

**TWO SPECIES AS NEW RECORDS FOR IRANIAN HOVER
FLIES OF THE GENUS *PIPIZELLA* RONDANI, 1856
FROM EAST AZERBAIJAN PROVINCE, IRAN**

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ABSTRACT: In order to study of the flower flies in East Azerbaijan province, a survey was conducted during 2009-2010. Based on identified materials, two species, *Pipizella maculipennis* Meigen, 1822 and *P. viduata* Linnaeus, 1758, are reported as new records for Iranian insect fauna.

KEY WORDS: Flower flies, Syrphidae, Milesiinae, East Azerbaijan province, Iran.

Hover flies belong to one of the most diverse fly families which include about 200 genera and more than 6000 species worldwide. Flower flies of the subfamily Milesiinae are the most common and conspicuous which contain about two thirds of hover fly fauna. In this subfamily humeri is hairy and head naturally sits well forward so that the humeri is clearly visible (Stubbs & Falk, 2002). These flies are common pollinators which is present wherever flowers are found, being absent only in truly arid areas and the Polar Regions (Kevan & Baker 1983). Nearly most of Melisiinae members are generally seen around ponds, marshes and wet lands where there is a large amount of decaying vegetation, wood and rotting seaweeds (Coe, 1953).

The most of Milesiinae larvae are filter feeders in all kinds of aquatic media and are commonly called rat-tailed maggots. The adults mainly feed on nectar or pollen for proteins, lipids and vitamins (Saribiyik, 2003).

If occasionally these larvae swallowed by human, myiasis will be observed. Otherwise, the larvae contribute to the purification of water by filtering out microorganisms as well as organic products. Some of them feed on plant materials and decaying organic matters (Stubbs & Falk, 2002). Feeding on dead animal could be seen in Pipizini tribe which consume dead aphids particularly Adelgids and other wax- secreting aphids (Chandler, 1968).

Ninety five species belonging to the Milesiinae subfamily have been already recorded from Iran (Golmohammadi & Khiaban, 2004; Gilasian, 2005; Dousti & Hayat, 2006; Gharali & Reemer, 2008 and 2010; Khaghaninia & Bashiri, 2011; Khaghaninia et al., 2012; Khaghaninia & Shakeryari, 2012; Shakeryari et al., 2012).

MATERIAL AND METHODS

The specimens were collected from Kanodvan valley located on the southern mountainside of Sultan Mount (one of the Sahand's summits), respectively in south of East Azerbaijan Province, Iran during 2009-10. This area has rich grass lands with various species of Astraceae, Umbelifera, Legominaceae and Ronunculaceae (Fig. 1).

The samples were killed in a killing jar containing potassium cyanide and the voucher specimens were deposited at Insect Museum of Tabriz University. The specimens were identified based on valid keys such as Stubbs and Falk (2002) and Speight (2008). The range and visited flowers of the recorded species are provided mostly from Speight (2010).

RESULTS

Pipizella Rondani, 1856

Diagnostic characters: These are small compact hover flies with rather elongate antennae. They never have spots on the abdomen. The upper outer cross-vein is not strongly oblique, but usually bent halfway along and often meeting vein R_{4+5} almost at right angle. A female from Surrey with yellow metatarsi on the front and middle legs could annulate (Speight 2008).

Pipizella maculipennis (Meigen, 1822)

(Fig. 2)

Material examined: 29 specimens (5♂♂, 24♀♀): Kandovan valley; 3744.911 N 4618.914 E, 2863 m, 5 July 2009.

Diagnostic characters: Third antennal segment longer, arista yellow in thickened basal half. Body very black and pale body hairs white. Eye hairs dark on upper half (female). Third antennal segment at least 3 times as long as wide (view on outer side). Tergite 3 usually with black hairs on axis (Stubbs & Fulk, 2002).

Flowers visited: White umbellifers, *Rosa canina* and *Prunus laurocerasus*.

Distribution: Britain (southern England), Belgium, France, Switzerland, Italy, Bosnia, Croatia, Macedonia, Montenegro, Serbia, Romania and Turkey.

Pipizella viduata (Linnaeus, 1758)

(Fig. 3)

Material examined: 2 specimens (1♂, 1♀): Kandovan valley; 3742.309 N 4618.677 E, 2619 m, 28 June 2010.

Diagnostic characters: Third antennal segment about twice as long as wide (view on outer side). Arista almost completely black. Third antennal segment twice as long as wide (view on outer side). Arista dusky yellow at base. Anterior surface of hind tibia with hairs at most as long as width of tibia. Abdomen compact (Bei-Bienko, 1988).

Flowers visited: White umbellifers, *Polygonum cuspidatum*, *Potentilla erecta*, and *Potentilla erecta*.

Distribution: From Fennoscandia south to Iberia and the Mediterranean; from Ireland eastwards through most of Europe into European parts of Russia and the Caucasus; Western Siberia.

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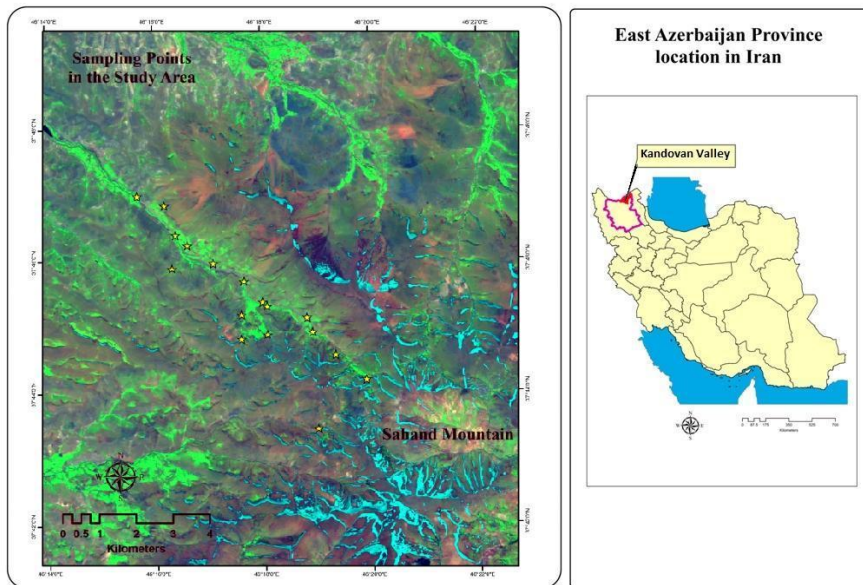


Figure 1. Location of sampling points on satellite image (SPOT) of Kandovan valley.



Figure 2. *Pipizella maculipennis*: Male: a- (dorsal view), b- (lateral view), c- (antennae); Female: d- (dorsal view), e- (lateral view), f- (Antennae).

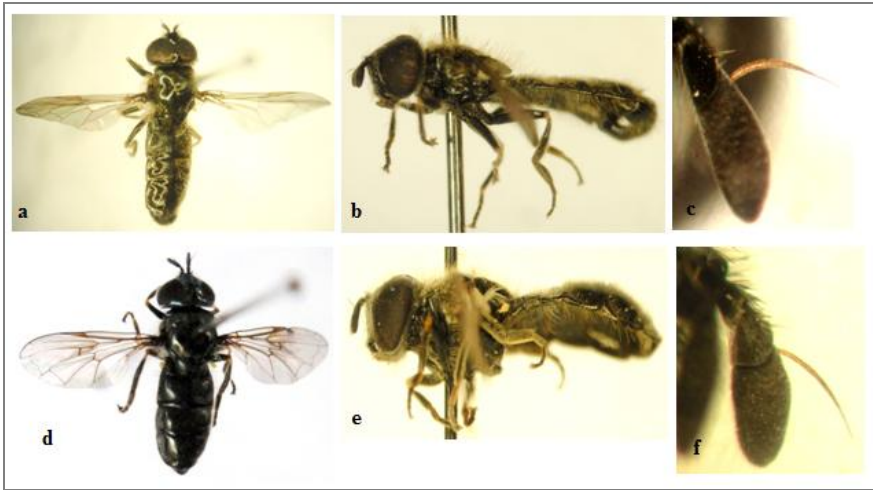


Figure 3. *Pipizella viduata* Male: a- (dorsal view), b- (lateral view), c- (antennae); Female: d- (dorsal view), e- (lateral view), f- (Antennae).