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S. Khaghaninia*, Y. Gharajedaghi. NOTES ON FAMILY OPOMYZIDAE (DIPTERA: BRACHYCERA) OF IRAN. – Far Eastern Entomologist. 2014. N 276: 7-12.

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Summary. *Opomyza germinationis* (Linnaeus 1758) and *O. thalhammeri* Strobl 1900 are recorded from Iran for the first time. *Geomyza tripunctata* Fallen 1823 and *Opomyza florum* (Fabricius 1794) are firstly recorded from East Azerbaijan province. Illustrations and key to the species occurring in this region are given.

Key words: Diptera, Opomyzidae, *Geomyza*, *Opomyza*, fauna, new records, Iran.

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Резюме. Впервые для фауны Ирана отмечены *Opomyza germinationis* (Linnaeus 1758) и *O. thalhammeri* Strobl 1900. Для провинции Восточный Азербайджан впервые приводятся *Geomyza tripunctata* Fallen 1823 и *Opomyza florum* (Fabricius 1794).

INTRODUCTION

The Opomyzidae is a small family of acalyptrate Diptera with 50 described species in four genera (*Anomalochaeta* Frey 1921, *Geomyza* Fallen 1810, *Opomyza* Fallen 1820 and *Scelomyza* Seguy 1938) found mostly in Holarctic (Drake, 1993). Nine species of *Opomyza*, eighteen species of *Geomyza* and one species of *Anomalochaeta* were listed in the Palaearctic catalogue (Soos, 1984). Keys to Palaearctic genera and species of Opomyzidae were published by Drake (1993).

Opomyzidae are small (2-5 m), slender flies with spotted or clouded wings, yellow to dark brown; third segment of antennae short, inclined downward from the second; arista dorsal (pubescent or plumose); second antennal segment not grooved; ptilinal suture clearly defined; one pair of frontal bristles, curving backward scattered interfrontal setulae present; vibrissae absent; postvertical orbital bristles absent; ocelli present; ocellar bristles present; mouthparts functional; thorax without a continuous dorsal suture; wing venation complete with a discal and anal cell, anal cell closed and short; costa with one break at the end of the subcosta; vein *Sc* usually incomplete but apical part sometimes visible as a thin line reaching the costa; crossvein *Bm-Cu* present but usually incomplete; lower calypter much reduced or absent; tibiae without a dorsal preapical bristle; hind tibiae without strong bristles in the basal 4/5 (Vockeroth, 1987; Drake, 1993). The larvae of this family are phytophagous, they inhabit within the stems of grasses (Poaceae); few species are pests of cereals and ryegrass (Blachowsky & Mesnil, 1935, Nye, 1958; Drake, 1993).

The fauna of Opomyzidae in Iran has been poorly studied so far (Rajabi *et al.,* 1997; Bahrami *et al*., 2004). New data on Iranian opomyzids are given below.

MATERIAL AND METHODS

Materials were collected by a standard entomological hand net from grasslands in several regions of East Azerbaijan province, located in northern east of Iran with geographic coordinate data from 45°5′ to 48°22′ N and from 36°45′ to 39°26′ E; and varying latitude from 1347 to 3707 m, in 2010–2013. The flies were killed in a killing jar containing potassium cyanide. Materials were preserved in 75% ethanol in glass vials. Collected specimens were deposited at the Insect Museum of Tabriz University (IMTU).

RESULTS

Four species in two genera are find in East Azerbaijan province of Iran. List of this species as well as key to the species of the family Opomyzidae in Iran (adapted from Drake, 1993) are given below.

Key to the Iranian species of the family Opomyzidae

1. Wing with well developed alula and small anal vein 2
– Wing without alula or anal vein, and small anal vein ..... ***Geomyza tripunctata***
2. Costal margin darkened beyond vein R_1 3
– Costal margin clear except for apical spot ..... ***Opomyza florum***
3. Fore femora with 2 long ventral setae, fore tarsi mainly dark, body mainly black-brown ... ……..... ***Opomyza thalhammeri***
– Ventral fringe of fore femur with more than 2 setae in addition to rows of weak setae, fore tarsi yellow-brown, body yellow-brown …….... ***Opomyza germinationis***

Genus *Geomyza* Fallen 1810

***Geomyza tripunctata* Fallen 1823**
Figs 1–4

MATERIAL EXAMINED. **Iran**: East Azarbaijan province, Ajabshir: 37°30' N, 46°01' E, 1437 m, 20.V 2009, 2♂, 1♀; 37°29' N, 45°52' E, 2037 m, 15.VII 2010, 1♂, 1♀; 37°32' N, 45°50' E, 1750 m, 25.VI 2011, 2♂, 2♀; 37°29' N, 45°52' E, 1320 m, 8.VIII 2011, 1♂; Chichakli: 38°39' N, 46°31' E, 2140 m, 10.VII 2009, 1♀; 38°40' N, 46°31' E, 2168 m, 28.V 2010, 1♂; 38°40' N 46°31' E, 2148 m, 16.VI 2011, 1♂; 38°41' N, 46°31' E, 2163 m, 23.V 2012, 1♂, 1♀; 38°40' N, 46°31' E, 2168 m, 2.VIII 2012, 1♀; Gharadagh forests: 38°53' N, 46°48' E, 1859 m, 14.VII 2009, 1♂, 1♀; 38°51' N, 46°52' E, 1770 m, 14.III 2013, 1♂; Horand: 38°59′N, 47°22′E, 1370 m, 5.VII 2009, 1♂; 38°56′N, 47°27′E, 1360 m, 28.VI 2010, 1♂, 2♀; 38°57′N, 47°17′E, 1350 m, 21.VI 2011, 1♀; 38°97′N, 47°21′E, 1420 m, 29.V 2012, 2♀; Isperekhan: 37°46' N, 46°24' E, 2504 m, 16.VII 2009, 4♂; Maraghe: 37°25' N, 46°25' E, 1787 m, 12.VII 2010, 1♂; Kandovan: 37°45' N, 46°17' E, 2696 m, 26.V 2009, 1♂, 1♀; 37°46' N, 46°16' E, 2496 m, 13.VII 2009, 1♂, 1♀; 37°46' N, 46°15' E, 2341 m, 25.VI 2010, 1♂; 37°44' N, 46°19' E, 3005 m, 25.VII 2010, 1♂, 2♀; 37°42' N, 46°18' E, 2863 m, 10.VIII 2011, 1♀; 37°46' N, 46°16' E, 2430 m, 17.VII 2012, 1♂; Qurigol: 37°55' N, 46°41' E, 1915 m, 22.III 2010, 1♂, 1♀; 37°55' N, 46°41' E, 1847 m, 12.V 2010, 1♂, 1♀; 37°54' N, 46°41' E, 1943 m, 19.VI 2010, 1♂, 1♀; 37°55' N, 46°41' E, 1888 m, 16.VII 2011, 1♂, 1♀.

DIAGNOSIS. Body mainly black. Antenna yellow. Femora completely yellow. Wing with large conspicuous dark spots on both cross-veins and usually with distinct spot at its base. Anepimeron with one strong seta in addition to 1-2 weak setae (Drake, 1993).

BIOLOGY. Larvae develop in various grasses. It is a cereal pest (Rohacek, 2012).

DISTRIBUTION. A very common and widespread Holarctic species (Wheeler *et al*., 1999; Bahrami *et al*., 2004). Here this species is recorded from East Azarbaijan province of Iran for the first time.

Figs. 1–4. *Geomyza tripunctata*, female. 1 – habitus, lateral view; 2 – wing; 3 – head, lateral view; 4 – fore leg, lateral view.

Genus *Opomyza* Fallen 1820

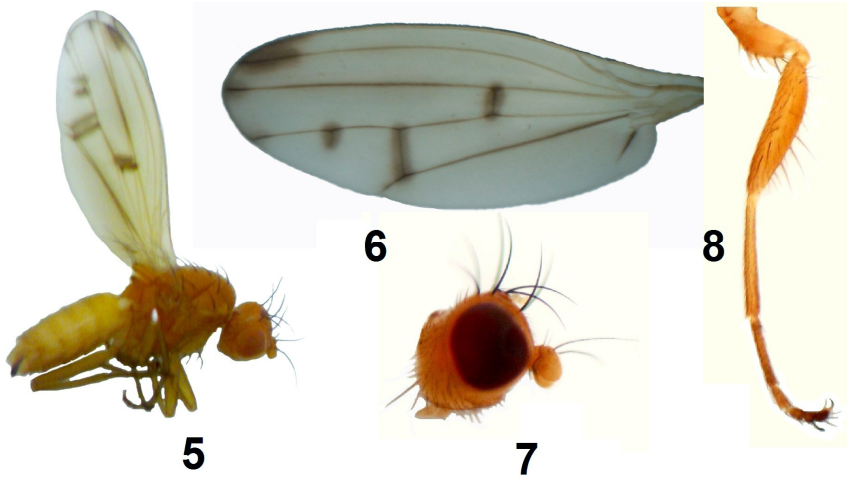
***Opomyza florum* (Fabricius 1794)**
Figs 5–8

MATERIAL EXAMINED. **Iran**: East Azarbaijan province, Ajabshir: 37°30' N, 46°01' E, 1437 m, 20.V 2009, 3♀; 37°32' N, 45°50' E, 1750 m, 25.VI 2011, 2♂, 3♀; 37°29' N, 45°52' E, 1320 m, 8.VIII 2011, 1♂; Chichakli: 38°39 N, 46°31 E, 2140 m, 10.VII 2009, 2♂; 38°40 N 46°31 E, 2148 m, 16.VI 2011, 1♀; 38°41 N, 46°31 E, 2163 m, 23.V 2012, 4♂, 3♀; Gharadagh forests: 38°53' N, 46°48' E, 1859 m, 14.VII 2009, 1♂, 1♀; 38°51' N, 46°52' E, 1770 m, 14.III 2013, 1♂; Horand: 38°59′N, 47°22′E, 1370 m, 5.VII 2009, 1♀; 38°56′N, 47°27′E, 1360 m, 28.VI 2010, 2♂, 5♀; 38°57′N, 47°17′E, 1350 m, 21.VI 2011, 1♀; 38°97′N, 47°21′E, 1420 m, 29.V 2012, 2♀; Isperekhan: 37°46' N, 46°24' E, 2504 m, 16.VII 2009, 1♂; Maraghe: 37°25' N, 46°25' E, 1787 m, 12.VII 2010, 2♂; Kandovan: 37°45' N, 46°17' E, 2696 m, 26.V 2009, 2♂, 2♀; 37°46' N, 46°16' E, 2496 m, 13.VII 2009, 1♂, 4♀; 37°46' N, 46°15' E, 2341 m, 25.VI 2010, 1♂; 37°44' N, 46°19' E, 3005 m, 25.VII 2010, 5♂, 8♀;37°46' N, 46°16' E, 2430 m, 17.VII 2012, 1♂; Qurigol: 37°55 N, 46°41' E, 1915 m, 22.III 2010, 1♀; 37°55.028 N, 46°41',244 E, 1847 m, 12.V 2010, 1♂, 1♀; 37°54.975 N, 46°41',120 E, 1943 m, 19.VI 2010, 1♂, 3♀; 37°54 N, 46°42' E, 1921 m, 21.VI 2012, 1♂, 1♀.

DIAGNOSIS. Body yellow. Antenna yellow. Femora yellow. Wings with 4 dark marks comprising an apical spot and costal margin clear except for apical spot (Drake, 1993).

BIOLOGY. Larvae develop in graminoid plants. It is a cereal pest (Rohacek, 2012).

DISTRIBUTION. A common and widespread Palaearctic species (Rajabi *et al*., 1997; Rohacek, 2012), but firstly recorded here from East Azarbaijan province of Iran.



Figs. 5–8. *Opomyza florum*, female. 5 – habitus, lateral view; 6 – wing; 7 – head, lateral view; 8 – fore leg, lateral view.

***Opomyza germinationis* (Linnaeus 1758)**
Figs 9–12

MATERIAL EXAMINED. **Iran**: East Azarbaijan province, Ajabshir: 37°29' N, 45°52' E, 2037 m, 15.VII 2010, 1♂, 1♀; 37°29' N, 45°52' E, 1320 m, 8.VIII 2011, 1♂; Chichakli: 38°39' N, 46°31' E, 2140 m, 10.VII 2009, 1♂; 38°40' N, 46°31' E, 2168 m, 28.V 2010, 1♂, 1♀; 38°41' N, 46°31' E, 2163 m, 23.V 2012, 1♀; 38°40' N, 46°31' E, 2168 m, 2.VIII 2012, 2♂, 1♀; Horand: 38°59′ N, 47°22′ E, 1370 m, 5.VII 2009, 1♀; 38°56′ N, 47°27′ E, 1360 m, 28.VI 2010, 2♀; 38°57′ N, 47°17′ E, 1350 m, 21.VI 2011, 1♀; 38°97′ N, 47°21′ E, 1420 m, 29.V 2012, 1♀; Isperekhan: 37°46' N, 46°24' E, 2504 m, 16.VI 2009, 4 ♂; Kandovan: 37°45' N, 46°17' E, 2696 m, 26.V 2009, 1♂, 1♀; 37°46' N, 46°16' E, 2496 m, 13.VII 2009, 1♂, 1♀; 37°46' N, 46°15' E, 2341 m, 25.VI 2010, 1♂; 37°44' N, 46°19' E, 3005 m, 25.VII 2010, 10♂, 8♀; 37°42' N, 46°18' E, 2863 m, 10.VIII 2011, 1♂, 1♀; Qurigol: 37°55' N, 46°41' E, 1915 m, 22.III 2010, 1♂, 1♀; 37°55' N, 46°41' E, 1847 m, 12.V 2010, 1♂, 1♀; 37°54' N, 46°41' E, 1943 m, 19.VI 2010, 1♂, 1♀; 37°55' N, 46°41' E, 1888 m, 16.VII 2011, 1♀.

DIAGNOSIS. Antenna yellow. Costal margin darkened beyond vein R_1 . Body yellow-brown, abdomen with rounded dull yellow patches at the sides of each tergite. Proepisternum without setulae midway between the coxa and postpronotal lobe. Dorsal setae on last abdominal segment of the male short (Drake, 1993). Ventral fringe of fore femur with more than 2 setae in addition to rows of weak setae and fore tarsi mainly yellow.

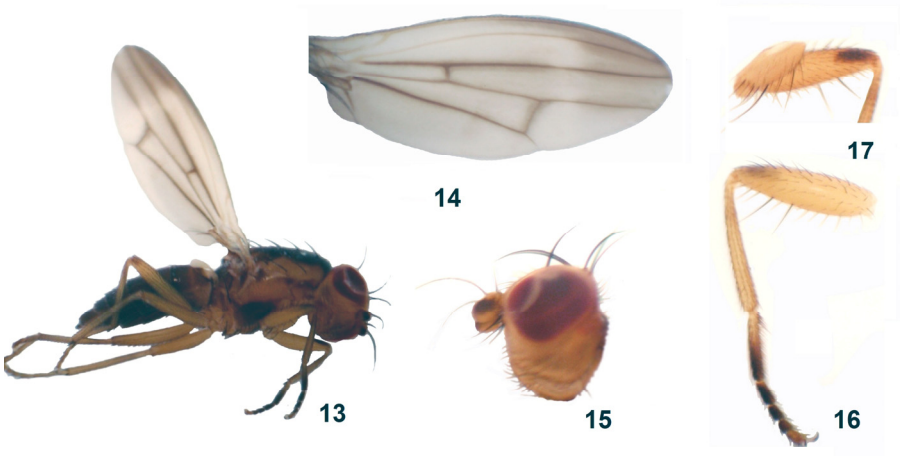
BIOLOGY. Common in meadows (Rohacek, 2012).

DISTRIBUTION. This Holarctic species widespread in Europe and introduced in Canada (Wheeler *et al*., 1999). This species is firstly recorded here from Iran.

Figs. 9–12. *Opomyza germinationis*, male. 9 – habitus, lateral view; 10 – wing; 11 – head, lateral view; 12 – fore leg, lateral view.

***Opomyza thalhammeri* Strobl 1900**
Figs 13–17

MATERIAL EXAMINED. **Iran**: East Azarbaijan province, Gharadagh forests, 38°53' N, 46°48' E, 1859 m, 20.III 2013, 2♀.



Figs. 13–17. *Opomyza thalhammeri*, female. 13 – habitus, lateral view; 14 – wing; 15 – head, lateral view; 16 – fore leg, lateral view; 17 – fore femur, lateral view.

DIAGNOSIS. Costal margin darkened beyond vein R_1. Body mainly black (Drake, 1993). Fore femora with 2 long ventral setae and black area in apical part. Fore tarsi mainly black.

BIOLOGY. Larvae developed in *Bromus inermis* (Martinek, 1978).

DISTRIBUTION. This Palaearctic species (Martinek, 1978) is new to Iran fauna.

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