

## First record of the genus *Trichopsomyia* Williston, 1888 (Diptera: Syrphidae) from Iran

Samad KHAGHANINIA<sup>1</sup>, Abbas SHAKERYARI<sup>1</sup>, Rüstem HAYAT<sup>2,\*</sup>

<sup>1</sup>Department of Plant Protection, Faculty of Agriculture, Tabriz University, 51664 Tabriz - IRAN

<sup>2</sup>Department of Plant Protection, Faculty of Agriculture, Süleyman Demirel University, 32260 Isparta - TURKEY

Received: 19.10.2011 • Accepted: 20.02.2012

**Abstract:** The genus *Trichopsomyia* Williston, 1888 is recorded for the first time from Iran. *Trichopsomyia flavitarsis* (Meigen, 1822) and *T. lucida* (Meigen, 1822) were determined based on the material collected from a wetland in Aynali forests in 2010. A key to the species of the genus in northwestern Iran is prepared and photographs of the specimens are provided.

**Key words:** *Trichopsomyia*, new record, Syrphidae, Iran

The genus *Trichopsomyia*, belonging to the subfamily Milesiinae and the tribe Pipizini, was described by Williston (1882), with *T. polita* designated as the type species (Peck, 1988). The genus *Trichopsomyia* in Europe, with only a single species, *Trichopsomyia lucida* (Meigen, 1822), has been known for many years. The name *Trichopsomyia*, however, is maintained as valid for the 3 European species, *Trichopsomyia lucida* (Meigen, 1822), *T. joratensis* Goeldlin, 1997, and *T. flavitarsis* (Meigen, 1822), previously grouped under the name *Parapenium* or *Trichopsomyia* by some authors (Coe, 1953). These species are fairly common in a variety of habitats such as highlands on moorland and wet heath, rich fen, damp areas of calcareous grassland and fly ash tips. The larvae are predaceous and feed on small insects, particularly psyllids and aphids (Stubbs and Falk, 2002). Recently, the checklist of Iranian hoverflies was

reviewed by Dousti and Hayat (2006), and it showed no record of this genus from Iran.

The specimens were collected from wetlands having long reed beds near woodlands in Aynali forests, using a common entomological sweep net, during 2010. Aynali forests are located west of Qaradag forest, a registered biosphere in world heritages by UNESCO since 1976, in East Azerbaijan Province, Iran. The specimens were determined using the keys of Stubbs and Falk (2002) and Speight (2008). The distribution of the species mostly follows Speight (2010).

### *Trichopsomyia* Williston, 1888

**Diagnostic characters:** Hind tibia with long black hairs on anterior surface. Female with a pair of orange spots on tergite 2 (Stubbs and Falk, 2002). Terga 2-4 well developed and subequal in length (Speight, 2008).

\* E-mail: rustemhayat@sdu.edu.tr

**Key<sup>1</sup> to species of *Trichopsomyia* in Iran**

- 1. Male (eyes meeting above the antennae) ..... 2
  - Female (eyes separate throughout) ..... 3
- 2. Cell R<sub>5</sub> ending apically almost in a right angle; antennal segment 3 approximately 3 times as long as its maximum width ..... *flavitarsis*
  - Cell R<sub>5</sub> ending apically in a distinctly acute angle, antennal segment 3 no more than 2 times as long as its maximum width ..... *lucida*
- 3. Tergite 2 with a pair of round yellow spots; hind tibia black-haired; Cell R<sub>5</sub> ending apically almost in a right angle; frons without dust spot ..... *flavitarsis*
  - Tergite 2 with a pair of square yellow spots; hind tibia silver-white haired; Cell R<sub>5</sub> ending apically in a distinctly acute angle; frons with a pair of distinct, silvery-gray dust spots ..... *lucida*

***Trichopsomyia flavitarsis* (Meigen, 1822) (Figure 1)**

Syst. Besch., 3: 248 (*Pipiza*).Type-locality: not given (hier nicht sehr selten) (Stolberg near Aachen) (Peck, 1988).

**Material examined:** Two specimens (2♀♀): Aynali forests; 38°53'N, 46°47'E, 1284 m, 13.07.2010 (deposited at the Insect Museum of Tabriz University).

**Flowers visited:** White umbellifers, *Caltha palustris*, *Ranunculus repens*, and *Sonchus* sp. (Speight, 2010).

**Note:** The adults could be found frequently at a low elevation, about 30 cm above the ground among reed beds.

**Distribution:** From Fennoscandia south to the Pyrenees and northern Spain; from Ireland eastwards through northern Europe and mountainous parts of central Europe into European parts of Russia and on to the Pacific coast; also in the former Yugoslavia (Speight, 2010).

***Trichopsomyia lucida* (Meigen, 1822) (Figure 2)**

Syst. Besch., 3: 247 (*Pipiza*).Type-locality: not given (Europe) (Peck, 1988).

**Material examined:** Six specimens (2♂♂, 4♀♀): Aynali forests; 38°53'N, 46°47'E, 1284 m, 13.07.2010 (deposited at the Insect Museum of Tabriz University).

**Flowers visited:** *Rubus fruticosus* and *Verbascum* sp. (Speight, 2010).

**Note:** The adults of this species were found similar to the previous one, at a low elevation among reed beds.

**Distribution:** Southern England, Germany, Belgium, the Netherlands, France, Ireland, Great Britain, central Spain, Switzerland, and Turkey (Speight, 2010).

**Acknowledgment**

We would like to thank Tabriz University for supporting this work under the Research Grant Contract No. 27.557.



Figure 1. *Trichopsomyia flavitarsis*: female, a-dorsal view, b-lateral view, and c-antenna.

<sup>1</sup> Adapted from Speight (2008) and Stubbs and Falk (2002).

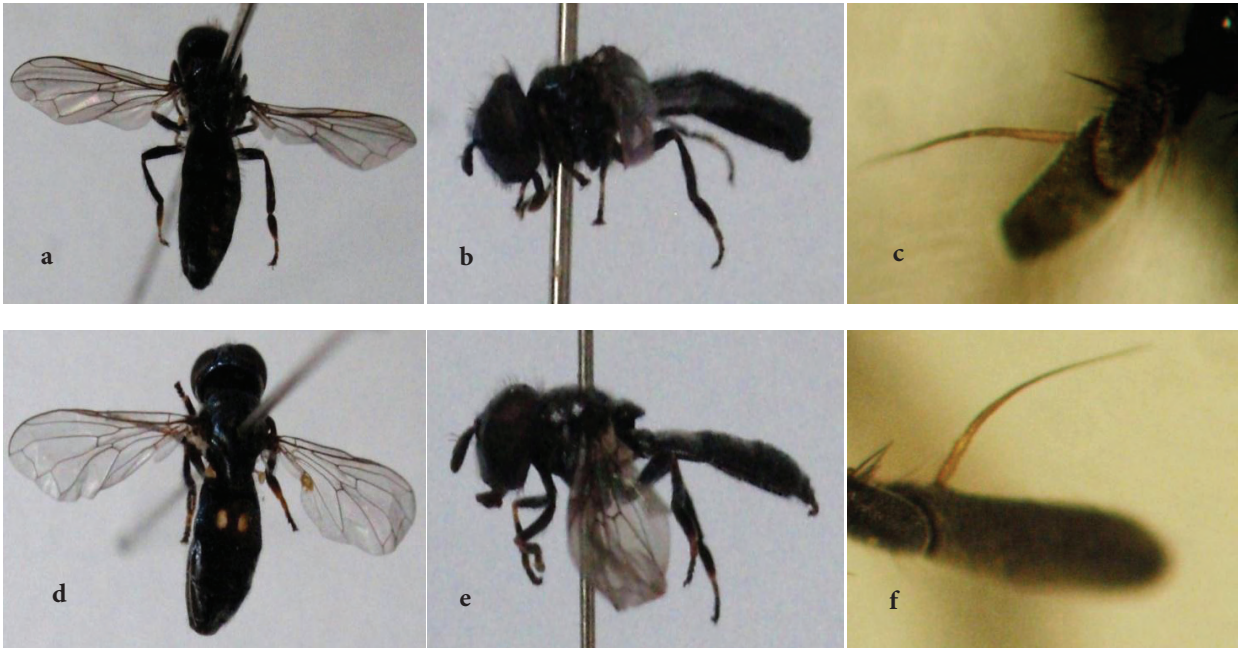


Figure 2. *Trichopsomyia lucida*: a-c male: a-dorsal view, b-lateral view, c-antenna; d-f female: d-dorsal view, e-lateral view, f-antenna.

## References

- Coe, R.L. 1953. Diptera: Syrphidae. Handbooks for the Identification of British Insects. The Royal Entomological Society, London.
- Dousti, A.F. and Hayat, R. 2006. A catalogue of the Syrphidae (Insecta: Diptera) of Iran. J. Entomol. Res. Soc. 8(3): 5-38.
- Peck, L.V. 1988. Family Syrphidae. In: Catalogue of Palaearctic Diptera (Ed., A. Soos), Akademiai Kiado, Budapest, Hungary, pp. 11-230.
- Speight, M.C.D. 2008. Species accounts of European Syrphidae (Diptera) 2008. In: Syrph the Net, the database of European Syrphidae (Eds., M.C.D. Speight, E. Castella, J.P. Sarthou and C. Monteil), Syrph the Net Publication, Dublin, Ireland, 262 pp.
- Speight, M.C.D. 2010. Species accounts of European Syrphidae (Diptera) 2010. In: Syrph the Net, the database of European Syrphidae (Eds., M.C.D. Speight, E. Castella, J.P. Sarthou and C. Monteil), Syrph the Net Publication, Dublin, Ireland, 285 pp.
- Stubbs, A.E. and Falk, S.J. 2002. British Hoverflies. An Illustrated Identification Guide. The British Entomology and Natural History Society, Reading, UK.
- Williston, S.W. 1882. New or little known genera of North American Syrphidae. The Canadian Entomologist 14: 77-80.