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A checklist of the fruit flies (Diptera: Tephritidae) of the province of Fars in southern Iran.

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Abstract: A first checklist of fruit flies (Diptera: Tephritidae) from the province of Fars in southern Iran is provided. A total of 45 species belonging to 20 genera and 3 subfamilies (Dacinae, 3 genera and 5 species; Tephritinae, 15 genera and 37 species; and Trypetinae, 2 genera and 3 species) are summarized. A list comprising both local and global distribution of each species is given.

Key words: Diptera, Tephritidae, checklist, distribution, Fars, Iran.

Resumen: Checklist de las moscas de la fruta (Diptera: Tephritidae) de la provincia de Fars en el sur de Irán. Se aporta una primera lista de las moscas de la fruta (Diptera: Tephritidae) de la provincia de Fars en el sur de Irán. Se recogen en total 45 especies pertenecientes a 20 géneros y 3 subfamilias (Dacinae, 3 géneros y 5 especies; Tephritinae, 15 géneros y 37 especies; y Trypetinae, 2 géneros y 3 especies).

Palabras clave: Diptera, Tephritidae, checklist, distribución, Fars, Irán.

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Introduction

The fruit flies (Diptera: Brachycera, Tephritidae) are one of the largest and most diverse families of flies with over 4400 species known throughout the world. Some species are important to agriculture as plant pests while some species are biological control agents of noxious weeds (Merz 2008, Norrbom & Condon 2010).

The fauna of Iranian Tephritidae has been poorly studied. In a checklist of Iranian agricultural pests (Modarres Awal 1997), only 8 species of Tephritidae were listed. In recent years, more contributions have been done for collecting and identifying the Iranian tephritids and their associates (e.g. Parchami Araghi 1995, Gharali *et al.* 2004, Gilasian, 2007, Mohamadzade Namin *et al.* 2010a, b, c, Karimpour 2011, Fazel *et al.* 2011, Korneyev *et al.* 2011, 2013, Khaghaninia *et al.* 2012, Soltanizadeh *et al.* 2015, Korneyev & Dirlbek 2016, Mohamadzade Namin 2016).

The province of Fars (coordinates 27°-31°N, 50°-55°E) is located in the southern part of Iran. Fars is geographically divided into three parts: (1) The mountain area north and northwest, with moderate cold winters and mild summers, (2) the central region, with relatively rainy mild winters, and hot dry summers, (3) the south and southeast, with moderate winters and very hot summers. Due to its peculiar geographical position, Fars should have a larger specific diversity of fruit flies than that currently known.

Although many studies have been conducted on the Tephritidae of Iran, their results were scattered in different publications and have never been summarized. This paper was aimed to provide a

reference for future studies of the fauna, particularly in relation to the increasing importance of tephritids as economically important pests as well as biological control agents of noxious weeds in the province of Fars, southern Iran.

Material and methods

All available literature sources were summarized for the first time as well. Taxonomic concepts mostly follow White & Elson-Harris (1992), Norrbom *et al.* (1999), and Korneyev & Ovchinnikova (2004). The distribution for each species for provinces within Iran as well as for countries outside Iran are included.

Results

In this paper, 45 Tephritid species and subspecies belonging to 20 genera and three subfamilies (Dacinae, Tephritinae, and Trypetinae) are listed for the fauna of the province of Fars.

Subfamily Dacinae

Tribe Ceratitidini

Genus *Ceratitis* McLeay 1829

Ceratitis capitata (Wiedemann, 1824)

Distribution in Iran. Mazandran, Khorasan, Tehran, Gilan, Markazi, Semnan, Isfahan, Yazd, Kermanshah, Kurdistan (Dastgheyb Beheshti 1980, Esmaili 1983, Behdad 1984, Fischer-Colbrie & Busch-Petersen 1989, Sabzevari & Jafari 1991, Modarres Awal 1997, Mohamadzade Namin *et al.* 2010c, Mirsardoo *et al.* 2010); Fars (Fazel *et al.* 2011, Pezhman *et al.* 2011, Soltanizadeh *et al.* 2015).

General distribution. Africa, Atlantic Ocean Islands, Indian Ocean Islands, Australia, Pacific Ocean Islands, Europe, Middle East, Central America, South Africa, West Indies (White & Elson-Harris 1992); Tropical Africa, Madagascar, Mauritius, Reunion, and introduced to North Africa, South Europe, Middle East, Neotropics, West Australia, Hawaii (Norrbom *et al.* 1999). Originally an East African species, introduced with commerce to North Africa, Southern Europe, Near and Middle East, Neotropics, Australia and Hawaii, Yemen (Merz *et al.* 2006).

Tribe Dacini

Genus *Bactrocera* Macquart, 1835

Bactrocera oleae (Gmelin, 1790)

Distribution in Iran. Iran (widespread) (Jafari & Rezaei 2004); Gilan (Gilasian 2007, Shahbazi *et al.* 2010); Qazvin (Nouri *et al.* 2010a, b, Nouri & Shirazi 2010a, b, Sorosh *et al.* 2010); Fars (Fazel *et al.* 2011). Widely distributed in Iran (Sorosh *et al.* 2011, Ramezani *et al.* 2015).

General distribution. Africa, Europe, Middle East, Oriental Asia (White & Elson-Harris 1992); Eritrea, Kenya, South Africa, and introduced to South Europe, Canary Is., North Africa, Middle East, Caucasus, Pakistan, North West India (Norrbom *et al.* 1999, Tzanakakis 2006, Daane & Johnson 2010).

***Bactrocera zonata* (Saunders, 1841)**

Distribution in Iran. Hormozgan, Sistan & Baluchestan (Abai 1984, Gilasian 2007, Bagheri *et al.* 2010); Fars (Soltanizadeh *et al.* 2015).

General distribution. Indian Ocean, North America, Tropical Asia (White & Elson-Harris 1992); Pakistan and Sri Lanka to Vietnam, Indonesia (Maluku), and introduced to Mauritius (Norrbon *et al.* 1999); North Africa, Arabian Peninsula, Tropical Asia, United Arab Emirates (Merz 2008).

Genus *Dacus* Fabricius, 1805***Dacus ciliatus* (Loew, 1862)**

Distribution in Iran. Fars, Hormozgan, Khuzestan, Khorasan Razavi, Tehran (Parchami Araghi 1995, Sirjani 1995, Sirjani & Kamali 1995, Hadizadeh & Hosseini 1998, Gilasian 2007); Kurdistan (Mohamadzade Namin & Nozari 2011); Fars (Soltanizadeh *et al.* 2015).

General distribution. Africa, Atlantic Islands, Middle East, Saudi Arabia, Yemen People's Democratic Republic, Yemen Arab Republic, probably in Iran, Oriental (White & Elson-Harris 1992); Senegal East to Somalia, South Africa, Madagascar, and introduced to Mauritius, Reunion, Israel, and Egypt East to Burma (Norrbon *et al.*, 1999). An Afrotropical species which is also found in the Middle East and South Asia (Merz *et al.* 2006, Merz 2008).

***Dacus persicus* (Hendel, 1927)**

Distribution in Iran. Hormozgan, Sistan & Baluchestan, Kerman, Khorasan (Becker 1913, Modarres Awal 1997, Parchami Araghi 1995, Gilasian 2007, Abbaszadeh *et al.* 2010); Fars (Fazel *et al.* 2011).

General distribution. Pakistan, India, Sri Lanka, Arabian Peninsula (Norrbon *et al.* 1999, Merz 2008).

Subfamily Tephritinae**Tribe Myopitini****Genus *Urophora* Robineau-Desvoidy, 1830*****Urophora affinis* (Frauenfeld, 1857)**

Distribution in Iran. Iran (White & Korneyev 1989); Kurdistan & East Azerbaijan (Zarghani *et al.* 2010b, Mohamadzade Namin & Nozari 2011, Gharajedaghi *et al.* 2011b, 2012b), Alborz, Chaharmahal & Bakhtiari, Qazvin, Fars, West Azerbaijan (Mohamadzade Namin 2016).

General distribution. Native of central Europe and also distributed to western North America and western Canada (White & Elson-Harris 1992); France & Germany East to Ukraine & South West Russia, Italy, Balkans, Turkey, and introduced to North America (Norrbon *et al.* 1999).

***Urophora bakhtiari* Mohamadzade, 2015**

Distribution in Iran. Chaharmahal & Bakhtiari, Fars (Mohamadzade Namin & Nozari 2015a).

General distribution. Armenia (Mohamadzade Namin & Nozari 2015a).

***Urophora cuspidata* (Meigen, 1826)**

Distribution in Iran. Kurdistan (Mohamadzade Namin & Nozari 2011); Fars (Fazel *et al.* 2011).

General distribution. North and Central Europe to West Siberia and Caucasus (Norrbon *et al.* 1999); Turkey (Kütük *et al.* 2013).

***Urophora kasachstanica* (Richter, 1964)**

Distribution in Iran. Fars (Fazel *et al.* 2011).

General distribution. Middle East and Central Asia; Ukraine, Kazakhstan, Uzbekistan, Tadjikistan (Norrbon *et al.* 1999); Kyrgyzstan (Mohamadzade Namin & Nozari 2015a).

***Urophora phaeocera* (Hering, 1961)**

Distribution in Iran. Chaharmahal & Bakhtiari, Tehran (Gilasian 2007); Ardebil (Mohamadzade Namin *et al.* 2010a); Chaharmahal & Bakhtiari, Fars (Mohamadzade Namin 2016).

General distribution. Syria, Jordan, Israel, Turkey, Armenia, Azerbaijan (Korneyev & Dirlbek 2000).

***Urophora pauperata* (Zaitzev, 1945)**

Distribution in Iran. Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); Chaharmahal & Bakhtiari, Fars, Qazvin (Mohamadzade Namin 2016).

General distribution. Georgia, Turkey (Norrbon *et al.* 1999).

***Urophora quadrifasciata sjumorum* (Rohdendorf, 1937)**

Distribution in Iran. West Azerbaijan (Karimpour & Merz, 2006); Ardebil (Mohamadzade Namin *et al.* 2010a); Fars (Fazel *et al.* 2011); Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); East Azerbaijan (Khaghaninia & Gharajedaghi 2012).

General distribution. Turkey, Caucasus and Kazakhstan South to Cyprus, Israel and Pakistan (Norrbon *et al.* 1999).

***Urophora spatiosa* (Becker, 1913)**

Distribution in Iran. Sistan & Baluchestan, East Azerbaijan (Becker 1913, Korneyev & White 1993a); Fars, Sistan & Baluchestan (Korneyev & Dirlbek 2016).

General distribution. Uzbekistan (Becker 1913, Korneyev & White, 1993b, Norrbom *et al.* 1999).

Tribe Noeetini

Genus *Hypenidium* Loew, 1862

***Hypenidium oculatum* (Becker, 1913)**

Distribution in Iran. Baluchestan (Becker 1913; Hendel 1927; Foote 1984, Norrbom *et al.* 1999); Baluchestan, Isfahan (Korneyev *et al.* 2011); Fars (Korneyev & Dirlbek 2016).

General distribution. Only known from Iran.

Tribe Schistopterini

Genus *Schistopterus* Becker, 1903

***Schistopterus moebiusi* Becker, 1903**

Distribution in Iran. Fars (Soltanizadeh *et al.* 2015).

General distribution. Afrotropical Region, Near East, Arabian Peninsula, UAE (Merz 2008).

Tribe Tephritini

Genus *Acanthiophilus* Becker, 1908

***Acanthiophilus helianthi* (Rossi, 1794)**

Distribution in Iran. Baluchestan, Khorasan (Becker 1913); East Azerbaijan, Gorgan, Fars, Isfahan,

Ghom (Modarres Awal 1997, Hatami *et al.* 2008, Keyhanian 2008); Ilam (Gharali & Zerova 2004); Tehran (Mohamadzade Namin *et al.* 2010c); Ardebil (Mohamadzade Namin *et al.* 2010a); Fars (Fazel *et al.* 2011, Soltanizadeh *et al.* 2015); Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); Kohkiluyeh & Boyerahmad (Saeidi & Nur Azura 2011a, b, Saeidi *et al.* 2011a, b, c); East Azerbaijan (Gharajedaghi *et al.* 2011a, 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012); Semnan, Alborz, Tehran, Qazvin, Khorasan Shomali, Khorasan Razavi, West Azerbaijan, Fars, Kohkiluyeh & Boyerahmad, Hormozgan, Khuzestan, Khorasan Jonubi, Kerman (Korneyev & Dirlbek 2016).

General distribution. Africa (Ethiopia, Kenya, Sudan), Asia (India, Pakistan, Thailand), Atlantic Islands (Madeira), Europe (all southern countries, plus the United Kingdom) (White & Elson-Harris 1992); Palearctic, Afrotropical and Oriental Regions (Merz 2008).

Genus *Actinoptera* Rondani, 1871

***Actinoptera discoidea* (Fallen, 1814)**

Distribution in Iran. East Azerbaijan (Khaghaninia & Gharajedaghi 2012); Fars, Qazvin, West Azerbaijan (Mohamadzade Namin 2016).

General distribution. Sweden, France, Europe, Ukraine, Caucasus (Norrbon *et al.* 1999); Turkey (Kütük, 2008).

Genus *Campiglossa* Rondani, 1870

***Campiglossa grandinata* (Rondani, 1870)**

Distribution in Iran. Fars (Mohamadzade Namin & Nozari 2015b).

General distribution. Europe, Russia, Kazakhstan, Mongolia (Norrbon *et al.* 1999).

***Campiglossa producta* (Loew, 1844)**

Distribution in Iran. East Azerbaijan (Zaitzev 1947); West Azerbaijan, East Azerbaijan, Fars, Golestan, Khuzestan, Lorestan, Tehran (Gilasian 2007); Tehran (Mohamadzade Namin *et al.* 2010c); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); Fars (Soltanizadeh *et al.* 2015, Mohamadzade Namin & Nozari 2015b).

General distribution. Britain, Finland to Mediterranean, Turkey, Central Asia (Norrbon *et al.* 1999); Europe, Asia Minor, Middle Asia, Near East, Iran, Afghanistan, Iraq (Korneyev & Dirlbek 2000).

Genus *Capitites* Foote & Freidberg, 1981

***Capitites ramulosa* (Loew, 1844)**

Distribution in Iran. Fars (Soltanizadeh *et al.* 2015).

General distribution. Afrotropical region, Near East, North Africa, Europe (Freidberg & Kugler 1989).

Genus *Goniurellia* Hendel, 1927

***Goniurellia lacerata* (Becker, 1913)**

Distribution in Iran. Baluchestan, Kerman (Becker, 1913); Bushehr, Kerman (Gilasian 2007); Fars (Soltanizadeh *et al.* 2015).

General distribution. Egypt (Norrbon *et al.* 1999); United Arab Emirates (Merz 2008).

***Goniurellia longicauda* Freidberg, 1980**

Distribution in Iran. Isfahan, Fars, Ilam, Kerman (Gilasian 2007); Tehran (Mohamadzade Namin *et*

al. 2010c); Fars (Fazel *et al.* 2011); Sistan & Baluchestan, Khorasan Razavi, Khorasan Shomali, Kerman, Fars, Khorasan Jonubi, Hormozgan, Khuzestan (Korneyev & Dirlbek 2016).

General distribution. France, Canary Is., Morocco to Egypt, Turkey, Syria (Freidberg 1980, Norrbom *et al.* 1999, Korneyev & Dirlbek 2000); United Arab Emirates (Merz 2008).

Genus *Sphenella* Robineau-Desvoidy, 1830

***Sphenella marginata* (Fallén, 1814)**

Distribution in Iran. Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); East Azerbaijan (Gharajedaghi *et al.* 2011a, 2012a, b, Khaghaninia & Gharajedaghi 2012); Fars (Soltanizadeh *et al.* 2015).

General distribution. North Europe E to W Siberia, S to Spain, Egypt, Afghanistan (Norrbom *et al.* 1999).

Genus *Tephritis* Latreille, 1804

***Tephritis divisa* (Rondani, 1871)**

Distribution in Iran. Mazandaran (Mohamadzade Namin 2011); Fars (Soltanizadeh *et al.* 2015).

General distribution. Spain, South France, South Switzerland, Italy, Greece (Crete), Israel (Norrbom *et al.* 1999).

***Tephritis multiguttata* (Becker, 1913)**

Distribution in Iran. Baluchestan (Becker 1913); Khorasan Razavi, Fars, Kerman (Korneyev & Dirlbek 2016).

General distribution. Syria, Iraq, Turkmenistan (Norrbom *et al.* 1999, Korneyev & Dirlbek 2000).

***Tephritis postica* (Loew, 1844)**

Distribution in Iran. Iran (Foote 1984); Isfahan, Hamadan, Kermanshah, Khorasan Razavi, Semnan, Tehran, Zanjan, East Azerbaijan (Gilasian 2007, Mohamadzade Namin *et al.* 2010c, Zarghani *et al.* 2010a, Gharajedaghi *et al.* 2011c, 2012a, b); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); Fars (Fazel *et al.* 2011, Soltanizadeh *et al.* 2015, Korneyev & Dirlbek 2016).

General distribution. Europe, Western Asia (Freidberg & Kugler 1989); France, Central Europe, Ukraine, Uzbekistan, South to North Africa, Israel (Norrbom *et al.* 1999).

***Tephritis tridentata* S. Korneyev & Mohamadzade Namin, 2013**

Distribution in Iran. Fars (Korneyev & Mohamadzade Namin 2013).

General distribution. Turkmenistan, Kazakhstan (Korneyev & Mohamadzade Namin 2013).

***Tephritis urelliosomima* (Korneyev & Dirlbek, 2000)**

Distribution in Iran. Fars, Tehran (Gilasian 2007, Gilasian & Merz 2008, Zarghani *et al.* 2010a); Yazd, Khorasan, Tehran, Fars (Mohamadzade Namin *et al.* 2015).

General distribution. Iraq, Turkmenistan (Korneyev & Dirlbek 2000).

Genus *Tephritomyia* Hendel, 1927

***Tephritomyia despoliata* (Hering, 1956)**

Distribution in Iran. Khorasan (Hering 1956); Hamadan, Markazi, Tehran (Gilasian 2007); Tehran, Alborz, Fars (Korneyev & Dirlbek 2016).

General distribution. Afghanistan, Saudi Arabia, Sudan (Hering 1956, Merz & Dawah 2005, Morgulis *et al.* 2016).

***Tephritomyia lauta* (Loew, 1869)**

Distribution in Iran. Iran (Hendel 1927); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); East Azerbaijan (Gharajedaghi *et al.* 2011a, 2012a, b); Fars (Soltanizadeh *et al.* 2015).

General distribution. Europe, Mediterranean, India (Becker 1907, Hendel 1914, 1927, Freidberg & Kugler 1989, Morgulis *et al.* 2016).

Genus *Trupanea* Schrank, 1975

***Trupanea amoena* (Frauenfeld, 1857)**

Distribution in Iran. Baluchestan, Kerman (Becker 1913); Tehran (Mohamadzade Namin *et al.* 2010c); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); Fars (Fazel *et al.* 2011, Soltanizadeh *et al.* 2015); East Azerbaijan (Gharajedaghi *et al.* 2011a, 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012); Tehran, East Azerbaijan, Zanjan, Hormozgan, Fars, Busher, Khuzestan, Kohgiluyeh & Boyerahmad (Korneyev & Dirlbek 2016).

General distribution. Afrotropical, Australasian, Oriental, and Southern Palaearctic Regions (Merz 2008).

***Trupanea stellata* (Fuesslin, 1775)**

Distribution in Iran. Baluchestan, Kerman (Becker 1913); Tehran (Mohamadzade Namin *et al.* 2010c); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); Fars (Fazel *et al.* 2011, Soltanizadeh *et al.* 2015); East Azerbaijan (Gharajedaghi *et al.* 2011a, 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012); Gilan, Tehran, Qazvin, Khorasan Razavi, Khorasan Shomali, Kerman, Busher, Sistan & Baluchestan, Fars (Korneyev & Dirlbek 2016).

General distribution. Palaearctic, Oriental Regions, United Arab Emirates (Merz 2008).

Tribe Terelliini

Genus *Chaetorellia* Hendel, 1927

***Chaetorellia conjuncta* (Becker, 1913)**

Distribution in Iran. Sistan & Baluchestan (Becker 1913, White & Marquardt 1989); Fars, Kohgiluyeh & Boyerahmad, Lorestan (Gilasian 2007); West Azerbaijan (Karimpour 2011).

General distribution. Albania, Kazakhstan S to Egypt, Pakistan, Southern Europe, Asia Minor, Transcaucasia, Middle Asia, Near East, Middle East (Afghanistan, Syria, Iraq), North Africa. (Norrbon *et al.* 1999, Korneyev & Dirlbek 2000).

***Chaetorellia jaceae* (Robineau-Desvoidy, 1830)**

Distribution in Iran. Fars (Fazel *et al.*, 2011), East Azerbaijan (Gharajedaghi *et al.* 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012).

General distribution. Europe, Near East (White & Marquardt 1989); Europe South to France, North Italy, Hungary, Ukraine, Caucasus (Norrbon *et al.* 1999).

Genus *Chaetostomella* Hendel, 1927

***Chaetostomella cylindrica* (Robineau-Desvoidy, 1830)**

Distribution in Iran. Tehran (Mohamadzade Namin *et al.* 2010c); Fars (Fazel *et al.* 2011); West

Azerbaijan (Karimpour 2011); East Azerbaijan (Gharajedaghi *et al.* 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012).

General distribution. British Is., Scandinavia East to Kazakhstan, South to North Africa, Turkey, Afghanistan (Norrbom *et al.* 1999).

Genus *Terellia* Robineau-Desvoidy, 1830

***Terellia freidbergi* Korneyev, Evstigneev, Karimpour, Kütük, Mohamadzade, Koyuncu & Yaran, 2013**

Distribution in Iran. West Azerbaijan, Tehran, Alborz, Kurdistan (Korneyev *et al.* 2013); Fars, Hormozgan (Korneyev & Dirlbek 2016).

General distribution. Israel, Armenia, Turkey, Syria (Korneyev *et al.* 2013, Korneyev & Dirlbek 2016).

***Terellia gynaecochroma* (Hering, 1937)**

Distribution in Iran. Iran (Zaitzev 1947); Arabil, Fars, Qazvin (Gilasian 2007, Mohamadzade *et al.* 2010c); West Azerbaijan (Karimpour 2011); East Azerbaijan (Gharajedaghi *et al.* 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012); Fars (Soltanizadeh *et al.* 2015).

General distribution. Central & South Europe, East to Caucasus, South to Cyprus, Israel (Norrbom *et al.* 1999).

***Terellia korneyevorum* Mohamadzade, 2011**

Distribution in Iran. Yazd, Kurdistan (Mohamadzade Namin *et al.* 2011); Chaharmahal & Bakhtiari, Fars, Markazi (Mohamadzade Namin 2016).

General distribution. Only known from Iran.

***Terellia whitei* Korneyev & Mohamadzade, 2013**

Distribution in Iran. West Azerbaijan, Khorasan Razavi, Fars (Korneyev *et al.* 2013, Korneyev & Dirlbek 2016).

General distribution. Turkmenistan, Kazakhstan, Kyrgyzstan (Korneyev *et al.* 2013, Korneyev & Dirlbek 2016).

***Terellia serratulae* (Linnaeus, 1758)**

Distribution in Iran. Khorasan (Becker 1913); Tehran, West Azerbaijan, Gilan, Kohkiluyeh & Boyerahmad, Mazandran, Tehran (Gilasian 2007, Mohamadzade Namin *et al.* 2010a); Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin & Nozari 2011); West Azerbaijan (Karimpour 2011); East Azerbaijan (Gharajedaghi *et al.* 2012a, b, Khaghaninia *et al.* 2012, Khaghaninia & Gharajedaghi 2012); Tehran, Alborz, Mazandaran, Hormozgan, Fars (Korneyev & Dirlbek 2016).

General distribution. British Is., Scandinavia, Kazakhstan South to North Africa, Israel (Norrbom *et al.* 1999).

***Terellia virens* (Loew, 1846)**

Distribution in Iran. Iran (Foote 1984); East Azerbaijan (Zarghani *et al.* 2010b); Fars (Fazel *et al.* 2011); East Azerbaijan (Gharajedaghi *et al.* 2012a, b).

General distribution. Netherlands to Kazakhstan, South to Spain, Egypt, Israel, and introduced to North America (Hendel 1927, Norrbom *et al.* 1999).

***Terellia zerovae* (Korneyev, 1985)**

Distribution in Iran. Ardebil (Mohamadzade Namin *et al.* 2010a); Kurdistan (Mohamadzade Namin &

Nozari 2011); Chaharmahal & Bakhtiari, Fars (Mohamadzade Namin 2016).

General distribution. Romania, Greece, Turkey, Tadjhikistan (Norrbom *et al.* 1999).

Subfamily Trypetinae

Tribe Carpomyini

Genus *Carpomya* Costa, 1854

Carpomya pardalina (Bigot, 1891)

Distribution in Iran. Baluchestan (Bigot 1891, Farahbakhsh 1961, Fischer-Colbrie & Busch-Petersen 1989); Iran (tropical areas) (Esmaili *et al.* 1991); Iran (widespread) (Modarres Awal 1997); Khorasan Razavi (Sirjani & Kamali 1995); Tehran (Mohamadzade Namin *et al.* 2010c); Fars (Eghtedar 1991, Fazel *et al.* 2011).

General distribution. Egypt, Caucasus to West India, Pakistan, Azerbaijan (Norrbom *et al.* 1999).

Carpomya vesuviana (Costa, 1854)

Distribution in Iran. Southern Iran (Abai 1984); Isfahan (Modarres Awal 1997); Bushehr (Farrar & Chou 2000, Farrar *et al.* 2003, 2004, 2009); Kurdistan (Mohamadzade Namin & Nozari 2011); Fars (Fazel *et al.* 2011); Gilan, Hormozgan, Tehran (Gilasian 2007, Mohamadzade Namin *et al.* 2010a); Southern Khorasan (Tavakkoli Korghond & Mahmoudi 2012).

General distribution. Italy, Bosnia-Herzegovina, Caucasus, Central Asia, Pakistan, India, Thailand (Norrbom *et al.* 1999, Merz 2008).

Genus *Rhagoletis* Loew, 1862

Rhagoletis cerasi (Linnaeus, 1758)

Distribution in Iran. Iran (widespread) (Afshar 1937, Esmaili *et al.* 1991); Tehran, Isfahan, Khorasan, Azerbaijan, Hamadan, Tehran, Hamedan, Ardebil, Fars (Dastgheyb Beheshti 1980, Behdad 1984, Fischer-Colbrie & Busch-Petersen 1989, Modarres Awal 1997, Mohamadzade Namin & Rasoulilian 2009, Mohamadzade Namin *et al.* 2010a, c, Mohamadzade Namin & Nozari 2011).

General distribution. Europe except British Is., Temperate & Central Asia (former USSR), West Siberia to Caucasus (White & Elson-Harris 1992, Norrbom *et al.* 1999).

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