus iranicus* Barkalov et Mutin, sp.n., male morphology: ventral (38), dorsal (40, 42) and lateral view (37, 39, 41). 37 — genitalia; 38 — III–IV sterna and terga; 39 — hind leg; 40 — ocellar triangle; 41 — 2–3 segments of antenna; 42 — abdomen. Scale bar: 0.23 mm for Figs 37, 40; 0.36 mm for Fig. 42, 0.45 mm for Figs 38, 39, 41.

Рис. 37–42. Детали строения самца *Eumerus iranicus* Barkalov et Mutin, sp.n.: снизу (38), сверху (40, 42) и сбоку (37, 39, 41). 37 — гениталии; 38 — III–IV стерниты и тергиты; 39 — задняя нога; 40 — глазковый треугольник; 41 — 2–3 членики усика; 42 — брюшко. Масштаб: 0,23 мм для рис. 37, 40; 0,36 мм для рис. 42, 0,45 мм для рис. 38, 39, 41.



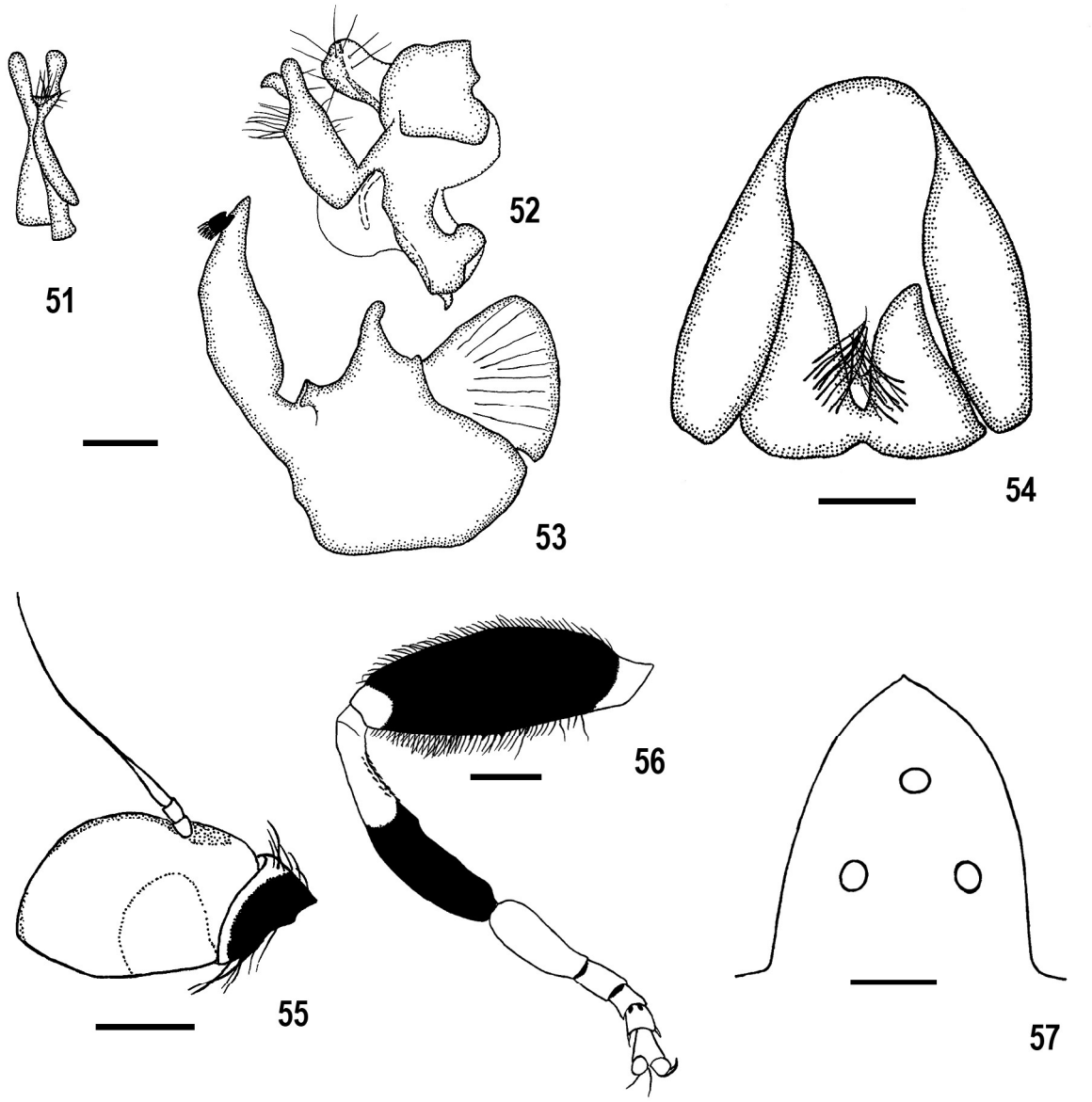
Figs 43–50. Details of *Eumerus trilobatus* Barkalov et Mutin, sp.n., male morphology: ventral (43, 49), dorsal (48, 50) and lateral view (44–47). 43, 44 — epandrium; 45 — hypandrium; 46 — 2–3 segments of antenna; 47 — hind leg; 48 — hind tarsus; 49 — IV sternum and tergum; 50 — ocellar triangle. Scale bar: 0.23 mm for Figs 43–46, 50; 0.45 mm for Figs 47–49.

Рис. 43–50. Детали строения самца *Eumerus trilobatus* Barkalov et Mutin, sp.n.: снизу (43, 49), сверху (48, 50) и сбоку (44–47). 43, 44 — эпандриум; 45 — гипандриум; 46 — 2–3 членики усика; 47 — задняя нога; 48 — задняя лапка; 49 — IV стернит и тергит; 50 — глазковый треугольник. Масштаб: 0,23 мм для рис. 43–46, 50; 0,45 мм для рис. 47–49.

black pilis, anterior part of tergum IV with short depressed black pilis; posterior surstylus with two lobs.

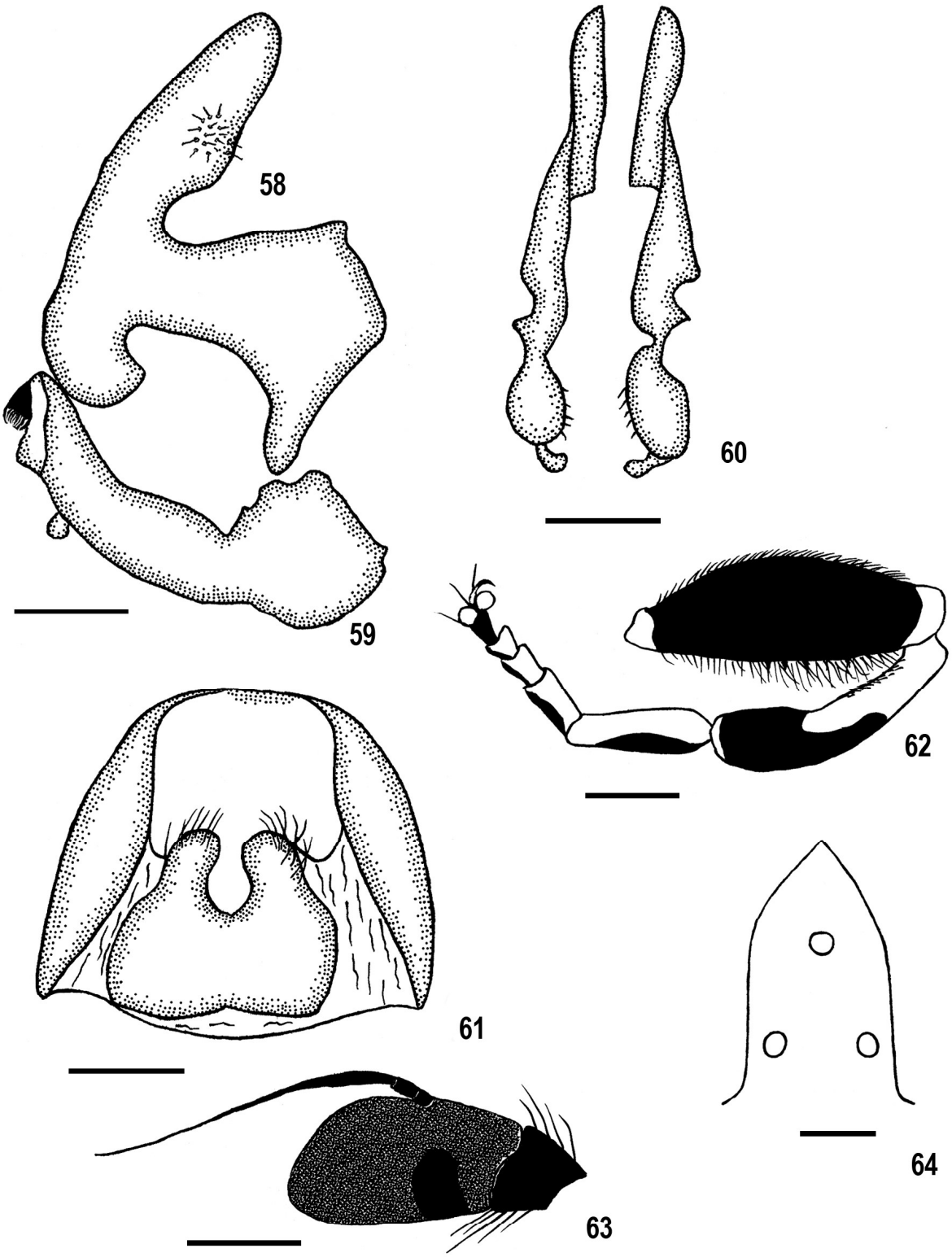
Description. *Male* (Fig. 72). Head. Face narrow with parallel sides, covered with grey tomentum and white pilis; genae shiny, without tomentum. Frons with dense silver tomentum and dense, semierect white pilis. Antennae: scapus and pedicel black, basoflagellomere elongated with distinct antero-ventral angle (Fig. 46), orange basally and black apically, covered with grey tomentum, arista comparatively long black. Eyes holoptic, line of their connection twice shorter as frons length, covered with short, dense white pilis. Vertex broad, shiny with spots of grey tomentum on anterior and posterior corners; ocellar triangle equilateral (Fig. 50), covered with white pilis. Occiput broad shiny.

Thorax: scutum and scutellum shiny with purple tint; scutum with two longitudinal narrow stripes of grey tomentum, which don't reach of hind margin, two narrow grey transvers stripes along transverse suture; postpronotum and lateral sides of scutum shiny without tomentum, covered with short erect white pilis; pleurae shiny without tomentum, covered with dense white pilis. Legs: coxae black, trochanters brownish; f black with yellow tips, f_3 moderately swollen with small black spines and white pilis; the longest pilis are on central part of f; t yellow in basal 1/3–1/2 and on tips and blackish in otherwhere; t_3 in ventral 1/3 with short, black, procumbent spinules (Fig. 47); all ta except dorsal part of hind basitarsus yellow, segments of ta_2 without black bristles medially; hind basitarsus slightly flattened dorso-ventrally, in length equal



Figs 51–57. Details of *Eumerus verae* Barkalov et Mutin, sp.n., male morphology: ventral (51, 54), dorsal (57) and lateral view (52, 53 55, 56). 51 — tip of epandrium; 52 — epandrium; 53 — hypandrium; 54 — IV sternum and tergum; 55 — 2–3 segments of antenna; 56 — hind leg; 57 — ocellar triangle. Scale bar: 0.23 mm for Figs 51–53, 55, 57; 0.45 mm for Figs 54, 56.

Рис. 51–57. Детали строения самца *Eumerus verae* Barkalov et Mutin, sp.n.: снизу (51, 54), сверху (57) и сбоку (52, 53 55, 56). 51 — вершина эпандриума; 52 — эпандриум; 53 — гипандриум; 54 — IV стернит и тергит; 55 — 2–3 членики усика; 56 — задняя нога; 57 — глазковый треугольник. Масштаб: 0,23 мм для рис. 51–53, 55, 57; 0,45 мм для рис. 54, 56.



Figs 58–64. Details of *Eumerus ziminae* Barkalov et Mutin, sp.n., male morphology: ventral (60, 61), dorsal (64) and lateral view (58, 59, 62, 63). 58 — epandrium; 59 — hypandrium; 60 — epandrium; 61 — IV sternum and tergum; 62 — hind leg; 63 — 2–3 segments of antenna; 64 — ocellar triangle. Scale bar :0.23 mm for Figs 58–60, 63, 64; 0.45 mm for Figs 61, 62.

Рис. 58–64. Детали строения самца *Eumerus ziminae* Barkalov et Mutin, sp.n.: снизу (60, 61), сверху (64) и сбоку (58, 59, 62, 63). 58, 60 — эпандриум; 59 — гипандриум; 61 — IV стернит и тергит; 62 — задняя нога; 63 — 2–3 членики усика; 64 — глазковый треугольник. Масштаб: 0,23 мм для рис. 58–60, 63, 64; 0,45 мм для рис. 61, 62.

to 2–4 segments combined (Fig. 48). Wings hyaline, covered with microtrichia, cell BM in basal half without microtrichia.

Abdomen black with bright purpure reflection, covered with white pilis, terga II–IV with couple of distinct grey spots. Sternum IV with deep cut (Fig. 49), sternum VI with white pilis. Genitalia: posterior surstylus with thee lobs, hypandrium without tooth-like projection (Figs 43–45).

Size: body length 8.8 mm, wing length 6.7 mm.

Etymology. The name reflects construction of posterior surstylus which have three lobs.

Eumerus verae Barkalov et Mutin, **sp.n.**

Figs 51–57, 73.

Urn:lsid:zoobank.org:act:D4C2E231-AAB2-4C48-BBFB-747A8EFF0AC1.

Material. **Armenia,** ***Kotayk province:*** holotype, ♂, «Gekhard, 18.VIII.1965, V. Richter leg.» (ZIN).

Diagnosis. In arrangement of ocelli, completely orange basoflagellomere, and yellow ta, the new species is close to *E. turanicus* Stackelberg, 1952 but differs in the presence of two tufts of long pale-yellow pilis on sternum IV (Fig. 54) and the construction of male genitalia (Figs 51–53). From the closely related *Eumerus iranicus* Barkalov et Mutin, sp.n., the new species differs in the dark coloration of the apical half of the t_3, a noticeable pubescence of eyes, and the presence of black pilis on the vertex as well as by the structure of surstylus.

Description. *Male* (Fig. 73). Head. Face and frons with whitish tomentum and white pilis. Eyes holoptic, line of their connection shorter than frons length and equal to 5 ommatidies. Eyes with short light pilis. Vertex bronze-black, weakly lustrous, with indistinct spots of pale tomentum at the line of eyes connections and at the edge of the eyes behind ocellar triangle, covered with erect pale pilis with admixture of black in the middle part. Ocellar triangle equilateral (Fig. 57). Scapus and pedicel brown, basoflagellomere big oval, pointed apicoventrally, orange with darkened dorsal and apical rim (Fig. 55); arista brown, reddish at base.

Thorax. Scutum black with fine bronze luster without distinct vittae of grey tomentum, covered with short light pilis. Pleurae with light pilis. Legs: trochanters mostly brown; f black with yellow tips, f_3 with two rows of spines; t yellow in basal half and dark, almost black in apical part; t_3 in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding, short, pilis; ta yellow, hind metatarsus with dark spot dorsally, its length distinctly longer of 2 and 3 segments put together. The longest pilis on f_3 are on apical 2/3 of ventral surface; the maximum length of these pilis does not exceed half the thickness of the f_3 (Fig. 56). Wings hyaline, completely covered with microtrichia.

Abdomen. Terga shiny-black with a bright bronze tint, with 3 pairs of sickle-shaped spots of grey tomentum, covered with pale pilis. Posterior margin of sternum IV with deep cut almost dividing sternum in two parts, ventral parts of this segment with two bunches of long pale pilis (Fig. 54). Genitalia as in Figs 51–53.

Size: body length 8.5 mm, wing length 5.8 mm.

Female unknown.

Etymology. The new species is dedicated to the late famous Russian dipterologist and collector of the holotype, Vera Andreevna Richter.

Eumerus ziminae Barkalov et Mutin, **sp.n.**

Figs 58–64, 74.

Urn:lsid:zoobank.org:act:0BE77827-11D3-4BF7-8155-9A46BAB0126B.

Material. **Azerbaijan,** ***Lerik Region:*** holotype, ♂, "Gosmalyan, S of Lerik, 30.V.1969, L. Zimina leg." (ZMMU).

Diagnosis. Thanks to unique construction of posterior surstylus the new species well differs from all studied species.

Description. *Male* (Fig. 74). Head. Face finely broadened ventrally, covered with grey tomentum and short, semierect white pilis. Genae shiny anteriorly and with grey tomentum posteriorly, covered with white pilis. Frons small, covered with grey tomentum and semierect white pilis. Antenna black with black pilis on apical part of pedicel, basoflagellomere elongated with anteroventral angle (Fig. 63). Eyes holoptic, connected for a distance distinctly longer than frons length, covered with rare short white pilis. Vertex shiny black, covered with mostly black pilis, only in anterior part before ocellus with fine grey tomentum and yellow pilis, ocellar triangle distinctly isosceles (Fig. 64). Occiput dorsally shiny with yellow pilis.

Thorax. Scutum shiny black. Postpronotum and lateral sides of scutum shiny, without tomentum; two stripes of grey tomentum narrow and don't reach hind margin of scutum; pilis short, semierect yellow, near wing base and on anterior half of postalar callus with row of short, strong black pilis; scutellum with longer yellow pilis. Pleura mostly shiny, only anterior part of anepisternum and katepisternum covered with yellow tomentum: covered with yellow pilis. Legs: coxae black with brownish tips, trochanters black; f black with narrowly yellow tip, f_3 moderately swollen with short black spines in apico-ventral half (Fig. 62), the longest ventral pilis are in apical half; t yellow in basal 1/3–1/3 and black in other part, t_3 in ventral 1/3 with short, black, procumbent spinules clearly stronger than the surrounding, short pilis; ta simple, ta_1 black dorsally, ta_2 with yellow segments 1–2, brownish segment 3 and black segments 4–5, ventrally with short black bristles on tips of segments only; ta_3 blackish dorsally, basitarsus in length approximately equal to other segments taken together. Wings brownish, almost completely covered with microtrichia, only bases of cells R and BM with small places without microtrichia.

Abdomen completely black, with three pairs of narrow grey spots on terga II–IV; covered with yellow pilis laterally and on posterior half of tergum IV and with short black pressed pilis medially. Sternum IV with deep cut (Fig. 61); sternum VI with yellow pilis. Genitalia (Figs 58–60) with lanceolate posterior surstylus, which have a spot of small pilis medially (Fig. 58) (cercus broken).

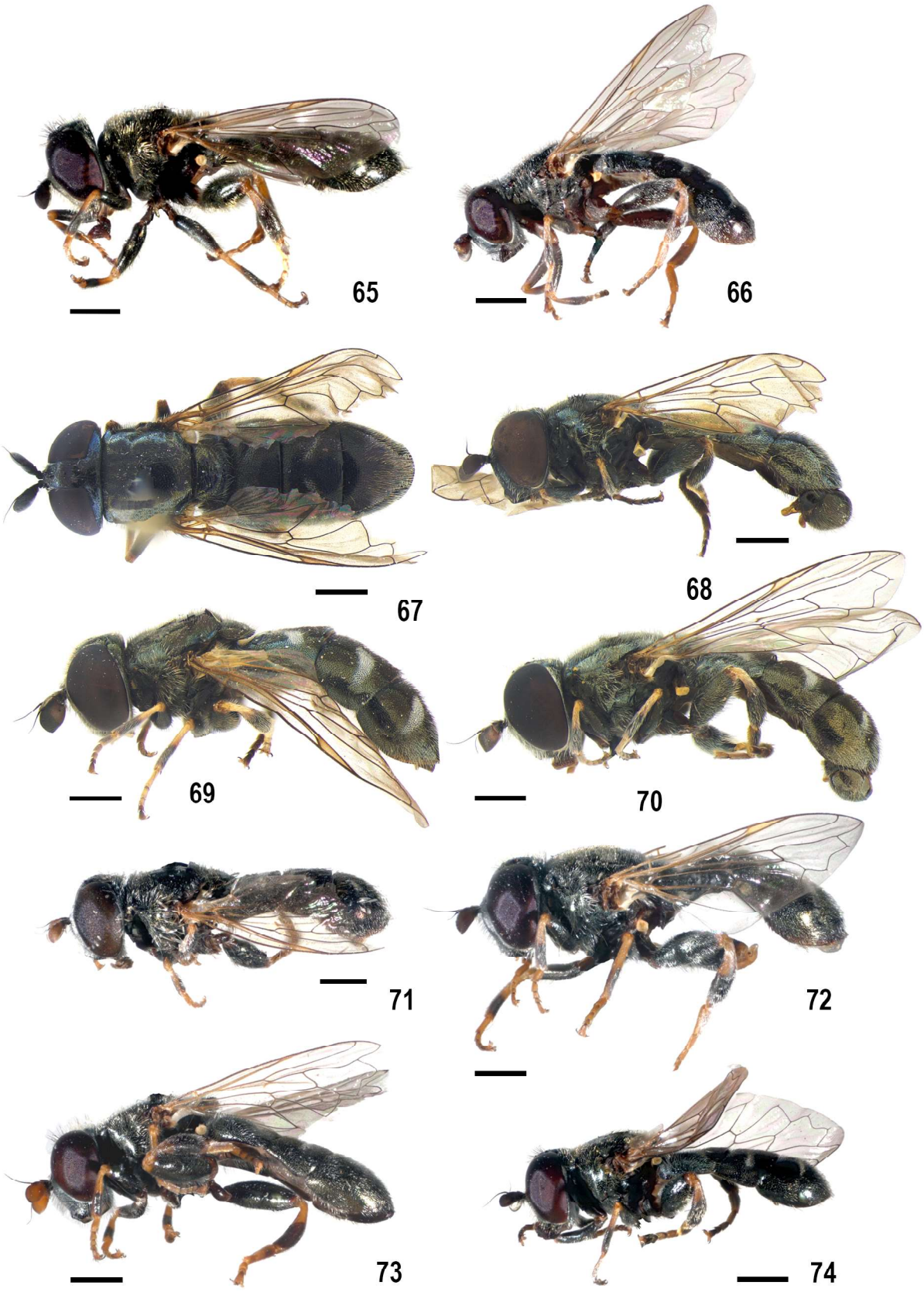
Size: body length 6.5 mm, wing length 5.0 mm.

Female unknown.

Etymology. The new species is named after the late dipterologist Lena Viktorovna Zimina, collector of the type specimen.

Figs 65–74. External appearance of new species in the genus *Eumerus* Meigen: male (65, 66, 68, 70–74) and female (67, 69) in lateral (65,66, 68–74) and dorsal view (67). 65 — *E. ampliotarsus* Barkalov et Mutin, sp.n.; 66 — *E. borisovi* Barkalov et Mutin, sp.n.; 67 — *E. dauricus* Barkalov et Mutin, sp.n.; 68 — *E. dauricus* Barkalov et Mutin, sp.n.; 69 — *E. gulyaevi* Barkalov et Mutin, sp.n.; 70 — *E. gulyaevi* Barkalov et Mutin, sp.n.; 71 — *E. iranicus* Barkalov et Mutin, sp.n.; 72 — *E. trilobatus* Barkalov et Mutin, sp.n.; 73 — *E. verae* Barkalov et Mutin, sp.n.; 74 — *E. ziminae* Barkalov et Mutin, sp.n. Scale bar 1 mm.

Рис. 65–74. Внешний вид новых видов рода *Eumerus* Meigen: самец (65, 66, 68, 70–74) и самка (67, 69) сбоку (65,66, 68–74) и сверху (67). 65 — *E. ampliotarsus* Barkalov et Mutin, sp.n.; 66 — *E. borisovi* Barkalov et Mutin, sp.n.; 67 — *E. dauricus* Barkalov et Mutin, sp.n.; 68 — *E. dauricus* Barkalov et Mutin, sp.n.; 69 — *E. gulyaevi* Barkalov et Mutin, sp.n.; 70 — *E. gulyaevi* Barkalov et Mutin, sp.n.; 71 — *E. iranicus* Barkalov et Mutin, sp.n.; 72 — *E. trilobatus* Barkalov et Mutin, sp.n.; 73 — *E. verae* Barkalov et Mutin, sp.n.; 74 — *E. ziminae* Barkalov et Mutin, sp.n. Масштаб: 1 мм.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The list of *Eumerus* Meigen species of the *strigatus* species group of the central and eastern parts of the Palaearctic

Collection material data of 21 species referred to *Eumerus strigatus* (Fallén) species group distributed in central and eastern parts of the Palaearctic, namely: *Eumerus acuticornis* Sack, 1933, *E. amoenus* Loew, 1848, *E. arnoldii* Stackelberg, 1952, *E. bactrianus* Stackelberg, 1952, *E. banaticus* Nedeljković, Grković et Vujić in Grković, van Steenis, Kočiš Tubić, Nedeljković, Hauser, Hayat, Demırözer, Đan, Vujić & Radenković, 2019, *E. basalis* Loew, 1848, *E. bicornis* Grković, Vujić & Hayat in Grković, van Steenis, Kočiš Tubić, Nedeljković, Hauser, Hayat, Demırözer, Đan, Vujić & Radenković, 2019, *E. bilobatus* Barkalov, Mutin, Daminova et Rakhimov, 2020, *E. consimilis* Šimić et Vujić, 1996, *E. funeralis* Meigen, 1822, *E. kondarensis* Stackelberg, 1952, *E. reichardi* Stackelberg, 1952, *E. roborovskii* Stackelberg, 1952, *E. rushanicus* Stackelberg, 1952, *E. sibiricus* Stackelberg, 1952, *E. sogdianus* Stackelberg, 1952, *E. strigatus* (Fallén, 1817), *E. transcaspicus* Stackelberg, 1952, *E. tugajorum* Stackelberg, 1952, *E. turanicola* Stackelberg, 1952 and *E. turanicus* Stackelberg, 1952 are provided in the Appendix 1 (p. 8–14).

Six species are firstly registered for some regions, namely: *E. banaticus* Nedeljković et al. for Kazakhstan and the south part of European part of Russia, *E. basalis* Loew for Krasnodarskii Krai of Russia, *E. bicornis* Grković et al. for Turkmenistan, *E. consimilis* Šimić et Vujić for Azerbaijan, *E. montanum* Grković et al. for Kazakhstan and Krasnodarskii Krai of Russia, and *E. roborovskii* Stackelberg for Mongolia.

The species *E. strigatus* (Fallén) has not been recorded from Central Asia in authors collections, thus all its indications from this region require confirmation.

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