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NEW DATA ON THE SIGNAL FLIES OF THE GENUS *PLATYSTOMA* (DIPTERA, PLATYSTOMATIDAE) IN THE FAUNA OF IRAN

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New Data on the Signal Flies of the Genus *Platystoma* (Diptera, Platystomatidae) in the Fauna of Iran.
Mohamadzade Namin S. — As a result of studies of the signal flies in Iran, 5 species of the genus *Platystoma* Meigen (*P. chrysotoxum* Hendel, *P. dimidiatum* Hendel, *P. elegans* Hendel, *P. pubescens* Loew and *P. rufipes* Meigen) are recorded for the first time for Iranian fauna.

Key words: Diptera, Platystomatidae, signal flies, Iran, new records.

Новые данные о мухах-сигнальщиках рода *Platystoma* (Diptera, Platystomatidae) в фауне Ирана.
Мохаммадзаде Намин С. — В результате изучения мух-сигнальщиц в Иране, 5 видов рода *Platystoma* Meigen (*P. chrysotoxum* Hendel, *P. dimidiatum* Hendel, *P. elegans* Hendel, *P. pubescens* Loew и *P. rufipes* Meigen) впервые отмечены в фауне Ирана.

Ключевые слова: Diptera, Platystomatidae, мухи-сигнальщицы, Иран, новые находки.

Platystomatids, or the signal flies are small to large-sized flies (3.5–20 mm) often with grayish microtrichose or bright and metallic blue or green body. Wings usually strongly patterned and the bcu cell is closed with arcuate or straight vein at apex, without a posteroapical lobe (Korneyev, 2001). There are about 1200 described species in 119 genera worldwide (McAlpine, 2001), with about 65 species in 8 genera occurring in the Palearctic Region (Soós, 1984; Korneyev, 2001).

Platystoma are medium-sized to large flies with rather robust, partially microtrichose thorax and abdomen with shining or opaque spots devoid of microtrichia. Head much shorter than high. Antennae short and broad. Arista short pubescent or bare. 1 medial and 1 lateral vertical seta present. Genal ridge usually without setae. Frons in posterior half without medial hump. Thorax densely microtrichose; usually as wide as head, with 1 postpronotal, 0+1–4 supraalar, 1 postalar, 0–1 intraalar, 0–2 scap, 1 dorsocentral, 1 prsc ac; 1+1 notopleural, 1 anepisternal, 0 katepisternal; 2–3 pairs of scutellar setae present. Wings always with dark reticulate pattern. Cell bcu closed by straight or arcuate vein. Cell bm short and usually narrowed and closed by straight vein, Lower calypter much longer than upper one. Abdomen usually not wider than thorax. abdomen rather round, nearly as long as wide (Korneyev, 2001).

Before this study, little information was available on the fauna of Platystomatidae of Iran. Portschinsky (1892) described *Lamprophthalma metallica*; Becker (1913) reported *Platystoma oculatum* Becker, *P. bipilosum* Portschinsky, and *P. gilvipes* Loew, 1868 and Rikhter (1980) added *Platystoma canum* Portschinsky to the list but Becker's material was not studied by Hendel and Hennig and the occurrence of these species in Iran is still doubtful (Valery Korneyev, personal communication).

Material and methods

Materials are collected by standard sweeping net.

Species were identified with the use of keys by Hendel (1914) and Hennig (1945). Morphological terminology follows White *et al.* (1999). The following morphometric characters with their abbreviations are used: body length (BL) and wing length (WL).

All the material is deposited in the personal collection of the author (SMNC).

Results

Five species were collected in different provinces of Iran. All species are reported for the first time for Iranian fauna.

List of species

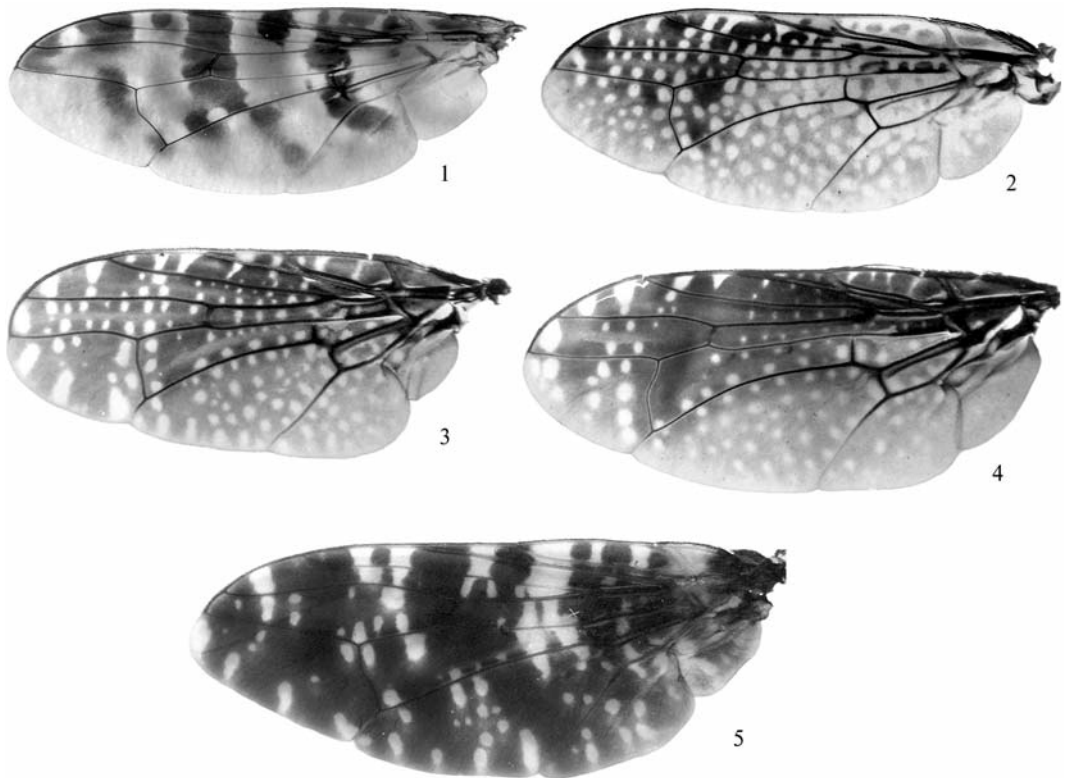
Platystoma chrysotoxum Hendel, 1913 (fig. 1)

Hendel, 1913: 122; Hennig, 1945: 45; Soós, 1984: 40.

Material examined: 1 ♀, 4 ♂, Kurdistan Province, Saral, Divan Dareh, 50km to Ghorveh, 15.06.2010 (Mohamadzade leg.); 1 ♂, Yazd Province, Taft, Deh bala, 15.06.2010 (Joharchi leg.)

Distribution: Armenia, Turkey (Hendel, 1913: “Armenischer Kaukasus und armenischer Taurus”); record from “Iraq” (Soós, 1984) is obviously erroneous as based on a series from “Malatia, Mesopotamien” (which actually is located in Turkey); Iran (new record).

Diagnosis: Large species. Head yellowish, frons brownish, antennae yellow. Mesonotal scutum black covered with grayish microtomentum. 2 pairs of scutellar setae present. Fore Femur yellow. Halter yellow. Wing pattern brown and banded with several spots. Cell c with 3 medial and 1 apical brown spot (fig. 1). Abdominal tergites with narrow yellow band in posterior part. Anterior part of tergites 5–6 with gray microtomentum. Oviscape shining black. Tergite 5 of male about 0.5 times as long as preab-



Figs. 1–5. *Platystoma* spp., wing: 1 — *P. chrysotoxum*; 2 — *P. dimidiatum*; 3 — *P. pubescens*; 4 — *P. rufipes*; 5 — *P. elegans*.

Рис. 1–5. *Platystoma* spp., крыло: 1 — *P. chrysotoxum*; 2 — *P. dimidiatum*; 3 — *P. pubescens*; 4 — *P. rufipes*; 5 — *P. elegans*.

domen. Measurement: male: BL: 7.5–9mm; WL: 7.2–9.2mm; female: BL: 6.5–8.5mm; WL: 6.5–7mm.

***Platystoma dimidiatum* Hendel, 1913 (fig. 2)**

Hendel, 1913: 99; Hennig, 1945: 29; Soós, 1984: 41.

Material examined: 2 ♀, 3 ♂, Kurdistan Province, Sanandaj, Abidar mountain, N: 35°18.107, E: 46°56.488, 17.06.2010; 15 ♀, 7 ♂, Kurdistan Province, Sanandaj, 30 km to Kamyaran, 1440 m, N: 34°58.385, E: 46°59.149, 24.08.2009. (Mohamadzade leg.).

Distribution: Greece (Crete) (Hendel, 1913); Iran (new record).

Diagnosis: Head black. Eye bordered with whitish microtrichose areas in posterior part. Frons yellowish brown, antennae brownish. Mesonotal scutum black, covered with gray microtomentum and with several black dots. Scutellum with 3 pairs of scutellar setae. Legs yellow, fore tarsus black. Halter yellow. Wing pattern pale brown and reticulated as in figure 1,2. Cell c with 5 brown spot. Oviscape brownish, its length as long as preceding abdominal tergite. Tergite 5 of male 1.5–2 times as long as preabdomen. Measurement: male: BL: 5.5–6.8 mm; WL: 4–4.8 mm; female: BL: 5–7 mm; WL: 3.5–4.5 mm.

***Platystoma elegans* Hendel, 1913 (fig. 5)**

Hendel, 1913: 121; Hennig, 1945: 44; Soós, 1984: 41.

Material examined: 4 ♀, 2 ♂, Kurdistan Province, Saral, Divan Dareh, 50 km to Ghorveh, 15.06.2010. (Mohamadzade leg.).

Distribution: Armenia or Azerbaijan: “Araxesthal” (Hendel, 1913); Iran (new record).

Diagnosis: Large species, frons reddish brown. Antennae yellowish brown, first segment of flagellum and slender part of arista black. Posterior part of eyes whitish. Mesonotal scutum black. Scutellum brownish with black spot in middle part and with 3 pairs of scutellar setae, legs completely black. Halter dark brown. Wing pattern dark brown and reticulated as in figure 5. Cell c with 4 brown spots. Abdominal tergites black. Oviscape shining black. Tergite 5 of male 2.2 times as long as preabdomen. Measurement: male: BL: 11–12 mm; WL: 11–11.5 mm; female: BL: 11.5–11.7 mm; WL: 10.5–11 mm.

***Platystoma pubescens* Loew, 1845 (fig. 3)**

Loew, 1845: 36; Schiner, 1864: 84; Hendel, 1913: 104; Hennig, 1945: 26; Soós, 1984: 42.

Material examined: 2 ♀, 3 ♂, Kurdistan Province, Sanandaj, Abidar mountain, N: 35°18.107, E: 46°56.488, 2000 m, 17.06.2010 (Mohamadzade leg.); 1 ♀, 1 ♂, Markazi Province, Ali Abad, 25.05.2009; 5 ♂, Markazi Province, Anbarbeh, 31.05.2009; 2 ♂, Markazi Province, Bazeneh, 31.05.2009 (Haji Ghorbani leg.).

Distribution: Hungary, Austria, northern Italy, Romania; Greece (Rhodos); Turkey (Hendel, 1913); “Czechoslovakia”, “Yugoslavia” (Soós, 1984); Iran (new record).

Diagnosis: Head black, posterior part of eyes covered with white microtomentum, frons dark brown with frontal setulae. Antennae dark brown; face blackish. Mesonotal scutum black with several dots. Three pairs of scutellar setae present. Legs black, middle and hind tarsi yellow. Wing pattern brown and reticulated as in figure 3. Cell c with 3 brown spots. Abdominal tergites black with narrow yellow band in posterior part. Oviscape shining black, its length as long as preceding abdominal tergite. Tergite 5 of male 0.3 times as long as preabdomen. Measurement: male: BL: 3.8–4.5 mm; WL: 3.3–3.8 mm; female: BL: 4.8–5 mm; WL: 4–4.2 mm.

***Platystoma rufipes* Meigen, 1826 (fig. 4)**

Meigen, 1826: 393; Schiner, 1864: 84; Hendel, 1913: 95; Hennig, 1945: 31; Soós, 1984: 42.

Material examined: 1 ♂, Alburz Province, Shahrestanak, 2150 m, 22.06.2009; 1 ♂, Ardabil Province, Sabalan mountain, 2000 m, 1.09.2010 (Mohamadzade leg.).

Distribution: Germany (Schiner, 1864); Ukraine (“Charkow, Odessa”), Turkey (Hendel, 1913); Russia (Astrakhan) (Hennig, 1945); Iran (new record).

Diagnosis: Medium size, Head and antennae black, face shining black. Mesonotal scutum shining black. Wing pattern brown and reticulated, as in figure 4. Femora yellow, hind femur blackish basally, tibiae yellowish, fore tibia and tarsi blackish. Apical part of halter blackish. Abdomen shining black. Tergite 5 of male as long as preabdomen. Measurement: male: BL: 5.8 mm; WL: 4 mm.

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