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## THE FIRST RECORD OF THE GENUS *OPLODONTA* RÓNDANI, 1863 (DIPTERA: STRATIOMYIDAE) FROM IRAN

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Genus *Oplodontha* Rondani, 1863 is firstly recorded of from Iran. Fifty one specimens of *O. viridula* (Fabricius, 1775) were collected in the pea shrub forests (*Caragana arborescens*) in the East Azarbaijan province in 2010-2011. Diagnostic characters, distribution and supplementary photographs of *O. viridula* are provided.

KEY WORDS: Diptera, Stratiomyidae, *Oplodontha viridula*, new record, Iran.

**Ф. Казерани, С. Хаганиниа. Первое указание рода *Oplodontha* Rondani, 1863 (Diptera: Stratiomyidae) из Ирана // Дальневосточный энтомолог. 2013. N 262. С. 1-6.**

Род *Oplodontha* Rondani, 1863 впервые указывается из Ирана. В провинции Восточный Азербайджан в 2010-2011 гг. в лесах из желтой акации (*Caragana arborescens*) был пойман 51 экз. *O. viridula* (Fabricius, 1775). Приводятся диагностические признаки, распространение и фотографии имаго этого вида.

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## INTRODUCTION

The family Stratiomyidae belongs to the suborder Brachycera and infraorder Stratiomyomorpha in Diptera (Rozkošný, 1982). This family includes more than 2650 species in 375 genera composed of 12 subfamilies worldwide of which 426 species in 55 genera and 7 subfamilies occur in the Palearctic region (Woodley, 2001; Üstüner & Hasbenli, 2011). The species of this family are small to large (body length 2-28 mm), highly varied in shape and coloration, some species mimic wasps and bees, particularly in flight. This family is distinct from other flies due to their unique wing venation and larval habitus (Woodley, 2001).

The genus *Oplodontha* Rondani, 1863 is belonged to subfamily Stratiomyinae and tribe Stratiomyini. This genus has 21 species in the world (Brake & Thompson, 2011), most species are native to Africa, with a few species distributed outside of Africa: *O. viridula* (Fabricius, 1775) is found throughout Europe and Western Asia, *O. luzonensis* James, 1947 is native to the Philippines, and *O. rubrithorax* (Macquart, 1838) is recorded as far east as the Ryukyu Islands (Japan) (Woodley, 2001). The Iranian fauna of Stratiomyidae has poorly studied. Herein the genus *Oplodontha* is firstly recorded from Iran.

## MATERIAL AND METHODS

The studied specimens were collected from 12 localities in the pea shrub (*Caragana arborescens*) forests during 2009-2011 (Fig. 1). This area, a registered biosphere in world heritages by UNESCO since 1976 and located in northern east of East Azarbaijan province (Iran), has semi-arid steppes, rangelands and forests, rivers and springs; this region has very divers fauna and flora. These forests are situated in the northern Iran with a common border to Armenia and Azerbaijan belongs to the Caucasus Iranian Highlands.

For identification, the materials were examined under a Nikon (SMZ 1000) binocular microscope. Morphological terminology follows Stakelberg (1969) and Rozkošný (1998). All specimens are deposited in the insect collection of the Department of Entomology, Tabriz University, Tabriz, Iran.

## NEW RECORDS

### Genus *Oplodontha* Rondani, 1863

*Hoplodonta* Scudder, 1882; *Oplodonta* Brauer, 1882.

Type species: *Stratiomys viridula* Fabricius, 1775.

DIAGNOSIS. Medium-sized; scape at most twice as long as the pedicel, rarely slightly longer, flagellum consisting of 5-6 flagelomers (figs. 2-3); vein  $Cu_1$  at most touching discal cell or separated from it by a cross-vein,  $R_1$  and  $R_{2+3}$ , fused, discal cell very small (fig. 4); posterior margin of scutellum with a pair of spines or at least

with two pointed tubercles. This genus is distinguished from other Palaearctic genera of the tribe Stratiomyini by the fusion of  $R_1$  and  $R_{2+3}$ , by the very small discal cell and by the scape no more than twice as long as the pedicel (Rozkošný, 2004). The larvae of *Oplodontha* are aquatic. Most species prefer marshes and the littoral zone of ponds and springs.

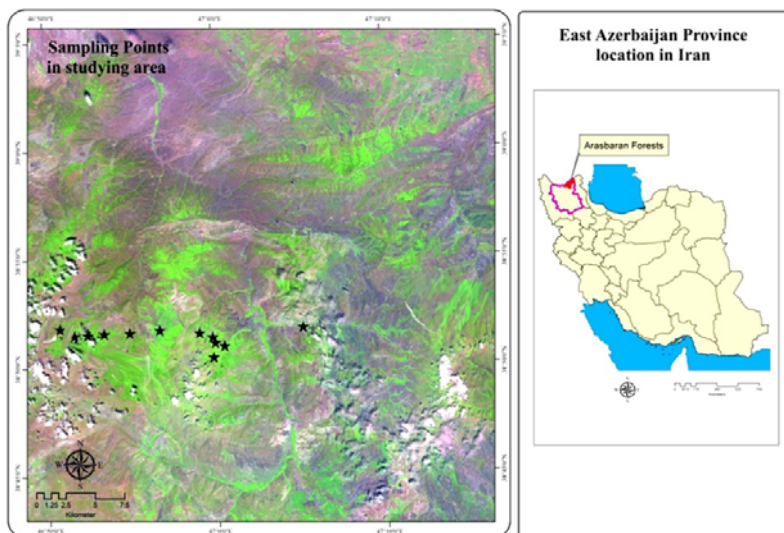


Fig. 1. Location of sampling points on satellite image (SPOT) of pea shrub forests.

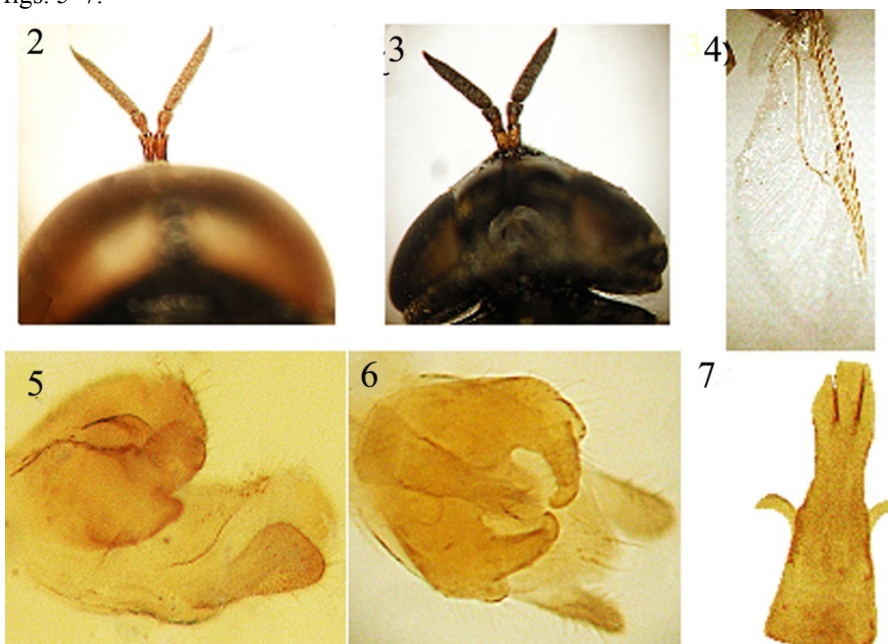
### *Oplodontha viridula* (Fabricius, 1775)

Figs. 2–18

*Musca viridata* Villers, 1789; *Odontomyia atrata* Verrall, 1909; *Odontomyia heydenii* Jaenicke, 1866; *Odontomyia interrupta* Loew, 1846; *Odontomyia personata* Loew, 1846; *Stratiomys bimaculata* Meigen, 1835; *Stratiomys jejuna* Schrank, 1803.

**MATERIAL EXAMINED.** **Iran:** East Azarbaijan province, Makidy valley; 38°50'57.6"N, 46°51'35.6"E, 1613m, 10.VII 2010, 5♂, 6♀; 38°51'48.78"N, 46°50'45.54"E, 1667 m, 22.VII 2011, 4♀; 38°51'55.20"N, 46°49'53.16"E, 1675 m, 12.VII 2010, 1♀; Chichakli, N38°30'26.22"N, 46°36'26.82"E, 1724 m, 25.VI 2009, 2♂, 5♀; 38°31'22.02"N, 46°32'6.66"E, 1733 m, 25.VI 2009, 1♂, 2♀; 38°38'47.7"N, 46°14'37.32"E, 1429 m, 25. VI 2009, 3♀; Aynali forests, 38°53'22.13"N, 46°47'13.56"E, 1284 m, 2.VIII 2011, 3♀; 38°52'26.22"N, 46°47'26.52"E, 1324 m, 3.VIII 2011, 3♀; 38°52'42.22"N, 46°47'55.22"E, 1314 m, 2.VIII 2011, 2♀; Oskolu, 38°52'50.6"N, 46°54'30.12"E, 1547 m, 17.VII 2010, 4♂, 1♀; 38°52'31.18"N, 46°54'22.57"E, 1558 m, 17.VII 2011, 4♀; 38°52'44.26"N, 46°54'50.26"E, 1556 m, 18.VII 2010, 5♀ (all specimens were collected from forestry wetlands near to rivers by S. Khaghaninia).

DIAGNOSIS. Scape equal to or only slightly larger than pedicle in length (figs. 2–3); *R4+5* not furcate (fig. 4); abdomen green for most part, with black spots along median line, patterns of abdomen various (figs. 8–18); male genitalia as in figs. 5–7.



Figs. 2–7. *Oplodontha viridula*. 2 – male antennae; 3 – female antennae; 4 – wing; 5 – male genitalia, lateral view; 6 – epandrium, dorsal view; 7 – adeagus.

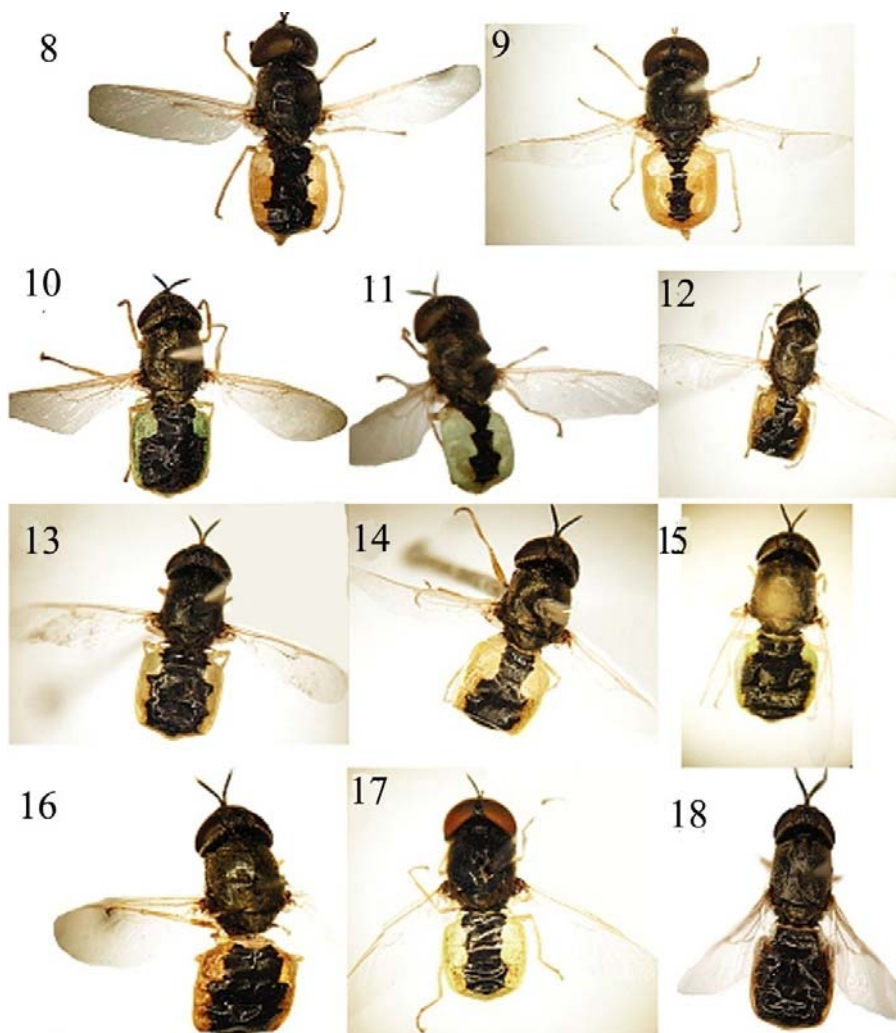
DISTRIBUTION. Albania, Algeria, Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, England, France, Finland, Germany, Greece, Hungary, Iraq, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Mongolia, Netherlands, Norway, Poland, Roumania, Russia, Slovakia, Spai (Woodley, 2011). New to Iranian fauna.

FLOWER VISITED. This species was abundant on the flowers of water mint (*Mentha aquatica*), marsh ragwort (*Senecio aquatica*), and parsley water-dropwort (*Oenanthe lachenalii*) (Barber, 1988).

#### DISCUSSION

*Oplodontha viridula* is halophilic and is found in near the margins of rivers and estuaries (Rozkošný, 1998). Drake (1991) in the provisional atlas of Brachycera (Diptera) of Britain and Ireland mentioned that *O. viridula* is the most common of the truly aquatic Stratiomyidae, and recording has shown it to be less rare. The larvae of this species may be locally common in a range of well-vegetated water bodies,

such as ponds, drainage ditches, fens, seepages and the margins of slow streams. Flight period in Europe is from early June to early August, exceptionally in to September, peaking from late June to mid July. The studied materials from Iran were collected from late of June to beginning of August with pick of flight in first half of July from pea shrub forests in wetlands such as along the streams and rivers. Thus our results are in agreement to the former studies.



Figs. 8–18. *Oplodontha viridula*, variation patterns of abdomen.

Studied specimens of *O. viridula* shows a high variability in the extent of the black abdominal patterns (figs. 8–18). In extreme cases the dorsal longitudinal mid band may be remarkably expanded, leaving only the narrow lateral margins of the tergites pale, or the black patches may be reduced and even separated in the middle. Rarely only the basal black abdominal spot is present (Rozkošný, 1982; Mason et al., 2009). Along the pea shrub forests, we collected diverse populations with various abdominal patterns. This diversity among the samples seems that not related to latitude and longitude of the sampling area because we collected various specimens from the sympatric area.

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