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NEW DATA ON THE SUBFAMILY OTITINAE (DIPTERA, ULIDIIDAE) IN THE FAUNA OF IRAN

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New Data on the Subfamily Otitinae (Diptera, Ulidiidae) in the Fauna of Iran. Mohamadzade Namin S., Nozari J., Najarpour A. — As a result of studies on picture-wing flies of the subfamily Otitinae in 2008–2011, *Ceroxys robusta* (Loew), *C. munda* (Loew), *Herina rivosecchii* Merz, *Melieria subapennina* (Rondani) and *Myennis octopunctata* (Coquebert) are recorded for the first time from Iran, and *H. rivosecchii* is recorded for the first time from Asia.

Key words: Diptera, Ulidiidae, Otitinae, Iran, new records.

Новые данные о подсемействе Otitinae (Diptera, Ulidiidae) в фауне Ирана. Мохаммадзаде-Намин С., Нозари Дж., Наджарпур А. — В результате изучения мух-лентокрылок подсемейства Otitinae в Иране в 2008–2011 гг., *Ceroxys robusta* (Loew), *C. munda* (Loew), *Herina rivosecchii* Merz, *Melieria subapennina* (Rondani) и *Myennis octopunctata* (Coquebert) отмечены впервые для фауны Ирана, а *H. rivosecchii* также впервые зарегистрирован в Азии.

Ключевые слова: Diptera, Ulidiidae, Otitinae, Иран, новые находки.

Introduction

The picture-winged flies (Ulidiidae) are moderately small family with about 700 described species and the third largest family of superfamily Tephritoidea (Kameneva, 2005). Flies of the subfamily Otitinae can be recognized by the combination of such characters: mostly dull gray to shiny brown or black flies with vein R₁ setulose or, rarely, bare, and a spinulose (rarely bare) phallus, and with the female abdominal sternites 4–6 with anterior apodemes (Kameneva, Korneyev, 2006).

Little information is available on the picture-wing flies of the subfamily Otitinae of Iran. Only Becker (1913) recorded *Ceroxys urticae* Linnaeus, *C. confusa* (Becker), *Melieria nigratarsis* Becker and *M. limpidipennis* Becker. Hennig (1939) recorded *Dorycera melanotica* Hennig and *D. persica* Hennig and recently, Fazel et al. (2012) added *Ceroxys hortulana* (Rossi) to the list. Thus, 7 species of subfamily Otitinae were known up to date from Iran.

Material and methods

Material was collected by standard sweeping net.

Species were identified according to Hennig (1939), Kameneva (1996), Merz (2002), Kameneva, Korneyev (2006), Kameneva (2007). Morphological terminology follows White et al. (1999). All the materials are deposited in personal collection of the first author.

Results and Discussion

As a result of studies on picture-wing flies of the subfamily Otitinae fauna in Iran in 2008–2011, 7 species of 4 genera collected from various localities in Iran. Six species and 2 genera (*Herina* and *Myennis*) are recorded for the first time from Iran. The subfamilies, tribes, genera and species are listed in alphabetic order. Detailed morphological descriptions are not given. For further information, refer to the works of Hennig (1939), Kameneva (1996; 2007), Merz (2002), Kameneva, Korneyev (2006).

SUBFAMILY OTITINAE

TRIBE MYENNIDINI

Myennis octopunctata (Coquebert, 1798) (fig. 1)

Kameneva, Korneyev, 2006.

Material examined: Alburz Province, Chaloos road, 6.08.2009, 1 ♂; Alburz Province, Taleghan, Hasanjoon, 36°12.173' N, 50°45.316' E, 2000 m, 30.08.2009, 1 ♀ (Mohamadzade and Najarpour leg.).

Distribution: Britain, Spain, France, Belgium, Netherland, Germany, Switzerland, Italy, Austria, Czech Republic, Poland, Slovakia, Hungary, Greece, Romania, Ukraine and Russia (Kameneva, Greve, 2011). A new record for Iran.

Diagnosis: Frons brownish, face yellow, arista bare. Mesonotal scutum gray microtrichose, scutellum dark brown. Wing pattern with 4 oblique crossbands. Basal band covering base of cells c and r₁, middle part of cell br and almost whole cells bm and bcu. Discal band crossing wing from middle part of cell c to posterior margin, discal band connecting to basal band in cell c. Preapical band crossing wing from perostigma through R-M and DM-Cu to posterior margin. Apical band crossing



Fig. 1. *Myennis octopunctata*, ♂ from above.

Рис. 1. *Myennis octopunctata*, ♂ вид сверху.

between apex of cell r_1 to apex of cells r_{2+3} and r_{4+5} and penetrating to cell m. In addition, cell r_1 with brown preapical oval spot as long as cell width and separated from apical crossband. Cell bcu with long extension; distance between R-M and DM-Cu crossveins lesser than length of R-M (fig. 1).

TRIBE OTITINI

Ceroxys hortulana (Rossi, 1790) (fig. 2, 1)

Hennig, 1939.

Material examined: West Azerbaijan Province, Khoy, 10 km to Ghotur, 38°27.620' N 44°31.229' E, 1850 m, 27.06.2011, 1 ♂ (Mohamadzade and Najarpour leg.).

Distribution: Austria, Bosnia and Herzegovina, Corsica, Croatia, Czech Republic, France, Germany, Greece, Hungary, Italy (including Sicily), Lithuania, Moldova, Poland, Portugal, Romania, Russia, Slovakia, Ukraine (Kameneva, Greve, 2011) and Iran (Fazel et al., 2012).

Ceroxys robusta (Loew, 1873) (fig. 2, 2)

Hennig, 1939.

Material examined: Tehran, 10 km to Pakdasht, 35°32.869' N, 51°35.079' E, 1100 m, 28.05.2009 1 ♂, 1 ♀, (Mohamadzade and Najarpour leg.).

Distribution: Armenia, Azerbaijan, China, Israel, Kazakhstan, Mongolia, Turkey, Turkmenistan and Uzbekistan (Soós, 1984; Kameneva, 2000). A new record for Iran.



Fig. 2. *Ceroxys*, total view, left: 1 — *C. hortulana*, ♂; 2 — *C. robusta*, ♀; 3 — *C. munda*, ♀.

Рис. 2. *Ceroxys*, общий вид, слева: 1 — *C. hortulana*, ♂; 2 — *C. robusta*, ♀; 3 — *C. munda*, ♀.

Diagnosis: Head yellowish brown, mesonotal scutum gray microtrichose, pleuron shining brown, scutellum yellow. Abdomen dark brown. Wing pattern consisting of 4 crossbands. Basal crossband covering cell bc, base of cells c and br. Subbasal band crossing wing from distal one third of cell c to posterior margin of the wing. Discal band crossing wing from pterostigma through R-M and DM-Cu to posterior margin. Apical band crossing between apex of cell r_1 to apex of cells r_{2+3} and r_{4+5} and penetrating into cell m. Cell bcu with short extension; distance between R-M and DM-Cu crossveins 1.3 times as long as R-M (fig. 2, 2).

Ceroxys munda (Loew, 1868) (fig. 2, 3)

Hennig, 1939.

Material examined: West Azerbaijan Province, Khoy, 5 km to Ghotur, 38°28.762' N 44°28.229' E, 1890 m, 27.06.2011, 1 ♂, 2 ♀ (Mohamadzade and Najarpour leg.).

Distribution: Czech Republic, Hungary, Russia, Slovakia, Ukraine (Kameneva, Greve, 2011) and Mongolia (Soós, 1984). A new record for Iran.

Diagnosis: Head reddish brown, proboscis and occiput posterior to eyes black; arista bare. Setae and setulae black. Mesonotum and scutellum black, mesonotal scutum with three sparsely silvery microtrichose parallel bands. Legs black, only distal part of femora and anterior part of tibia reddish brown. Wing pattern consisting a dark spot in distal half of pterostigma and 2 bands. Subbasal crossband oblique, dark brown, crossing wing from distal part of c cell through base of cell r_{2+3} , middle part of cell br, apices of cells bm and bcu and base of cell dm. Apical band crossing between apex of cell r_1 to apex of cells r_{2+3} and r_{4+5} . Cell bcu with short extension; distance between R-M and DM-Cu crossveins about 7 times as long as R-M (fig. 2, 3).

Herina rivosecchii Merz, 2002 (fig. 3, 1, 2)

Merz, 2002; Kameneva, 2007.

Material examined: 1♂, 1♀, East Azerbaijan Province, Sahand ski resort, 30 km to Tabriz, 37°45.850' N, 46°30.754' E, 2900 m, 2.09.2011 (Mohamadzade and Najarpour leg.).

Distribution: Croatia, Czech Republic, France (incl. Corsica), Greece (incl. Crete), Italy (incl. Sicily), Serbia, Spain, Switzerland (Kameneva, Greve, 2011). A new record for Asia and Iran.

Diagnosis: Mesonotum subshining black, sparsely microtrichose; postpronotum, proepisternum and scutellum reddish. Wing hyaline with 4 dark brown areas, basal area



Fig. 3. *Herina rivosecchii*, ♂: 1 — total view, left; 2 — genitalia.

Рис. 3. *Herina rivosecchii*, ♂: 1 — общий вид слева; 2 — гениталии.



Fig. 4. *Melieria*, total view, left: 1 — *M. subapennina*, ♀; 2 — *M. omissa*, ♀.

Рис. 4. *Melieria*, общий вид, слева: 1 — *M. subapennina*, ♀; 2 — *M. omissa*, ♀.

covering the basal costal cells, base of cells br, bm and bcu and also middle part of cell br and base of r_{2+3} . Discal area crossing wing from apical half of pterostigma through R-M and to middle part of dm cell. Preapical crossband covers the DM-Cu crossvein and the apical area is covers the apex of cell r_1 , penetrating into cell r_{4+5} and usually leaving the apex of the wing hyaline. Cell bcu with short extension; distance between crossveins R-M and DM-Cu 3 times as long as R-M. Abdomen shining black (fig. 3, 1). This species cannot be separated from *H. aartseni* Merz with using external characters. In *H. rivosecchii*, the black spine of lateral surstylus inserted near tip (fig. 3, 2) but in *H. aartseni* the spine is near base of it.

Melieria omissa (Meigen, 1826) (fig. 4, 2)

Hennig, 1939.

Material examined: West Azerbaijan Province, Khoy, 5 km to Ghotur, 38°28.762' N 44°28.229' E, 1890 m, 27.06 2011, 3 ♂, 3 ♀ (Mohamadzade and Najarpour leg.).

Distribution: Austria, Belgium, Czech Republic, Denmark, France (incl. Corsica), Germany, Great Britain, Greece, Hungary, Italy, Latvia, Moldavia, the Netherlands, Poland, Romania, Russia, Sicily, Slovakia, Spain, Switzerland, Ukraine (Kameneva, Greve, 2011). A new record for Iran.

Diagnosis: head yellow, antenna brown, first segment of flagellum pointed, arista plumose. All setae and setulae black. Mesonotum and abdomen gray microtrichose. Femora gray, tibia and tarsi dark yellow. In wing, basal band present as spot at base of r_{2+3} cell that penetrating to r_1 . Discal one is broken into two spots: in apical half of stigma and around R-M. Preapical spot present in apical third of r_1 that penetrating to r_{2+3} and another spot present around DM-Cu crossvein. Apical band indistinct. Cell bcu with short extension; distance between R-M and DM-Cu crossvein 3.5 times as long as R-M (fig. 4, 2).

Melieria subapennina (Rondani, 1869) (fig. 4, 1)

Hennig, 1939; Kameneva, 1996.

Material examined: Mazandaran Province, Namakabroud, 17.08.2008, 2 ♀; Mazandaran Province, Plour, Rineh, southern mountainside of Damavand, 35°52.168' N 52°06.329' E, 2500 m, 8.08.2008, 1 ♀ (Mohamadzade and Najarpour leg.).

Distribution: Austria, France, Italy, Switzerland (Kameneva, Greve, 2011). A new record for Iran.

Diagnosis: head yellowish brown, antenna light brown, first segment of flagellum pointed, arista plumose. All setae and setulae black. Mesonotum and abdomen gray microtrichose, scutellum yellow, legs yellow. Wing pattern with 4 crossbands, basal band present as spot at base of r_{2+3} cell, middle part of br cell and on BM-Cu crossvein. Discal one is broken into two spots: in apical half of stigma and around R-M. Preapical band broken into two spots: in apical third of r_1 that penetrating to r_{2+3} and around DM-Cu crossvein. Apical band present. Cell bcu with short extension; distance between R-M and DM-Cu crossvein 3.7 times as long as R-M (fig. 4, 1).

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- Becker T.* Persische Dipteren von den Expeditionen des Herrn N. Zarudny 1898 und 1901 // *Ezheg. Zool. Muz.* — 1913. — 17 — P. 503–654.
- Fazel M. A., Fallahzadeh M., Gheibi M.* A contribution to the picture-winged flies (Diptera: Ulidiidae) from Fars Province, Iran // *Munis Entomology and Zoology.* — 2012. — 7, N 1. — P. 446–448.
- Hennig W.* 46/47. Otitidae (46. Otitidae und 47. Pterocallidae) // *Die Fliegen der paläarktischen Region* / Ed. E. Lindner. — Stuttgart : Schweizerbart., 1939. — 5, Lfg. 126–128. — 79 S.
- Kameneva E. P.* Revision of the palaeartic species of *Meliera* R.-D. (Diptera, Ulidiidae, Otitinae). 1. The groups of species assigned to *Hypochra* Loew // *Vestnik zoologii.* — 1996. — 30, N 6. — P. 19–46.
- Kameneva E. P.* A new genus and species of the tribe Lipsanini (Diptera. Ulidiidae) from Central America // *Vestnik zoologii.* — 2005. — 39, N 1. — P. 97–101.
- Kameneva E. P.* A new species of *Herina* (Diptera, Ulidiidae) from Switzerland, with a key to European species and notes on nomenclature and distribution // *Vestnik zoologii.* — 2007. — 41, N 5. — P. 405–421.
- Kameneva E. P., Greve L.* Fauna Europaea: Ulidiidae // *Fauna Europaea: Diptera Cyclorhapha.* Fauna Europaea version 2.4 / Eds. T. Pape, P. Beuk. — <http://www.faunaeur.org>. — 2011.
- Kameneva E. P., Korneyev V. A.* Myennidini, a new tribe of the subfamily Otitinae (Diptera: Ulidiidae), with discussion of the suprageneric classification of the family // *Isr. J. Entomol.* — 2006. — 35–36. — P. 497–586.
- Merz B.* A revision of the *Herina lugubris* species group (Diptera, Ulidiidae, Otitinae), with the description of two new species // *Revue Suisse de Zoologie.* — 2002. — 109, N 2. — P. 407–431.
- Soós Á.* Family Otitidae (Ortalidae) // Eds Á. Soós, L. Papp. *Catalogue of Palearctic Diptera.* Vol. 9. Micropezidae—Agromyzidae. — Budapest : Akadémiai Kiadó, 1984. — P. 45–59.