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RESEARCH ARTICLE

First records of long-legged flies (Diptera, Dolichopodidae) from Fars Province of Iran

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This paper provides data on distribution of 9 long-legged fly species (Diptera, Brachycera, Dolichopodidae) belonging to 6 genera from Fars province, southern Iran. Four species, Asyndetus albifrons Loew, 1869, Asyndetus chaetifemoratus Parent, 1925, Medetera media Parent, 1925 and Sciapus adumbratus (Becker, 1902) are newly added to the Iranian insect fauna. In addition, available information for each species and comments on geographical distribution and taxonomy are also included.

Keywords: Dolichopodidae; Iran; Fars; new records

Introduction

Iranian entomological fauna is receiving an increasing interest in the last few years, compensating for the long dated lack of knowledge. The family Dolichopodidae (Diptera, Brachycera) is not the exception, with a number of papers published in the last years. Most of these studies have been conducted in northern (e.g. Khaghaninia, Gharajedaghi, & Grichanov, 2014; Kazerani, Khaghaninia, & Grichanov, 2014; Kazerani, Khaghaninia, Talebi, Persson & Pollet, 2017) or central parts (e.g. Ahmadi, Gheibi, Ostovan, Hesami, & Grichanov, 2016; Ahmadi, Gheibi, Ostovan, Hesami, & Grichanov, 2017) of Iran, and so far practically no studies have been conducted in southern parts of the country. The Fars province (coordinates 27°01’-31°51’N, 50°27’-55°45’E) is located in southern Iran (Fig. 1). It is the fourth largest province of the country, covering an area of 122,400 km². The climate in the province varies across counties. The north and northwest areas experience mild summers and moderately cold winters, whereas the weather is hot and dry in the south and southeast. The central region and the surrounding areas have hot dry summers and relatively rainy mild winters. Information on Dolichopodidae of the Fars Province has not been available before our investigation. The aim of current study was to increase our knowledge regarding Iranian long-legged flies, studying Dolichopodidae from southern Iran.

Material and methods

The specimens were collected by Malaise traps in four different localities of the Fars province (South Iran). Sampling localities are briefly described below and shown in Figures 1 and 2.

Loc. A): IRAN, Fars, Dalin, 52°07’54.7”E, 30°02’15.0”N.
Dalin is a small village in Hamajian rural district, Sepidan County. Dalin is located in the west of Fars province, having a cold and mountainous climate with green and breezy summers and snowy winters. Diverse rivers favour the cultivation of, for example, apple (Malus pumila Miller), plum tree (Prunus spp.) and walnut (Juglans regia L.) orchards.

Loc. B): IRAN, Fars, Shiraz County, Jannat garden, 52°28’9.147”E, 29°36’52.373”N.
The climate has distinct seasons, and is overall classed as a hot semi-arid climate, though it is only a little short of a hot-summer Mediterranean climate. Shiraz contains a considerable number of gardens. Jannat garden has a large number of fruit trees and ornamental plants including walnut, pomegranate (Punica granatum L.), pine (Pinus ssp.) and cypress trees (Cupressus sempervirens L.).
Fig. 1. Map of Iran and location of the sampling localities in Iran.

Figs. 2. Habitats of collected flies: A: Dalin, B: Shiraz, Jannat garden, C: Dasht-e Arzhan
New records of Dolichopodidae

Asyndetus Loew, 1869

Asyndetus albifrons Loew, 1869 (Fig. 3)


DISTRIBUTION. Type locality: Bir Abrag (South Eastern Desert). Palaeartic or Afrotropical: Egypt (close to Hala’ib Triangle); Palaearctic: Iraq. New species for Iran.

REMARKS. The species was not appropriately illustrated and was recorded only once (from Iraq) after its description. The material examined corresponds to the original description and keys to A. albifrons in the known keys (Negrobov, 1973; Grichanov, 2007, 2013). It was the most abundant species in our samples.

Asyndetus chaetifemoratus Parent, 1925 (Fig. 4)

MATERIAL. 1♂, Larestan, 10.4.2018–20.4.2018, 54°26’1.36”E, 27°31’55.4”N.


REMARKS. The species was not was not appropriately illustrated and was recorded only twice after its description. The material examined corresponds to the original description and keys to A. chaetifemoratus in the known keys (Negrobov, 1973; Grichanov, 2007).

Asyndetus sp.


REMARKS. The material examined belongs most probably to an undescribed species.
**Chrysotus** Meigen, 1824

REMARKS. Southern Palaeartic *Chrysotus* species are indistinguishable by females; therefore, 4 females collected are left unidentified.

**Chrysotus** sp. 1


**Chrysotus** sp. 2


**Medetera** Fischer von Waldheim, 1819

**Medetera media** Parent, 1925

MATERIAL. 1♂, Dalin, 8.5.2018–14.5.2018, 52°07'54.7"E, 30°02'15.0"N.

DISTRIBUTION. Type locality: Tunisia. Palaeartic: Egypt, Kazakhstan, Turkmenistan, Tunisia. New species for Iran.

REMARKS. This species is a sister species to *Medetera flavipes* Meigen, 1824, differing from the latter in yellow rather than dark fore coxa, dark at extreme apex 1st-4th segments of all tarsi and in setation of hypopygial surstylus and cercus; the tarsi are dark from apex of basitarsus in *M. flavipes*.

**Sciapus** Zeller, 1842

**Sciapus adumbratus** (Becker, 1902) (Fig. 5)

MATERIAL. 1♂, Dalin, 8.5.2018–14.5.2018, 52°07'54.7"E, 30°02'15.0"N.

DISTRIBUTION. Type locality: [Egypt:] "Siala". Afrotropical: Oman, United Arab Emirates; Palaeartic: Egypt, Iraq, Morocco, Tunisia, Turkmenistan. New species for Iran.

**Tachytretus** Haliday, 1851

**Tachytretus planitarsis** Becker, 1907 (Fig. 6)

MATERIAL. 1♂️, 5♀♀, Larestan, 30.5.2018–9.4.2018, 54°59'2.3"E, 27°32'6.7"N; 1♂️, Larestan, 1.5.2018–11.5.2018, 54°26'1.36"E, 27°31'55.4"N.

DISTRIBUTION. Type locality: Algeria: Biskra. Palaeartic: Algeria, Egypt, Iran, Israel, Saudi Arabia, Spain (Canary Is.), Tunisia, Turkmenistan; Afrotropical: Ethiopia.

**Thinophilus** Wahlberg, 1844

**Thinophilus sp.**

MATERIAL. 1♂️, Larestan, 30.5.2018–9.4.2018, 54°59'2.3"E, 27°32'6.7"N.

REMARKS. The material examined belongs most probably to an undescribed species. Unfortunately, the single male trapped is somewhat damaged.

Figs. 3. *Asyndetus albifrons* Loew, 1869: A-male habitus; B-hypopygium.
Figs. 4. *Asyndetus chaetifemoratus* Parent, 1925: A-male habitus; B-head; C-hypopygium.

Figs. 5. *Sciapus adumbratus* (Becker, 1902): A-male habitus; B-hypopygium.

Figs. 6. *Tachytrechus planitarsis* Becker, 1907: A-male habitus; B-fore leg; C-hypopygium.
Discussion

As a result of 2018 survey conducted in Fars Province, a new material of Dolichopodidae was collected and identified, belonging to 6 genera and 9 (including 4 unnamed) species listed above. The present research gives new records from the southern Iran, including Asyndetus albifrons, A. chaetifemoratus, Medetera media and Sciapus adumbratus found for the first time in Iran. In this small collection, we found two undescribed species and four species newly recorded for Iran. Such a large proportion of new species and new records indicates that the Iranian Dolichopodidae fauna is largely unknown and needs more extensive investigation. As a result of our study, the number of reported dolichopid species from Iran includes now about 155 species. Grichanov, Ahmadi, & Kosterin (2017) suggested that the total number of Iranian species can reach to 400–500 species.

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