Iranian Lauxaniidae (Diptera, Brachycera):
new records and a preliminary checklist

B. MAJNON JAHROMI, A. F. DOUSTI, N. SAGHAEI & R. VAN DER WEELE

Abstract: The fauna of lauxaniid flies (Diptera: Lauxaniidae) in Alborz province in the north of Iran was surveyed during the years 2011 and 2012. A total of 8 species representing 6 genera belonging to 2 subfamilies were collected and identified. The subfamily Homoneurinae is recorded from the country. One genus and one species of Homoneurinae, one genus and 3 species of Lauxaniinae are recorded for the first time from Iran. Locality and date of collection and distribution data for each species are provided. Additionally, a preliminary list of Iranian Lauxaniidae is given.

Key words: Alborz province, Iran, Fauna, Lauxaniidae, Diptera.

Introduction

The Lauxaniidae is one of the largest families of acalyptate flies (Diptera, Brachycera) containing nearly 2000 described species worldwide (SEMELBAUER & KOZANEK 2011). They are best represented in the tropics of the Old and New World (except for the Afro-tropical region), and their diversity declines strongly towards the more temperate regions (MERZ 2003). The majority of these species are found in forests, on shrubs, trees, and leaves. They are less common in dry and wet grasslands (MERZ 2004). Larvae of lauxaniids are saprophagous, usually occurring in decaying vegetation such as fallen leaves or bird nests (SEMELBAUER & KOZANEK 2012). Our knowledge of the lauxaniid flies of Iran is limited. A first report on Lauxaniidae fauna of Iran was made by CZERNY (1932) who described Sapromyza biordinata CZERNY. Over sixty years later, SHATALKIN (1996, 1998, 2000) has described additional new species. Here, we provide some additional information on the distribution of Lauxaniidae in Alborz province-Iran, add a subfamily, one genus and three species to the published records, and provide a preliminary list of Iranian Lauxaniidae.

Materials and Methods

The material was collected from many different habitats and localities in Alborz province, northern Iran between 2011 and 2012. Different methods were used including light, Malaise and bait traps and also sweeping on the host. Voucher specimens of all the species are deposited in the Department of Entomology, College of Agriculture, Islamic Azad University, Jahrom branch. The taxonomic arrangement is adapted from PAPP (1984).
Results

In a total of 8 species representing 6 genera belonging to 2 subfamilies were collected in Alborz province. Of these, one subfamily, 2 genera and 4 species are reported for the first time for Iranian fauna. The genera and species are listed in alphabetic order.

Subfamily Homoneurinae

Genus Homoneura VAN DER WULP 1891

Homoneura dentiventris CZERNY 1932

Material examined: 11♂, 8♀: Vardeh; 35°93’ N 50°83’ E, 18 September 2011, Malaise trap in Prunus avium garden [Rosaceae]; 28♂, 2♀: Kordan; 35°93’ N 50°83’ E, 19 July 2012, Malaise trap in P. avium garden; 17♂, 35♀: Arangeh; 35°94’ N 51°06’ E, 27 September 2012, bait trap in Pyrus communis garden [Rosaceae].

Distribution: Mountains of middle Asia and West Palaearctic (SHATALKIN 2000). New record for the fauna of Iran.

Genus Calliopum STRAND 1928

Calliopum aeneum (FALLÉN 1820)

Material examined: 4♂, 1♀: Kordan; 35°93’ N 50°83’ E, 20 August 2012, Malaise trap in Prunus avium garden [Rosaceae].

Distribution: This species is widely distributed in West Europe, Russia, Caucasus and Sweden (SHATALKIN 2000). New record for the fauna of Iran.

Genus Eusapromyza MALLOCH 1923

Eusapromyza multipunctata (FALLÉN 1820)


Distribution: European Russia, Ukraine, Moldavia, West Europe, Turkey (SHATALKIN 2000), Iran (GILASIAN 2008).

Genus Meiosimyza HENDEL 1925

Meiosimyza rorida (FALLÉN 1820)

Material examined: 2♀: Kordan, Near the Kordan river, 35°93’ N 50°83’ E, 12 May 2012, Sweeping net on Phaseolus coccineus [Fabaceae].
Distribution: Europe, North America (SHATALKIN 2000). New record for the fauna of Iran.

**Genus Minettia ROBINEAU-DESVOIDY 1856**

**Minettia bulgarica** PAPP 1981

**Material examined:** 4♀ Kordan; 35°93′ N 50°83′ E, 20 August 2012, Malaise trap in *Prunus avium* garden [Rosaceae].

**Distribution:** Ukraine, Bulgaria, Near East (SHATALKIN 2000). New record for the fauna of Iran.

**Minettia hyrcanica** SHATALKIN 1998

**Material examined:** 14♂, 3♀: Kordan; 35°93′ N 50°83′ E, 25 June 2012, Sweeping net in *Prunus avium* garden [Rosaceae]; 15♂, 9♀: Kordan; 35°93′ N 50°83′ E, 19 July 2012, Malaise trap in *P. avium* garden; 53♂, 36♀: Kordan; 35°93′ N 50°83′ E, 20 August 2012, Malaise trap in *P. avium* garden; 60♂, 39♀: Arangeh; 35°94′ N 51°06′ E, 27 September 2012, Malaise trap in *Pyrus communis* garden [Rosaceae].

**Distribution:** Iran (SHATALKIN 2000).

**Genus Sapromyza FALLÉN 1820**

**Sapromyza afghanica** PAPP 1979

**Material examined:** 14♂, 3♀: Kordan; 35°93′ N 50°83′ E, 18 September 2011, Malaise trap in *Prunus avium* garden [Rosaceae]; 1♂, 2♀: Kordan; 35°93′ N 50°83′ E, 20 August 2012, Malaise trap in *P. avium* garden; 4♂, 5♀: Arangeh; 35°94′ N 51°06′ E, 27 September 2012, light trap in *Pyrus communis* garden [Rosaceae].

**Distribution:** Afghanistan, Iran, Turkmenistan (SHATALKIN 2000).

**Sapromyza apicalis** LOEW 1847

**Material examined:** 3♂, 9♀: Kordan, 35°93′ N 50°83′ E, 12 May 2012, Malaise trap in *Prunus avium* garden [Rosaceae]; 3♂, 6♀: Kordan, 35°93′ N 50°83′ E, 25 June 2012, Malaise trap in *P. avium* garden; 21♂, 7♀: Kordan, 35°93′ N 50°83′ E, 20 August 2012, Malaise trap in *P. avium* garden; 12♂, 3♀: Arangeh, 35°93′ N 50°83′ E, 27 September 2012, Sweeping net in *Pyrus communis* garden [Rosaceae].

**Distribution:** Europe, North Africa (Morocco), Turkey, Iran, Middle Asia, East Kazakhstan (SHATALKIN 2000).

**Discussion**

During two years sampling, two subfamily, 6 genera and 8 species of lauxaniid flies were identified. The total number of lauxaniid species in Iran being 18, as a result of this study
one subfamily [Homoneurinae], two genera [Homoneura VAN DER WULP 1891 and Calliopum STRAND 1928] and 4 species [Homoneura dentiventris CZERNY 1932, Calliopum aeneum (FALLÉN 1820), Meiosimyza rorida (FALLÉN 1820) and Minettia bulgarica PAPP 1981] were added (Table 1). We believe that this family can be augment to more than hundred species in Iran, while it contains 2000 species worldwide (SEMELBAUER & KOZANEK 2011). So, we expect that a large number of species remain to be discovered though many already be described.

Table 1: Checklist of recorded species of Lauxaniiae from Iran (until 2012).

<table>
<thead>
<tr>
<th>References</th>
<th>Species</th>
<th>NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present study</td>
<td>Homoneura dentiventris CZERNY 1932</td>
<td>1</td>
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<tr>
<td>GILASIAN (2008), Present study</td>
<td>Eusapromyza martineki SHATALKIN 1998</td>
<td>3</td>
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<tr>
<td>SHATALKIN (1998)</td>
<td>Eusapromyza multipunctata (FALLÉN 1820)</td>
<td>4</td>
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<td>Present study</td>
<td>Meiosimyza nigripalpis (CZERNY 1932)</td>
<td>5</td>
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<tr>
<td>Present study</td>
<td>Meiosimyza rorida (FALLÉN 1820)</td>
<td>6</td>
</tr>
<tr>
<td>SHATALKIN (1998), Present study</td>
<td>Minettia bulgarica PAPP 1981</td>
<td>7</td>
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<tr>
<td>SHATALKIN (1998), Present study</td>
<td>Minettia hyrcanica SHATALKIN 1998</td>
<td>8</td>
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<td>SHATALKIN (1998), Present study</td>
<td>Sapromyza afghanica PAPP 1979</td>
<td>9</td>
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<tr>
<td>SHATALKIN (1998), Present study</td>
<td>Sapromyza apicalis LOEW 1847</td>
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<td>CZERNY (1932), SHATALKIN (1998)</td>
<td>Sapromyza biordinata CZERNY 1932</td>
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<td>SHATALKIN (1996)</td>
<td>Sapromyza ravida SHATALKIN 1996</td>
<td>15</td>
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<tr>
<td>SHATALKIN (1998)</td>
<td>Sapromyza transcaucasica CZERNY 1932</td>
<td>18</td>
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Zusammenfassung

References


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