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To the fauna of *Risa* Becker, 1907 (Diptera: Ephydridae) of Central Asia

К фауне двукрылых рода *Risa* Becker, 1907 (Diptera: Ephydridae) Средней Азии

M.G. Krivosheina[1], A.L. Ozerov[2]
М.Г. Кривошеина[1], А.Л. Озеров[2]

[1]A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, 119071 Moscow, Russia. E-mail: dipteramarina@rambler.ru

[1]Институт проблем экологии и эволюции им. А.Н. Северцова РАН, Ленинский проспект, 33, Москва 119071, Россия.

[2]Zoological Museum, Moscow Lomonosov State University, Bol'shaya Nikitskaya 2, Moscow 125009, Russia (ZMUM). E-mail: ozerov2455@rambler.ru

[2]Зоологический музей, Московский государственный университет им. М.В. Ломоносова, Большая Никитская ул., 2, Москва 125009, Россия.

KEYWORDS: Diptera, Ephydridae, *Risa*, new species, Central Asia, key.

КЛЮЧЕВЫЕ СЛОВА: Diptera, Ephydridae, *Risa*, новый вид, Средняя Азия, определительная таблица.

ABSTRACT. New data on the flies from the genus *Risa* Becker, 1907 for Central Asia are given. Five species are registered, one of which, *Risa flavicoxa* sp.n. (Diptera: Ephydridae), is described as new to science. *Risa flavipalpis* Ozerov, 1984 and *Risa longirostris* Becker, 1907 are registered in Turkmenistan for the first time. Besides *R. flavipalpis* is found on the territory of Kazakhstan for the first time. Key to species of *Risa* of Central Asia is composed.

РЕЗЮМЕ. Приведены новые данные о двукрылых рода *Risa* Becker, 1907 фауны Средней Азии. Отмечено 5 видов, из которых один вид, *Risa flavicoxa* sp.n., описан как новый для науки. *Risa flavipalpis* Ozerov, 1984 и *Risa longirostris* Becker, 1907 впервые отмечены для фауны Туркмении. Кроме того, *R. flavipalpis* впервые зарегистрирован на территории Казахстана. Составлена определительная таблица видов *Risa* Средней Азии.

Introduction

The genus *Risa* Becker, 1907 — a small Palaearctic genus, uni-ting seven species registered in North Africa and Asia only.

The situation with the family, to which different authors attributed the genus, is of much interest. At first the genus *Risa* was described in subfamily Agromyzinae of the family Ephydridae [Becker, 1907]. Hennig placed this genus in "Milichiidae et Carnidae" [Hennig, 1937]. The examination of *Risa* specimens by Papp resulted in the description of a new family — Risidae Papp, 1977, which according to his opinion was closer to Ephydridae than to Milichiidae and Carnidae [Papp, 1977b]. Freidberg et al. [1998] suggested to attribute *Risa* to the subfamily Discomyzinae of the family Ephydridae based on morphological and biological evidence. Their presentation at the Fourth International Congress of Dipterology took a step forward concerning the position of *Risa* in the system of Diptera. Mathis and Zatwarnicki [1998] followed Freidberg et al. [1998] to include *Risa* in the family Ephydridae in Manual of Palaearctic Diptera. Further investigations on internal female reproductive tract gave one more evidence for consideration *Risa* in the family Ephydridae [Kotrba, Mathis, 2009].

The genus *Risa* was described by Becker [1907] basing on the type specimen *R. longirostris* Becker, 1907 from North Africa. For a long time the genus remained monotypic until Papp [1977a] described one more species, *R. mongolica* Papp, 1977, from Mongolia. Some years later the same author described one more new species in this genus, *R. longicornuta* Papp, 1980 from Turkmenistan [Papp, 1980]. In the same work Papp described *A. brevicornis* Papp, 1980 from North Africa, separating the latter species in a new genus — *Achaetorisa* Papp, 1980. Later the status of the genus *Achaetorisa* was changed for subgenus of the genus *Risa* [Freidberg et al., 1998]. We follow the point of view of the abovementioned authors in our work. Ozerov [1984] discovered two more species of the genus: *R. asiatica* Ozerov, 1984 from Turkmenistan and *R. nartshukae* Ozerov, 1984 from Uzbekistan. Later Ozerov [1992] described one more species, *R.*

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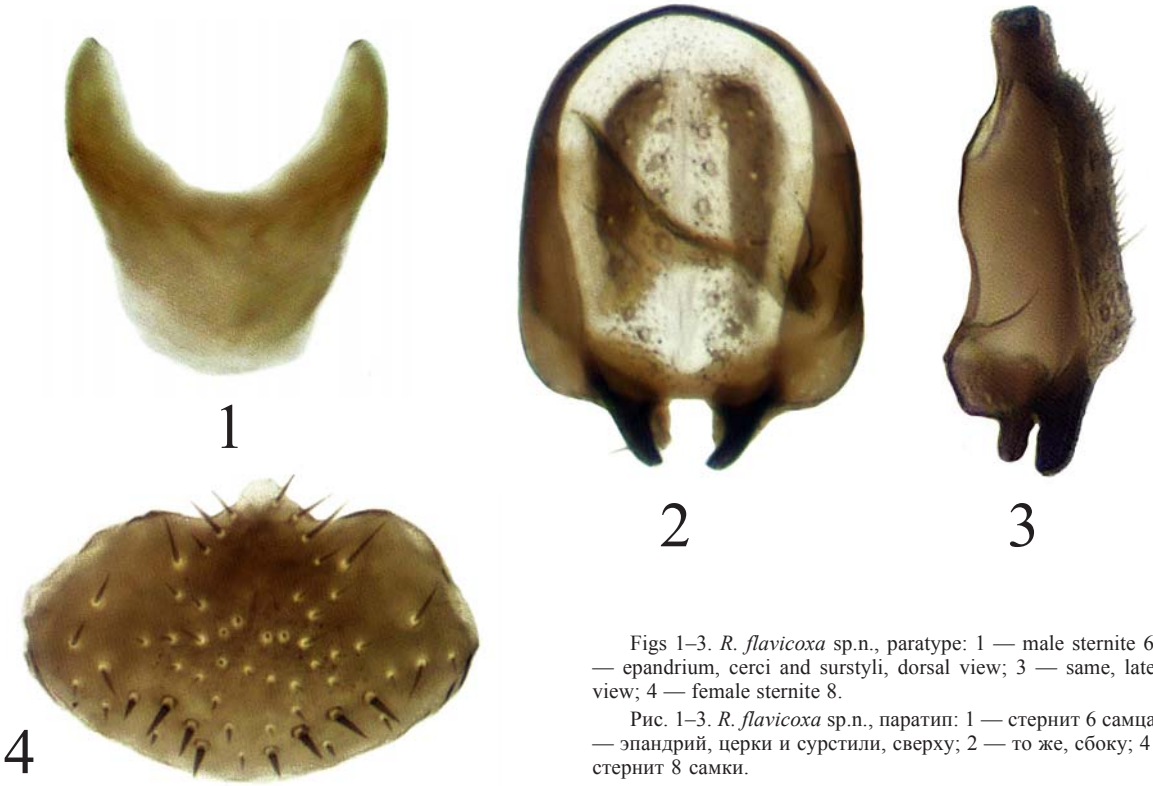

Figs 1–3. *R. flavicoxa* sp.n., paratype: 1 — male sternite 6; 2 — epandrium, cerci and surstyli, dorsal view; 3 — same, lateral view; 4 — female sternite 8.

Рис. 1–3. *R. flavicoxa* sp.n., паратип: 1 — стернит 6 самца; 2 — эпандрий, церки и сурстили, сверху; 2 — то же, сбоку; 4 — стернит 8 самки.

flavipalpis Ozerov, 1992 and synonymized *R. nartshukae* with *R. longirostris*. Mathis et al. [2017] described one more species in the family Risidae (*Achaetorisa salsolae* Mathis et Zatwarnicki, 2017); however they treated *Risa* and *Achaetorisa* as different genera.

Not so many data are known concerning ecology and biology of *Risa* for the majority of species were described from collection specimens. Imago of *R. longirostris* was caught on flowers of *Tamarix* sp. in Turkmenistan in May [Ozerov, pers. observations]. *A. salsolae* is associated with *Salsola rosmarinus* (Bunge ex Boiss.) Eig (1945) [Mathis et al., 2017]. Larvae of *R. brevicornis* are parasitic on caterpillars of *Ancylosis (Cabotia) lacteicostella* (Ragonot, 1887) (Lepidoptera, Pyralidae) [Papp, 1980].

The examination of the material from the collection of Ephydridae in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZISP) and Zoological Museum, Moscow University (ZMUM) allowed us to get new data on the distribution of *Risa* species. One new to science species of the genus *Risa* was recognized. The description of this species is given below.

The morphological terminology used in the descriptions follows McAlpine [1981] and Stuckenberg [1999].

Taxonomic part

Risa asiatica Ozerov, 1984

The species was known for Turkmenistan and Uzbekistan [Ozerov, 1984].

MATERIAL EXAMINED. **Turkmenistan**: Badhyz, Yeroylanduz (35.6679°N 61.84817°E), 25–28.V.1991, A.L. Ozerov (6 ♂♂, 5 ♀♀, ZMUM); 45 km SW of Kizyl-Ayak (ca. 37.4372°N 65.0267°E), 19.VIII.1973, Nartshuk (1 ♂, 1 ♀, ZISP); **Uzbekistan**: Ayakguzhumdy (40.7504°N 63.7626°E), Kyzylkum, 7.VI.1965, Nartshuk (1 ♀, ZMUM); Ayakagytma (40.6663°N 64.4834°E), Kyzylkum, 16.VI.1965, Nartshuk (1 ♂, ZMUM).

DISTRIBUTION. Turkmenistan, Uzbekistan.

Risa flavicoxa Krivosheina et Ozerov, **sp.n.**
Figs 1–4.

MATERIAL. Holotype ♂, Turkmenistan: Ishkak, 45 km SW of Kizyl-Ayak [ca. 37.4372°N 65.0267°E], 19.VIII.1973, Nartshuk (ZISP). Paratypes 2 ♂♂, 2 ♀♀, same labels as holotype (ZISP and ZMUM).

DESCRIPTION. Male. Length of body 1.2–1.4 mm. Length of wing 1.0–1.3 mm.

Head. Frontal vitta and fronto-orbital plate from yellow to blackish, whitish dusted; ocellar triangle black, shining, reaching lunule; face dark brown or blackish, shining, with a rounded protuberance at middle; gena and postcranium blackish, shining. Setae: 3 short fronto-orbitals, 1 short ocellar, no postocellar, 1 inner vertical, 1 outer vertical. Antenna yellow, only postpedicel dorsally darkened; postpedicel conical apically, about as long as wide; arista yellow, bare. Palpus yellow, filiform. Length of proboscis 0.9–1.1 mm.

Thorax completely black, faintly greyish dusted. Acrostichals as hairs in two irregular rows, 1 postpronotal, 2 notopleurals, 1 supra-alar, no intra-alars, 1 postalar and 1 dorsocentral. Katepisternum with strong seta.

Scutellum greyish dusted, with a pair of strong basal scutellar and a pair of strong apical scutellar setae.

Legs yellow in ground colour, only femora usually blackish medially.

Wing whitish with whitish yellow veins. Halter whitish.

Abdomen black, faintly greyish dusted. Male sternite 6 bifurcate, with conical lateral lobes (Fig. 1); epandrium oval, truncate posteriorly, with short narrow surstyli and small protuberance below each of them (Figs 2, 3). Female sternite 8 as in Fig. 4.

DIAGNOSIS. The new species differs from all known Central Asian species of *Risa* by the structure of male epandrium. The other diagnostic characters are given in the key. The structure of epandrium of the new species is similar to those of *A. salsolae* but the latter species differs in greenish reflection of thorax, black palpus and fore coxa [Mathis et al., 2017, Fig. 2].

DISTRIBUTION. Turkmenistan.

Risa flavipalpis Ozerov, 1992

The species was described from Kyrgyzstan and Uzbekistan [Ozerov, 1992].

MATERIAL EXAMINED. **Kazakhstan**: 120 km E of Aksu, Spring Anare, 23.VI.1973, Nartshuk (1 ♂, 1 ♀, ZISP); **Turkmenistan**: 10 km N of Kizyl-Atrek (ca. 37.6905°N 54.7921°E), 10.VII.1973, Nartshuk (6 ♂♂, 2 ♀♀, ZISP and ZMUM); coast of Caspian Sea, 10 km N of Chikishlyar (ca. 37.6642°N 53.8868°E), 8.VII.1973, Nartshuk (2 ♂♂, 1 ♀, ZISP).

DISTRIBUTION. Kazakhstan (**first record**), Kyrgyzstan, Turkmenistan (**first record**), Uzbekistan.

Risa longicornuta Papp, 1980

The species was described from Turkmenistan: Farab [Papp, 1980] and was known from the type locality only.

MATERIAL EXAMINED. **Turkmenistan**: environs of Mukra (37.5965°N 65.7329°E), 22.VIII.1973, Nartshuk (1 ♀, ZISP).

DISTRIBUTION. Turkmenistan.

Risa longirostris Becker, 1907

Risa nartshukae Ozerov, 1984. Synonymized by Ozerov [1992].

The species was described from Algeria [Becker, 1907]. Under the name of *R.nartshukae* was described from Uzbekistan [Ozerov, 1984].

MATERIAL EXAMINED. **Turkmenistan**: Badhyz, Lake Yeroylanduz (35.6679°N 61.84817°E), 27–28.V.1991, A.L. Ozerov (31 ♂♂, 9 ♀♀, ZMUM); coast of Caspian Sea, 10 km N of Chikishlyar (ca. 37.6642°N 53.8868°E), 8.VII.1973, Nartshuk (1 ♀, ZISP).

DISTRIBUTION. Algeria, ?Egypt [Cogan, 1984], Turkmenistan (**first record**), Uzbekistan.

KEY TO THE SPECIES OF *RISA* BECKER OF CENTRAL ASIA

1. Palpus yellow 2
– Palpus black 3
2. Fore coxa black. Ocellar triangle short, slightly protruding beyond the middle of frons. Postocellar setae present ..... *R. flavipalpis* Ozerov
– Fore coxa yellow. Ocellar triangle long, reaching lunule. Postocellar setae absent ..... *R. flavicoxa* sp.n.
3. Postpedicel 3 times as long as wide .... *R. longicornuta* Papp
– Postpedicel 1.5–2.0 times as long as wide 4
4. Thorax subshining with greenish reflection. Ocellar triangle narrow and short, slightly protruding beyond the middle of frons ..... *R. asiatica* Ozerov
– Thorax black, greyish dusted. Ocellar triangle wide and long, reaching lunule ..... *R. longirostris* Becker

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