

Checklist and distribution of lady beetles (Coleoptera: Coccinellidae) in Iran

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This paper is an attempt to summarize all previous literature of Coccinellidae records from Iran and their distribution in the world as well as in provinces of Iran. There are 8 subfamilies, 17 tribes, 41 genera and 142 species in Iran recorded up to now. The largest subfamily, tribe and genera in Iran were Scymninae, Scymnini and *Scymnus*, respectively. The most widely distributed species in Iran were *Hippodamia variegata* (Goeze), *Coccinella septempunctata* L., *Oenopia conglobata* L., *Chilocorus bipustulatus* L. and *Adalia bipunctata* L.

Key words: Checklist, distribution, Iran, lady beetles.

INTRODUCTION

Family Coccinellidae (lady beetles or ladybirds) is the largest family in the newly recognized superfamily Coccinelloidea (Robertson et al. 2015), and in the previously joint Cucujoidea s.lat., with about 6000 species described worldwide (Iablokoff-Khanzorian, 1982; Vandenberg, 2002). They are well known as mostly beneficial insects, their larvae and adults feed on pests, especially on aphids, scale insects and mites (Dobzhansky, 1933). But some of them are mycophagous and phytophagous and can become pests. Some species are very sensitive to changes in the environment so they can offer a better overall picture about the health of ecosystems and they can be good indicator species (Iperti, 1999).

Iran is an ecologically diverse country which includes different climates and geographical zones in 31 provinces. Rich faunal assemblage is thus expected for the country. There are many articles, theses and books about faunistic studies and coccinellid records in Iran and in the world. This paper is an attempt to review all previous literature of coccinellid records from Iran and species distribution in the world and also in different provinces of Iran. So far, a checklist of Scymninae of Iran (Jafari et al., 2013) and a catalog of Palearctic Coccinellidae (Kovar, 2007), including Iranian Coccinellidae, have been published. Subfamilies Microweiseinae and Sticholotidinae in Iran were recently summarized (Biranvand et al. in press a). This paper is an up to date list of species including their distribution in the world and in different provinces of Iran.

MATERIAL AND METHODS

A revised list of the Coccinellidae of Iran was generated by reviewing the relevant literature on Coccinellidae. According to the last classification of Coleoptera, Coccinellidae were classified in two subfamilies Microweiseinae and Coccinellinae (Bouchard et al., 2011) but we use the classification of Kovar (2007) modified by Nedvěd and Kovář (2012) in this paper. We implemented some comments and synonyms, which have been used wrongly as separate species in some Iranian

articles. This list incorporated the most recent systematic and nomenclature updates. The arrangement of the subfamilies, tribes and genera are alphabetical for convenience and do not reflect phylogenetic relationships. Geographical distribution in 31 provinces of Iran and in the world was extracted for each species. For the distributions in the world, classification of geographical regions in the book Catalogue of Palearctic Coleoptera (Ivan Löbl and Ales Smetana, 2007) was used.

RESULTS

By reviewing the relevant literature on Coccinellidae of Iran, it was recognized that there are 142 species classified in eight subfamilies, 17 tribes and 41 genera in Iran.

Subfamily CHILOCORINAE

Tribe Chilochorini

Genus *Brumoides* E. A. Chapin, 1965

B. adenensis Fursch, 1987

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Afrotropical: Ethiopia (Fursch, 1987); Palearctic: Iran, Saudi Arabia, United Arab Emirates, Yemen (Kovar, 2007)

Genus *Chilocorus* Leach, 1815

C. bipustulatus (Linnaeus, 1758)

Distribution in Iran: Lorestan (Mohammad poor et al., 2013), Yazd (Zare Khormizi et al., 2013), Kerman (Salehi et al., 2011), North Khorasan (Biranvand et al. in press b), Razavi Khorasan (Farahi & Sadeghi, 2009), Semnan (Dazyanian & Sahragard, 2000), Fars (Fallahzadeh et al., 2000), Tehran (Omid et al., 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Hamadan (Sadeghi & Khanjani, 1998), Mazandaran (Maafi et al., 1998), Zanjan (Mohseni et al., 1998), Gilan (Hai-Zadeh et al., 1998), Alborz (Babmorad, 1993), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Isfahan (Jafari et al., 2002), Golestan (Monutazeri & Mossadegh, 1995), South Khorasan (Moadi & Mossadegh, 1995), Markazi (Ahmadi et al., 2012), Khuzestan (Mossadegh, 2012), West Azerbaijan (Parvizi et al., 1986), Ardebil (Lotfalizadeh, 2001), Kermanshah (Khosravi et al., 2014), East Azerbaijan & Kordestan (Borumand, 2000)

Distribution in the world: Afrotropical: Sudan (Yousof et al., 2013); Nearctic: USA (Gordon, 1985); wide distribution in Palearctic (Mader, 1955; Kovar, 2007) including Mongolia (Bielawski, 1975)

Genus *Exochomus* Redtenbacher, 1844

(= *Brumus* Mulsant, 1850, = *Anexochomus* Barovskij, 1922)

E. bifasciatus Barovskij, 1927

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province.

Distribution in the world: Palearctic: China, Iran and Kazakhstan (Kovar, 2007).

E. gebleri (Weise, 1885)

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), Golestan (Kovar, 1995).

Distribution in the world: Palearctic: Afghanistan, Iran and Turkey (Kovar, 2007).

E. quadriguttatus (A. Fleischer, 1900)

Comment: Synonyme with *E. illaescollis* (Roubal, 1927)

Distribution in Iran: Kerman (Yazdani & Ebrahimi, 1993)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

***E. octosignatus* (Gebler 1830)**

Distribution in Iran: Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), South Khorasan (Mudi & Mosadegh, 2000), Gilan (Hai-Zadeh et al., 1998), Kerman (Yazdani & Ebrahimi, 1993), Razavi Khorasan (Yaghmaee & Kharaji, 1995), Isfahan & Alborz (Vodjdani, 1965), Lorestan (Ghanbari Kohyani et al., 2013), Hamadan (Hamedi & Moharramipour, 2012), West Azerbaijan & Qom & Tehran & Sistan and Baluchestan (Borumand, 2000)

Distribution in the world: Palearctic: Afghanistan, Albania, Armenia, France, Iran, Iraq, Italy, Russia, Kazakhstan, Kyrgyzstan, Mongolia, Tadjikistan, Turkey, Turkmenistan, and Uzbekistan (Kovar, 2007)

***E. quadripustulatus* (Linnaeus, 1758)**

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), Kerman (Salehi et al., 2011), Fars (Lotfalizade et al., 2000), Qazvin (Mohammadbeigi, 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Zanjan (Mohseni et al., 1998), Isfahan (Bagheri & Emami, 1998), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Khuzestan (Mosadegh & Aleosfoor, 2004), Razavi Khorasan (Yaghmaee & Kharaji, 1995), North Khorasan (Biranvand et al. in press b), Mazandaran (Vodjdani, 1965), Yazd (Zare Khormizi et al., 2013) West Azerbaijan (Parvizi et al., 1986), Tehran (Abdi et al., 2012), East Azerbaijan & Qom & Ilam (Borumand, 2000)

Distribution in the world: Nearctic: USA (Gordon, 1985); Oriental: India (Poorani, 2004); Palearctic: wide distribution in western Palearctic (Mader, 1955; Kovar, 2007) and Russia (Poorani, 2004)

***E. undulatus* (Weise, 1878)**

Distribution in Iran: Lorestan (Mohammad poor et al., 2013), Kerman (Salehi et al., 2011), Fars (Fallahzadeh et al., 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Isfahan (Bagheri & Emami, 1998), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Tehran (Ghanbari et al., 2012), Kermanshah (Gholami moghadam et al., 2014), Razavi Khorasan (Farahi & Sadeghi, 2009), South Khorasan (Moadi & Mossadegh, 1995), Markazi (Ahmadi et al., 2012)

Distribution in the world: Palearctic: Afghanistan, Albania, Egypt, Georgia, Iran, Iraq, Israel, Lebanon, Syria, (Kovar, 2007), Uzbekistan (Mader, 1955)

***E. kiritschenkoi* Barovskij, 1927**

Distribution in Iran: Recorded from Iran by Mader (1955) without mention of province.

Distribution in the world: Afghanistan, Iran, Turkmenistan (Mader, 1955); Kazakhstan, Kyrgyzstan, Mongolia and Tadjikistan (Kovar, 2007)

Genus *Parexochomus* Barovskij, 1922***P. pubescens* (Kuster, 1848)**

Distribution in Iran: Lorestan (Ansari pour & Shakarami, 2011), Mazandaran (Montazeri & Mossadegh, 1995), South Khorasan (Moadi & Mossadegh, 1995), Kerman (Jafari et al, 2011), Khuzestan (Afshari, et al., 2000), Fars (Al-e-Mansoor & Ahmadi, 1993), Isfahan (Haghshenas et al., 2004), Sistan and Baluchestan (Modarres Najaf Abadi et al., 2008), Tehran (Samin & Shojai, 2013)

Distribution in the world: Afrotropical: Africa (Raimundo & Van Harten, 2000); Oriental: India (Raimundo et al., 2008); Palearctic: Afganistan, Algeria, Egypt, France, Germany, Iran, Iraq, Israel, Italy, Lebanon, Morocco, Pakistan, Saudi Arabia, Spain, Tunisia (Kovar, 2007), Transcaucasia (Mader, 1955) and Turkey (Efil et al., 2010)

***P. melanocephalus* (Zoubkoff, 1833)**

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), Kerman (Salehi et al., 2011), Razavi Khorasan (Yaghmaee & Kharaji, 1995), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995)

Distribution in the world: Palearctic: Albania, Armenia, Bulgaria, Georgia, Iran, Kazakhstan, Kyrgyzstan, Tadjikistan, Turkey, Turkmenistan, Uzbekistan (Kovar, 2007), South Russia and Transcaucasia (Mader, 1955)

***P. nigripennis* (Erichson, 1843)**

Distribution in Iran: Yazd (Zare Khormizi et al., 2013), Kerman (Salehi et al., 2011), Semnan (Dazyanian & Sahragard, 2000), Razavi Khorasan (Kalantari & Sadeghi, 2000), Gilan (Hai-Zadeh et al., 1998), Fars (Al-e-Mansoor & Ahmadi, 1993), Golestan (Monutazeri & Mossadegh, 1995), South Khorasan (Moadi & Mossadegh, 1995), Khuzestan (Mosadegh & Aleosfoor, 2004), Tehran (Samin & Shojai, 2013), Isfahan & Ilam & Khuzestan & Sistan and Baluchestan (Borumand, 2000)

Distribution in the world: Afrotropical: Angola, Chad, Tangier (Morocco), Luxor (Egypt), Tripoli (Lybia), Nubien (Sudan) (Fursch, 1961); Oriental: Northwestern India (Poorani, 2004); Palearctic: Afghanistan, Algeria, Canary Islands, Egypt, Italy, Iraq, Israel, Lebanon, Morocco, Pakistan, Portugal, Saudi Arabia, Spain, Syria, Tunisia, United Arab Emirates, (Kovar, 2007), Iran (Fursch, 1961; Kovar, 2007), Armenia, Azerbaijan, Georgia, Malta, Turkey (De Jong, 2011) and Caspian surrounding (Mader, 1955)

***P. nigromaculatus* Goeze, 1777**

Comment: This species is very similar to *P. flavipes* (Thunb, 1784) and because of this *P. flavipes* has been reported wrongly in some Iranian papers

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), Kerman (Jafari et al., 2011), Razavi Khorasan (Farahi & Sadeghi, 2009), Gilan (Nazari et al., 2000), Hamadan (Sadeghi & Khanjani, 1998), Zanzan (Mohseni et al., 1998), Isfahan (Bagheri & Emami, 1998), Fars (Ahmadi & Sarafrazi, 1993), West Azerbaijan (Khalil Aria & Malkeshi, 2002), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Khuzestan (Mosadegh & Aleosfoor, 2004), Golestan (Monutazeri & Mossadegh, 1995), South Khorasan (Moadi & Mossadegh, 1995), North Khorasan (Biranvand et al. in press b), Markazi (Ahmadi et al., 2012), Tehran (Ghanbari et al., 2012), Kermanshah (Khosravi et al., 2014), East Azerbaijan & Ilam & Mazandaran (Borumand, 2000), Alborz (Vodjdani, 1965), Ardebil (Lotfalizadeh, 2001)

Distribution in the world: Nearctic: USA (Gordon, 1985); Palearctic: wide distribution in Palearctic (Mader, 1955; Kovar, 2007)

Subfamily COCCIDULINAE

Tribe Coccidulini

Genus *Coccidula* Kugelann, 1798

***C. lithophiloides* Reitter, 1890**

Distribution in Iran: Kermanshah & Fars & Lorestan (Fursch, 1977)

Distribution in the world: Palearctic: Armenia (Kovar, 2007), Iran (Fursch, 1977; Kovar, 2007)

***C. rufa* Herbst, 1783**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

Genus *Lindorus* Casey, 1899

***L. lophantae* Blaisdell, 1892**

Comment: Also placed in *Rhyssobius* J.F. Stephens, 1832

Distribution in Iran: Introduced. Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Australian: Australia, New Zealand (Canepari, 2011); Nearctic: introduced to USA (Raimundo & Van Harten, 2000); Neotropical: introduced to Chile (Canepari, 2011); Afrotropical: South and West Africa (Raimundo & Van Harten, 2000), Palearctic: Albania, Algeria, Canary Islands, Croatia, France, Germany, Italy, Iran, Morocco, Spain, Tunisia, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro) (Kovar, 2007)

Genus *Cryptolaemus* Mulsant, 1853

***C. montrouzieri* Mulsant, 1853**

Distribution in Iran: Fars & Gilan & Golestan & Lorestan & Mazandaran (Jafari et al., 2013), Kerman (Jafari et al., 2011), Khuzestan (Mossadegh et al., 2008), Markazi (Ahmadi et al., 2012)

Distribution in the world: Afrotropical: introduced to South Africa (Mader, 1955); Australian: Australia (Canepari, 2011), Tasmania, introduced to Hawaii and New Zealand (Mader, 1955); Nearctic: introduced to USA (Gordon, 1985); Neotropical: introduced to Chile, French Guyana (Canepari, 2011); Oriental: introduced to India (Poorani, 2004), Java (Mader, 1955); Palearctic: introduced to China, Egypt, France, Germany, Iran, Italy, Spain, (Kovar, 2007)

Tribe Tetrabrachini

Genus *Tetrabrachys* Kapur, 1948

***T. bipustulatus* Barovskij, 1909**

Distribution in Iran: Lorestan (Iablokoff-Khuzorian, 1974)

Distribution in the world: Palearctic: Afghanistan, Iran, Turkmenistan (Kovar, 2007)

***T. coloratus* Fursch, 1960**

Distribution in Iran: Golestan (Fursch, 1960)

Distribution in the world: Palearctic: Iran (Fursch, 1960)

***T. major* Crotch, 1874**

Distribution in Iran: Kordestan (Mader, 1955)

Distribution in the world: Palearctic: Iran (Mader, 1955; Kovar, 2007)

***T. minimus* Barovskij, 1910**

Distribution in Iran: Lorestan (Mader, 1955; Iablokoff-Khuzorian, 1974)

Distribution in the world: Palearctic: Iran (Mader, 1955; Kovar, 2007)

***T. naviauxi* Duverger, 1983**

Distribution in Iran: Lorestan, Mazandaran, Isfahan (Duverger, 1983)

Distribution in the world: Palearctic: Iran (Duverger, 1983)

***T. pallidus* Crotch, 1874**

Distribution in Iran: Recorded from Iran by Mader (1955) without mention of province

Distribution in the world: Palearctic: Iran (Mader, 1955; Kovar, 2007)

***T. pellucidus* Barovskij, 1909**

Distribution in Iran: Lorestan (Iablokoff-Khuzorian, 1974)

Distribution in the world: Palearctic: Iran (Mader, 1955; Kovar, 2007)

***T. smarti* Iablokoff-Khuzorian, 1974**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Iran (Kovar, 2007)

***T. zarudnyi* Barovskij, 1909**

Distribution in Iran: Khorasan Razavi (Iablokoff-Khinzorian, 1974)

Distribution in the world: Palearctic: Iran (Iablokoff-Khinzorian, 1974; Mader, 1955)

Subfamily COCCINELLINAE**Tribe Halyziini****Genus *Halyzia* Mulsant, 1846*****H. sedecimguttata* (Linnaeus, 1758)**

Distribution in Iran: Gilan & Mazandaran (Borumand, 2000)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007), including Japan, Mongolia (Beilawski, 1968)

Genus *Psyllobora* Dejean, 1836***P. bisoconotata* (Mulsant, 1850)**

Distribution in Iran: Hormozgan & Fars (Borumand, 2000)

Distribution in the world: Palearctic: Afganistan, United Arab Emirates, Egypt, Iraq, Iran, Israel, Jordan, Pakistan, Saudi Arabia, Syria, Yemen (Kovar, 2007); Afrotropical (Kovar, 2007); Oriental: India (Kovar, 2007)

***P. vigintiduopunctata* (Linnaeus, 1758)**

Distribution in Iran: Hamadan (Sadeghi & Khanjani, 1998), Zanjan (Mohseni et al., 1998), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), West Azerbaijan (Alizadeh & Malkeshi, 2010), North Khorasan (Biranvand et al. in press b), South Khorasan (Moadi & Mossadegh, 1995), Alborz (Vodjdani, 1965), Lorestan (Mohammad poor et al., 2013), Kerman (Koochpayezadeh & Mossadegh, 1991), Mazandaran (Montazeri & Mossadegh, 1995), Razavi Khorasan (Yaghmae & Kharazi Pakdel, 1995), Gilan (Haji Zade et al., 1998), Fars (Fallahzadeh et al., 2000), East Azerbaijan (Sadaghian et al., 2000), Isfahan (Nematollahi & Bagheri, 2002), Ardebil (Lotfalizadeh, 2001), Tehran (Borumand, 2000)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

Genus *Vibidia* Mulsant, 1846***V. duodecimguttata* (Poda in Neuhaus, 1761)**

Distribution in Iran: East Azerbaijan (Mohammadi et al., 2013), West Azerbaijan (Parvizi et al., 1986), Gilan (Borumand, 2000), North Khorasan (Biranvand et al. in press b)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007), including Mongolia (Beilawski, 1975)

Tribe Coccinellini**Genus *Adalia* Mulsant, 1846*****A. bipunctata* (Linnaeus, 1758)**

Comment: Synonyme with *A. fasciatopunctata* (Faldermann, 1835)

Distribution in Iran: Yazd (Zare Khormizi et al., 2013), Kerman (Jafari et al., 2011), Lorestan (Mohammad poor et al., 2013), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), Ardebil (Razmjo & Hajizadeh, 2000), West Azerbaijan (Akbarzadeh & Rezvani, 2000), Semnan (Dazyanian & Sahragard, 2000), North Khorasan (Biranvand et al. in press b), Razavi Khorasan (Kalantari & Sadeghi, 2000) Qazvin (Mohammadbeigi, 2000), Fars (Fallahzadeh et al., 2000), Hamadan (Ahmadi, 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), South Khorasan (Malkeshi, et al., 1998), Gilan (Hai-Zadeh et al., 1998), Golestan (Sadeghi et al., 2002), Isfahan (Jafari et al., 2002), Khuzestan

(Mosadegh & Aleosfoor, 2004), Sistan and Baluchestan (Modarres Najaf Abadi et al., 2008), Mazandaran & Tehran & Hormozgan (Vodjdani, 1965), Kermanshah (Gholami moghadam et al., 2014), Zanjan (Mohseni et al., 1998), East Azerbaijan & Qom & Kordestan (Borumand, 2000)

Distribution in the world: Afrotropical: Middle of Africa (Bielawski, 1975); Nearctic: USA (Gordon, 1985) and Canada (Larson, 2013); Neotropical: introduced to Chile (Rebolledo et al., 2007); Oriental: India, (Poorani, 2004); Palearctic: wide distribution in Palearctic (Kovar, 2007), including Mongolia (Bielawski, 1975) and China (Poorani, 2004)

***A. decempunctata* (Linnaeus, 1758)**

Distribution in Iran: Kerman (Jafari et al., 2011), Lorestan (Mohammad poor et al., 2013), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), Golestan (Monutazeri & Mossadegh, 1995), North Khorasan (Biranvand et al. in press b), South Khorasan (Moadi & Mossadegh, 1995), Alborz (Vodjdani, 1965), Markazi (Ahmadi et al., 2012), Isfahan (Fatemi, 1982), Hamadan (Akhavan et al., 2013), Ilam & Tehran & Gilan (Borumand, 2000)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007), including Mongolia (Bielawski, 1975); Oriental: India (Lal & Kanakavalli, 1960)

***A. tetraspilota* (Hope, 1831)**

Distribution in Iran: Lorestan (Biranvand et al., 2014), Razavi Khorasan (Borumand, 2000)

Distribution in the world: Oriental: India (Poorani, 2004) and Nepal (Poorani, 2004; Ashfaq, 2012); Palearctic: Afghanistan, China, Iran, Tadjikistan, Turkmenistan and Uzbekistan, (Kovar, 2007)

Genus *Aphidecta* Weise, 1893

***A. obliterata* (Linnaeus, 1758)**

Distribution in Iran: Lorestan (Jafari et al., 2008)

Distribution in the world: Nearctic: Canada, USA (Gordon, 1985); Palearctic: wide distribution in western Palearctic (Kovar, 2007)

Genus *Calvia* Mulsant, 1850

***C. punctata* (Mulsant, 1853)**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Oriental: India, Nepal (Ashfaq, 2012); Palearctic: Afganistan, Iran, Tadjikistan and Uzbekistan (Kovar, 2007) and Paskistan (Poorani, 2004)

***C. quatuordecimguttata* (Linnaeus, 1758)**

Distribution in Iran: Fars (Alichi & Yazdani, 1989), Kerman (Koochpayezadeh & Mossadegh, 1991)

Distribution in the world: Nearctic: USA (Bielawski, 1975) and Canada (Larson, 2013); Oriental: India, Bhutan and Nepal (Poorani, 2004); Palearctic: wide distribution in Palearctic (Kovar, 2007) including Mongolia (Bielawski, 1975)

Genus *Ceratomegilla* Crotch, 1873

***C. undecimnotata* D. H. Schneider, 1792**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: wide distribution in western Palearctic (Kovar, 2007), Caucasus, Western Siberia, Asia Minor (Iablokoff-Khznorian, 1982)

Genus *Coccinella* Linnaeus, 1758

***C. iranica* Dobzhansky, 1926**

Distribution in Iran: Mazandaran & Tehran (Naim, 1971)

Distribution in the world: Palearctic: Iran, Turkey (Kovar, 2007) and Pakistan (Ashfaqe *et al.*, 2013)

***C. magnopunctata* Rybakow, 1889**

Distribution in Iran: Razavi Khorasan (Farahi & Sadeghi, 2009)

Distribution in the world: Oriental: Mongolia, Nepal, Tibet (Poorani, 2004); Palearctic: China, Mongolia (Kovar, 2007), Iran (Farahi & Sadeghi, 2009); Oriental: India

***C. septempunctata* Linnaeus, 1758**

Distribution in Iran: All parts of Iran

Distribution in the world: Nearctic: USA (Gordon, 1985), Canada (Larson, 2013); Oreintal: India (Bielawski, 1968; Canepari, 2011), Sri Lanka (Ashfaqe, 2012), Pakistan (Poorani, 2004); Palearctic: wide distribution in Palearctic; Afrotropical (Kovar, 2007)

***C. undecimpunctata* Linnaeus, 1758**

Distribution in Iran: Lorestan (Ansari pour & Shakarmi, 2011), Mazandaran (Fursch, 1977; Maafi *et al.*, 1998), Yazd (Zare Khormizi *et al.*, 2013), Ardebil (Razmjo & Hajizadeh, 2000), Semnan (Dazyanian & Sahragard, 2000), Khuzestan (Bagheri & Mosadegh, 2000), East Azerbaijan (Sadaghian *et al.*, 2000), Hamadan (Sadeghi & Khanjani, 1998), Gilan (Hai-Zadeh *et al.*, 1998), Fars (Al-e-Mansoor & Ahmadi, 1993), Kohgiluyeh and Boyer-Ahmad (Saeedi, 2002), Sistan and Baluchestan (Modarres Najaf Abadi *et al.*, 2008), Golestan (Monutazeri & Mossadegh, 1995), Alborz & Tehran (Vodjdani, 1965), Isfahan (Vodjdani, 1965), Kerman (Salehi *et al.*, 2011), North Khorasan (Biranvand *et al.* in press b), South Khorasan (Kalantari & Sadeghi, 2000), West Azerbaijan (Parvizi *et al.*, 1986), Ilam (Borumand, 2000)

Distribution in the world: Australian: Australia (Poorani, 2004), New Zealand (Raimundo & Van Harten, 2000); Nearctic: Canada, USA (Gordon, 1985); Oriental: India, Nepal (Poorani, 2004); Palearctic: wide distribution in western Palearctic (Kovar, 2007), Mongolia (Bielawski, 1975) and Pakistan (Poorani, 2004); North Africa (Poorani, 2004)

Genus *Harmonia* Mulsant, 1846

***H. quadripunctata* (Pontoppidan, 1763)**

Distribution in Iran: North Khorasan (Hamidi, 2013)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007)

Genus *Hippodamia* Chevrolat, 1836

***H. septemmaculata* (DeGeer, 1775)**

Comment: Synonyme with *H. heydeni* (Meier, 1897)

Distribution in Iran: Tehran (Borumand, 2000)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

***H. variegata* (Goeze, 1777)**

Comment: Synonyme with *H. novemnotata* Haworth, 1912; also placed in *Adonia* Mulsant, 1846

Distribution in Iran: All parts of Iran

Distribution in the world: Afrotropical: Kenya (Canepari, 2007), Central Africa (Raimundo & Van Harten, 2000), Eastern Africa (Ashfaqe, 2012); Neotropical: introduced to Chile (Rebolledo *et al.*, 2007); Oriental: India (Bielawski, 1968; Canepari, 2007), Nepal (Ashfaqe, 2012); Palearctic: wide distribution in western Palearctic, Iran (Kovar, 2007), Tibet, China (Ashfaqe, 2012) and Pakistan (Poorani, 2004)

***H. tredecimpunctata* (Linnaeus, 1758)**

Distribution in Iran: Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), Isfahan (Fatemi, 1982), West Azerbaijan (Parvizi et al., 1986), Fars & Gilan & Mazandaran (Borumand, 2000)

Distribution in the world: Nearctic: Canada (Belicek, 1976); Oriental: Nepal, Tibet, India (Poorani, 2004); Palearctic: wide distribution in western Palearctic, Iran (Kovar, 2007)

Genus *Menochilus* Timberlake, 1943***M. sexmaculatus* (Fabricius, 1781)**

Comment: Also placed in *Cheilomenes* Mulsant, 1850

Distribution in Iran: East Azerbaijan (Sadaghian et al. 2000), Kerman (Koochpayezadeh & Mossadegh, 1991), Razavi Khorasan (Kalantari & Sadeghi, 2000), Fars (Mosadegh & Aleosfoor, 2004), Lorestan (Ghanbari Kohyani et al., 2013), Hormozgan & Sistan and Baluchestan & Tehran (Borumand, 2000)

Distribution in the world: Australian: Australia (Poorani, 2004); Oriental: Bhutan, China, Ceylon, Formosa, Malaysia, Micronesia, New Guinea, Philippines (Sasaji, 1971), India (Lal & Kanakavalli, 1960) Indonesia (Korschefsky, 1932), Timor (Alves & Raimundo, 1971), Bangladesh, Myanmar, Vietnam (Ashfaq, 2012), Nepal, (Kovar, 2007), Sri Lanka (Poorani, 2004); Palearctic: Afghanistan, Iran, Japan, Oman, Pakistan, United Arab Emirates; Afrotropical (Kovar, 2007)

Genus *Oenopia* Mulsant, 1850***O. conglobata* (Linnaeus, 1758)**

Comment: including two subspecies *O. conglobata contaminata* Ménétries, 1849 & *Oenopia conglobata conglobata* (Linnaeus, 1758)

Distribution in Iran: Lorestan (Farahbakhsh, 1961), Kerman (Salehi et al., 2011), Fars (Yazdani, 1990), Gorgan (Montazeri & Mossadegh, 1995), Kermanshah (Jalilvand et al., 2014) Mazandaran (Maafi et al., 1998), Razavi Khorasan (Farahi & Sadeghi, 2009), Semnan (Dazyanian & Sahragard, 2000), Qazvin (Mohammadbeigi, 2000), Alborz (Babmorad et al., 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Hamadan (Sadeghi & Khanjani, 1998), North Khorasan (Biranvand et al. in press b), South Khorasan (Malkeshi, et al., 1998), Gilan (Hai-Zadeh et al., 1998), Tehran (Omid et al., 1993), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Isfahan (Jafari et al., 2002), Khuzestan (Mosadegh & Aleosfoor, 2004), Golestan (Monutazeri & Mossadegh, 1995), Zanjan (Mohseni et al., 1998), East Azerbaijan & Kordestan & Hormozgan (Vodjdani, 1965), West Azerbaijan (Parvizi et al., 1986), Ardebil (Lotfalizadeh, 2001), Qom (Borumand, 2000)

Distribution in the world: Nearctic: North America (Ashfaq, 2012); Oriental: India (Sicard, 1907); Palearctic: wide distribution in Palearctic (Kovar, 2007), Northern China (Ashfaq, 2012) and Pakistan (Poorani, 2004)

***O. montana* Savoyskaya, 1969**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Iran & Kazakhstan (Kovar, 2007)

***O. oncina* (Olivier, 1808)**

Distribution in Iran: Lorestan (Ansari pour & Shakarami, 2011), Yazd (Zare Khormizi et al., 2013), Kerman (Jafari et al., 2011), Razavi Khorasan (Kalantari & Sadeghi, 2000), Isfahan (Seifollahi et al., 2000), Fars (Al-e-Mansoor & Ahmadi, 1993), West Azerbaijan (Khalil Aria & Malkeshi, 2002), Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Khuzestan (Mosadegh & Aleosfoor, 2004), South Khorasan (Moadi & Mossadegh, 1995), Markazi (Ahmadi et al., 2012), Kermanshah (Gholami

Moghadam et al., 2014), Hamadan (Akhavan et al., 2013), Qom & Ilam & Mazandaran & Sistan and Baluchestan & Tehran (Borumand, 2000)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

Genus *Propylea* Mulsant, 1846

***P. quatuordecimpunctata* (Linnaeus, 1758)**

Distribution in Iran: Alborz (Farahbakhsh, 1961), Lorestan (Mohammad poor et al., 2013), Chaharmahal and Bakhtiari (Bagheri & Mossedegh, 1995), North Khorasan (Biranvand et al. in press b), Razavi Khorasan (Farahi & Sadeghi, 2009), Kerman (Jafari at al., 2011), Ardebil (Razmjo & Hajizadeh, 2000), Kohgiluyeh and Boyer-Ahmad (Saeedi, 1998), Hamadan (Sadeghi & Khanjani, 1998), Mazandaran (Maafi et al., 1998), Gilan (Hai-Zadeh et al., 1998), Golestan (Sadeghi et al., 2002), Isfahan (Haghshenas et al., 2004), Fars (Alichi & Yazdani, 1989), Khuzestan & Alborz & Hormozgan (Vodjdani, 1965), Tehran (Abdi et al., 2012), Qom & Semnan (Borumand, 2000)

Distribution in the world: Nearctic: USA & Canada (Hoebeke & Wheeler, 1996); Oriental: India (Ashfaq, 2012), Bangladesh (Poorani, 2004); Palearctic: wide distribution in Palearctic (Kovar, 2007), including China (Ashfaq, 2012) and Pakistan (Poorani, 2004)

Tribe Tytthaspidini

Genus *Anisosticta* Dejean, 1837

***A. caucasica* A. Fleischer, 1900**

Distribution in Iran: Tehran (Fursch, 1977)

Distribution in the world: Palearctic: Armenia (Kovar, 2007) Iran (Fursch, 1977; Kovar, 2007)

***A. bitriangularis* (Say, 1842)**

Distribution in Iran: Razavi Khorasan (Yaghmaee & Kharaji, 1995)

Distribution in the world: Nearctic: North America (Bielawski, 1958) and Canada (Larson, 2013); Palearctic: Iran (Kovar, 2007), Russia (Far East), Siberia (Bielawski, 1958)

***A. novemdecimpunctata* (Linnaeus, 1758)**

Distribution in Iran: Alborz (Vodjdani, 1965)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

Genus *Bulaca* Mulsant, 1850

***B. lichatschovii* Hummel, 1827**

Distribution in Iran: South Khorasan (Moadi & Mossadegh, 1995), Alborz (Vodjdani, 1965), Isfahan (Fatemi, 1982), West Azerbaijan (Parvizi et al., 1986), Ardebil (Lotfalizadeh, 2001), East Azerbaijan & Bushehr & Fars & Hormozgan & Ilam & Kerman & Sistan and Baluchestan & Markazi (Borumand, 2000)

Distribution in the world: Afrotropical: Central Africa (Poorani, 2004); Oriental: India (Poorani, 2004); Palearctic: wide distribution in Palearctic (Kovar, 2007)

***B. lividula bocanderi* Mulsant, 1850**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Algeria, Egypt, Morocco, United Arab Emirates, Iraq, Israel, Jordan, Pakistan, Saudi Arabia, Syria, Yemen, Iran; Afrotropical (Kovar, 2007)

Genus *Coccinula* Dobzhansky, 1925

***C. elegantula* (Weise, 1890)**

Distribution in Iran: Yazd (Zare Khormizi et al., 2013), Isfahan (Bagheri & Emami, 1998), Razavi Khorasan (Yaghmaee & Kharaji, 1995), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), Lorestan (Ansari pour & Shakarami, 2011), Kermanshah (Jalilvand et al., 2014)

Distribution in the world: Palearctic: Russia, Iran, Kazakhstan, Mongolia, Uzbekistan, Kyrkyzstan, Tadjikistan (Kovar, 2007), Mongolia and Turkestan (Duverger, 1983)

***C. redimita* (Weise 1885)**

Distribution in Iran: Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995), Lorestan (Ghanbari Kohyani et al., 2013), Tehran (Borumand, 2000)

Distribution in the world: Palearctic: Afghanistan, Iran, Tadjikistan, Uzbekistan (Kovar, 2007), Turkey & Pakistan (Ashfaque, 2012) and Mongolia (Bielawski, 1975)

***C. sinuatomarginata* Faldermann, 1837**

Distribution in Iran: Tehran (Borumand, 2000)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

Genus *Tytthaspis* Crotch, 1874

***T. sedecimpunctata* (Linnaeus, 1758)**

Distribution in Iran: Lorestan (Mohammad Poor et al., 2013)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007) including Mongolia (Bielawski, 1975)

Subfamily EPILACHINAE

Tribe Epilachini Mulsant, 1846

Genus *Chnootriba* Chevrolat, 1837

***C. elaterii* P. Rossi, 1794**

Distribution in Iran: Bushehr & Isfahan & Fars & Gilan & Hormozgan & Ilam & Kermanshah & Khuzestan & Lorestan & Semnan & Tehran (Borumand, 2000), Golestan (Khormali, 2012), North Khorasan (Biranvand et al. in press b),

Distribution in the world: North Africa: Niger, Sudan, Senegal, Chad, Burkina Faso (Poorani, 2004); Oriental: India (Poorani, 2004); Palearctic: Algeria, Albania, Austria, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, France, Great Britain, Germany, Hungary, Italy, Luxembourg, Morocco, Portugal, Romania, Spain, Slovakia, Switzerland, Turkey, Tunisia, Ukraine, (Kovar, 2007), Iran (Borumand, 2000), Turkey (Poorani, 2004)

Genus *Cynegetis* Chevrolat, 1836

***C. syriaca* Mader, 1958**

Comment: Synonyme with *C. rapillyi* Duverger, 1983

Distribution in Iran: Kerman (Duverger, 1983)

Distribution in the world: Palearctic: Iran, Syria, Turkey (Kovar, 2007)

Genus *Henosepilachna* Li, 1961

***H. argus* (Geoffroy, 1785)**

Distribution in Iran: Ilam (Borumand, 2000), Kermanshah (Modarrese aval, 1994)

Distribution in the world:palearctic: Armenia, Austria, Belgium, Bulgaria, Czech Republic, Great Britain, France, Germany, Hungary, Italy, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, Yugoslavia, Algeria, Morocco, Lebanon, Tadjikistan, Turkmenistan, Turkey, Uzbekistan (Kovar, 2007), Iran (Bagheri & Modarress Aval, 1994); Afrotropical (Kovar, 2007)

***H. vigintiquatuorpunctata* (Linnaeus, 1758)**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province
 Distribution in the world: wide distribution in Eastern Palearctic (Kovar, 2007)

Subfamily MICROWEISEINAE

Tribe Microweiseini Leng, 1920

Genus *Paracoelopterus* Normand, 1936 (= *Diloponis* Pope 1962)

***P. berytensis* J. Weise, 1884**

Comment: Synonyme with *P. fuerschi* Ahmadi & Yazdani 1993

Distribution in Iran: Fars (Ahmadi & Yazdani, 1993), Khorasan Razavi (Khandehroo, 2015)

Distribution in the world: Palearctic: Germany, Iran, Israel, Lebanon, Morocco, Tunisia, (Kovar, 2007), Syria (Mader, 1955)

Tribe Serangiini

Genus *Serangium* Blackburn, 1889

***S. montazerii* Fursch, 1995**

Distribution in Iran: Zanjan (Mohseni et al., 1998), Gilan (Hai-Zadeh et al., 1998), Golestan (Monutazeri & Mossadegh, 1995)

Distribution in the world: Palearctic: France, Georgia, Iran, Israel, Pakistan, Syria (Kovar, 2007),
 Oriental: India (?)

Subfamily Ortaliinae Mulsant, 1850

Tribe Noviini Mulsant, 1850

Genus *Rodolia* Mulsant, 1850

***R. cardinalis* Mulsant, 1850**

Distribution in Iran: Gilan (Hai-Zadeh et al., 1998), Khuzestan (Eslamizadeh & Barzkar, 2006), Fars (Alichi & Yazdani, 1989), Golestan (Monutazeri & Mossadegh, 1995), Mazandaran (Borumand, 2000)

Distribution in the world: Australian: Australia (Gordon, 1972); Afrotropical: introduced to North and South Africa (Gordon, 1972); Nearctic: introduced to USA (Gordon, 1985); Neotropical: introduced to South America (Gordon, 1972); Oriental: introduced to India (Lal & Kanakavalli, 1960); Palearctic: widely introduced in Palearctic (Kovar, 2007)

***R. fausti* Weise, 1885**

Distribution in Iran: Razavi Khorasan (Yaghmaee & Kharaji, 1995)

Distribution in the world: Palearctic: Iran, Kazakhstan, Kyrkzstan, Uzbekistan, (Kovar, 2007)

***R. rufipennis* Pic, 1926**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Egypt, Iran and Libya (Kovar, 2007)

Subfamily SCYMNINAE

Tribe Diomini R. D. Gordon, 2000

Genus *Diomus* Mulsant, 1850

***D. rubidus* Motscholsky, 1837**

Distribution in Iran: Kerman (Koohpayezadeh & Mosadegh 1991), Kermanshah (Jalilvand et al., 2014)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

Tribe Hyperaspidini**Genus *Hyperaspis* Chevrolat 1837*****H. concolor* (Suffrian, 1843)**

Distribution in Iran: Chaharmahal and Bakhtiari (Bagheri & Mosadegh 1995)

Distribution in the world: Palearctic: Austria, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Italy, Poland, Romania, Slovakia, Sweden, Switzerland (Kovar, 2007), Iran (Bagheri & Mosadegh 1995)

***H. duvergeri* Fursch, 1985**

Distribution in Iran: Chaharmahal and Bakhtiari (Bagheri & Mosadegh 1995)

Distribution in the world: Palearctic: Algeria, Croatia, France, Hungary, Italy, Portugal, Spain, Morocco (Kovar, 2007), Iran (Bagheri & Mosadegh 1995)

***H. femorata* (Motschulsky, 1837)**

Distribution in Iran: Tehran (Borumand, 2000)

Distribution in the world: Palearctic: Armenia, Azarbaijan, Bulgaria, Russia, Tadjhikistan, Turkmenistan, Ukraine, (Kovar, 2007), Iran (Borumand, 2000)

***H. histeroides* Faldermann, 1837**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Armenia, Azerbaijan, Iran, Kazakhstan (Kovar, 2007)

***H. marmottani* Fairmaire, 1868**

Distribution in Iran: Razavi Khorasan (Yaghmaee & Kharazipakdel 1995)

Distribution in the world: Algeria, Tunisia (Sicard, 1907; Kovar, 2007), Egypt, Iran, Libya, (Kovar, 2007)

***H. persica* Duverger, 1983**

Distribution in Iran: Kerman (Duverger, 1983), Khorasan (Moadi & Mossadegh, 1995)

Distribution in the world: Palearctic: Iran (Duverger, 1983)

***H. polita* Weise, 1885**

Distribution in Iran: Golestan & Kerman & South Khorasan & Razavi Khorasan & Khuzestan (Jafari et al., 2013), Fars (Fahhahzade et al., 2006), Kermanshah (Jalilvand et al., 2014; Khosravi et al., 2014)

Distribution in the world: Afrotropical: Chad, Ethiopia, Sudan, Somalia, Kenya (Duverger, 1983); Oriental: India (Iablokoff-Khznorian, 1971); Palearctic: Afghanistan, Cyprus, Egypt, Iran, Israel, Syria, Tadjhikistan, Turkmenistan, Turkey, (Kovar, 2007), Coastal areas of the eastern Mediterranean region, Lebanon, Pakistan, (Alizadeh et al., 2013)

***H. pumila* (Sharafme 1987)**

Distribution in Iran: Tehran (Naeem 1971), South Khorasan (Moadi & Mossadegh, 1995)

Distribution in the world: Afrotropical: Cameroon, Congo, Erythrea, Guinea, Sudan, (Duverger, 1983), Senegal (Sicard A., 1907; Iablokoff-Khznorian, 1971; Duverger, 1983); Palearctic: Algeria, Egypt, Libya, Iran (Duverger, 1983), Yemen, Arabia (Raimundo et al., 2006), Egypt (Mader, 1955), Lybia, Tunisia (Iablokoff-Khznorian, 1971)

***H. quadrimaculata* (Redtenbacher, 1843)**

Distribution in Iran: Lorestan, Mazandaran, Isfahan (Duverger, 1983), (Ansari pour 2012), Alborz (Ansari pour, 2012)

Distribution in the world: Palearctic: Albania, Austria, Belgium, Bulgaria, Czech Republic, Germany, Hungary, Romania, Slovakia, Lebanon, Turkey, Syria (Kovar, 2007), Iran (Duverger, 1983)

***H. reppensis* (Herbst, 1783)**

Distribution in Iran: Yazd (Zare et al., 2014)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007) and Iran (Zare et al., 2014)

***H. syriaca* Weise, 1885**

Distribution in Iran: Mazandaran (Duverger, 1983), Chaharmahal and Bakhtiari (Bagheri & Mosadegh 1995)

Distribution in the world: Palearctic: Israel, Syria, Lebanon, Turkey, Iran (Kovar, 2007), Lebanon (Fursch, 1977)

***H. transversoguttata* J. Weise, 1878**

Distribution in Iran: Kerman, Khuzestan (Duverger, 1983)

Distribution in the world: Palearctic: Armenia, Iran, Kazakhstan, Uzbekistan, Mongolia, Tadjikistan, Turkmenistan, Kyrkzstan, China (Kovar, 2007), Afghanistan, Azerbaijan, (Iablokoff-Khuzorian, 1971)

***H. vinciguerrae* Capra, 1929**

Distribution in Iran: Kuzestan (Alizadeh et al., 2013)

Distribution in the world: Afrotropical: Northern and eastern Africa (Raimundo & Van Harten, 2000); Palearctic: Libya, Saudi Arabia (Raimundo & Van Harten, 2000) Yemen (Iablokoff-Khuzorian, 1971; Raimundo & Van Harten, 2000), Iran (Alizadeh et al., 2013)

Tribe Platynaspidini

Genus *Platynaspis* Redtenbacher, 1844

***P. luteorubra* (Goeze, 1777)**

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), South Khorasan (Moadi & Mossadegh, 1995), Ardebil (Lotfalizadeh, 2001), Fars & Tehran (Borumand, 2000)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

Tribe Scymnini

Genus *Clitostethus* Weise, 1885

***C. arcuatus* (Rossi, 1794)**

Distribution in Iran: Chaharmahal and Bakhtiari & Fars & Golestan & Kerman & South Khorasan & Gilan (Jafari et al., 2013) Ardebil (Lotfalizadeh, 2001), North Khorasan (Biranvand et al. in press b)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007); Neotropical: introduced to Chile (Canepari, 2011); Afrotropical (Kovar, 2007)

Genus *Nephus* Mulsant, 1846

***N. arcuatus* Kapur**

Distribution in Iran: Khuzestan (Mossadegh et al., 2012)

Distribution in the world: Afrotropical: Togo (Raimundo et al., 2008); Palearctic: Iran, Syria, Yemen (Kovar, 2007), Saudi Arabia (Raimundo & Van Harten, 2000), United Arab Emirates (Raimundo et al., 2008)

***N. biguttatus* Mulsant, 1850**

Distribution in Iran: Golestan & South Khorasan (Jafari et al., 2013) Chaharmahal and Bakhtiari (Esfandiari et al., 2002), Kerman (Koochpayezadeh & Mossadegh, 1991)

Distribution in the world: Turkey (Kaydan et al., 2006)

***N. bipunctatus* (Kugelann, 1794)**

Distribution in Iran: Fars (Ahmadi & Yazdani 1993), Kerman (Koochpayezadeh Esfahani & Mosadegh 1991), Semnan (Dazyanian & Sahragard, 2000), Zanjan (Mohseni et al., 1998), Gilan (Hajizadeh et al., 1998), Isfahan (Fatemi, 1982)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007), Iran (Koochpayezadeh Esfahani & Mosadegh 1991), Japan (Mader, 1955)

***N. bisignatus* Fursch, 1984**

Distribution in Iran: Razavi Khorasan (Yaghmaee & Kharazipakdel 1995)

Distribution in the world: Palearctic: Austria, Czech Republic, Germany, Hungary, Sweden (Kovar, 2007), Iran (Yaghmaee & Kharazipakdel 1995)

***N. caneparii* Fursch & Uygun, 1980**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Iran and Turkey (Kovar, 2007)

***N. caucasicus* Weise, 1929**

Distribution in Iran: Tehran (Jafari et al., 2013)

Distribution in the world: Palearctic: Armenia, Iran (Kovar, 2007), Caucasus (Mader, 1955)

***N. conjunctus* Wollaston, 1870**

Comment: Synonyme with *N. includens* Kirsch, 1871

Distribution in Iran: Khuzestan (Asadeh & Mosaddegh, 1991; Mossadegh & Kocheili, 1993), Fars (Fallahzadeh et al., 2004)

Distribution in the world: Palearctic: Canary Islands, Egypt, Greece, Israel, Saudi Arabia, Portugal, Turkey, Yemen (Raimundo et al., 2006.), Iran (Asadeh & Mosaddegh, 1991), Turkestan (Mader, 1955); Afrotropical: Cape Verde Islands, Gambia, Guinea Bissau, Ethiopia, (Raimundo et al., 2006)

***N. crucifer* A. Fleischer, 1900**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Iran, Kazakhstan, Kyrkyzstan, Saudi Arabia, Tadzhikistan, Turkmenistan, Uzbekistan (Kovar, 2007), Yemen (Raimundo & Van Harten, 2000); Afrotropical (Kovar, 2007)

***N. fenestratus* J. R. Sahlberg, 1913**

Distribution in Iran: Khuzestan (Asadeh & Mosaddegh, 1991, Mossadegh & Kocheili, 1993), Fars (Fallahzadeh & Hesami, 2004), Kermanshah (Jalilvand, 2011)

Distribution in the world: Palearctic: United Arab Emirates, Cyprus, Egypt, Israel, Saudi Arabia, Iran (Kovar, 2007), Syria (Raimundo & Van Harten, 2000), United Arab Emirates (Raimundo et al., 2008); Afrotropical (Kovar, 2007)

***N. hiekei* Fursch, 1987**

Distribution in Iran: Fars (Falahzade, et al. 2003)

Distribution in the world: Palearctic: United Arab Emirates, Algeria, Egypt, Greece, Iran, Iraq, Italy, Lebanon, Morocco, Saudi Arabia, Spain, Tunisia, Turkey (Kovar, 2007), Syria, Yemen (Raimundo et al., 2008), Israel (Fursch, 1967), Portugal (Raimundo, A. 1992)

***N. jucundus* Fürsch, 1977**

Distribution in Iran: Azerbaijan (Fursch, 1977)

Distribution in the world: Palearctic: Iran (Fursch, 1977)

***N. levaillanti* Mulsant, 1850**

Comment: Synonyme with *S. levaillantii* Mulsant, 1850

Distribution in Iran: Fars & Kerman & Razavi Khorasan & Khuzestan (Jafari et al., 2013)

Distribution in the world: Afrotropical: Rwanda (Fursch, 1997); Oriental: India (Canepari, 1986); Palearctic: Afghanistan, China, Egypt, Germany, Iran, Israel, Italy, Japan, Jordan, Russia, Lebanon, Pakistan (Kovar, 2007)

***N. nigricans* (Weise, 1879)**

Distribution in Iran: Lorestan (Biranvand, 2014)

Distribution in the world: Albania, Croatia, France, Greece, Italy, Turkey (Kovar, 2007), Iran (Biranvand, 2014)

***N. quadrimaculatus* (Herbst, 1783)**

Distribution in Iran: Kerman (Salehi et al., 2011), Kermanshah (Gholami Moghadam et al., 2014), Gilan & Golestan & Mazandaran (Jafari et al., 2013)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

***N. ulbrichi* Fursch, 1977**

Distribution in Iran: Chaharmahal and Bakhtiari (Bagheri & Mosadegh, 1995), Khuzestan (Mosadegh & Aleosfoor, 2004), Fars (Fahhahzade et al., 2006), Kermanshah (Jalilvand et al., 2014).

Distribution in the world: Palearctic: Greece, Italy, Portugal, Spain (Kovar, 2007), Iran (Bagheri & Mosadegh, 1995)

Genus *Scymniscus* Dobrzhanskiy, 1925??***S. biflammulatus* (Motschulsky, 1837)-**

Distribution in Iran: Khuzestan (Bagheri & Mosadegh, 1995) Lorestan (Biranvand, 2014), Kermanshah (Jalilvand et al., 2014; Khosravi et al., 2014)

Distribution in the world: Palearctic: Afghanistan, Armenia, Georgia, Iran, Turkmenistan, Uzbekistan (Kovar, 2007)

***S. uguttatus* Mulsant, 1850**

Comment: Synonyme with *S. quadriguttatus* Feischer, 1900

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Afghanistan, Iran, Kazakhstan (Kovar, 2007)

***S. elbursi* Fursch, 1981**

Distribution in Iran: Alborz (Karaj) (Fursch, 1981), Kerman (Salehi et al., 2011)

Distribution in the world: Palearctic: Iran (Fursch, 1981)

Genus *Scymnus* Kugelann, 1794

***S. apetzi* Mulsant, 1846**

Distribution in Iran: West Azerbaijan & Chaharmahal and Bakhtiari & Fars & Gilan & Golestan & Razavi Khorasan & Lorestan & Tehran (Jafari et al., 2013), Mazandaran (Maafi et al., 1998), South Khorasan (Malkeshi, et al., 1998), Isfahan (Bagheri & Emami, 1998), Khuzestan (Mossadegh, 2012), Hamadan (Akhavan et al., 2013), North Khorasan (Biranvand et al. in press b)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007)

***S. arabicus* Fursch, 1989**

Distribution in Iran: Fars & Gilan & Lorestan (Jafari et al., 2013)

Distribution in the world: Palearctic: Saudi Arabia (Kovar, 2007), Iran (Jafari et al., 2013)

***S. argutus* Mulsant, 1850**

Distribution in Iran: Kerman (Jafari et al., 2013), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995)

Distribution in the world: Palearctic: Afghanistan, Albania, Armenia, Georgia, Iran, Iraq, Israel, Turkmenistan, Uzbekistan (Kovar, 2007)

***S. auritus* (Thunberg, 1795)**

Distribution in Iran: Chaharmahal and Bakhtiari & Fars & Yazd & Gilan (Jafari et al., 2013), Kerman (Salehi et al., 2011)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

***S. ebneri* J. Weise, 1926**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province
Distribution in the world: Palearctic: United Arab Emirates, Egypt, Iran; Afrotropical (Kovar, 2007)

***S. cedricolus* Fursch, 1977**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Iran, Lebanon, Turkey (Kovar, 2007)

***S. flagellisiphonatus* (Fursch, 1970)**

Distribution in Iran: North Khorasan (Hamidi, 2013)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

***S. flavicollis* Redtenbacher, 1843**

Distribution in Iran: Chaharmahal and Bakhtiari & Fars & Gilan & Isfahan & Razavi Khorasan & Khuzestan & Lorestan (Jafari et al., 2013), Kerman (Salehi et al., 2011), Semnan (Dazyanian & Sahragard, 2000), Kermanshah (Bagheri & Emami, 1998), Tehran & East Azerbaijan (Fursch, 1977), Markazi (Ahmadi et al., 2012)

Distribution in the world: Palearctic: Algeria, France, Italy, Morocco, Tunisia (Kovar, 2007), Iran (Fursch, 1977), Syria (Mader, 1955), Lebanon (Fursch, 1977)

***S. fraxini* Mulsant, 1850**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007)

***S. frontalis* Fabricius, 1787**

Comment: Synonyme with *S. bimaculatus* (Thunberg, 1795)

Distribution in Iran: West Azerbaijan & Isfahan & Razavi Khorasan & Lorestan & Tehran & Gilan & Golestan (Jafari et al., 2013), Kermanshah (Gholami moghadam et al., 2014)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007)

***S. impexus* Mulsant, 1850**

Distribution in Iran: West Azerbaijan (Parvizi et al., 1987), Razavi Khorasan (Kalantari & Sadeghi, 2000)

Distribution in the world: Nearctic: Canada, USA (Gordon, 1985); Oriental: India (Poorani, 2004); Palearctic: Austria, China, Czech Republic, France, Germany, Italy, Poland, Slovakia, Spain (Kovar, 2007), Iran (Parvizi et al., 1987), North Africa (Mader, 1955)

***S. indrihensis* Weise, 1929**

Distribution in Iran: South Khorasan (Moadi & Mossadegh, 1995)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007), Iran (Moadi & Mossadegh, 1995), Turkestan (Mader, 1955), Mongolia (Bielawski, 1968)

***S. latemaculatus* Motschulsky, 1858**

Distribution in Iran: unknown

Distribution in the world: Palearctic: Afghanistan, China, Iran, Pakistan, (Kovar, 2007); Oriental: India, Sri Lanka, Taiwan, Thailand (Poorani, 2004)

***S. limbatus* Stephens, 1832a**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007)

***S. manipulus* Fursch & Kreissl, 1967**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: China, Iran, Mongolia, Turkmenistan (Kovar, 2007)

***S. marginicollis* Mannerheim, 1843**

Comment: this species has been wrongly reported from Iran by Behdad (1988)

***S. marinus* (Mulsant, 1850)**

Comment: Synonyme with *S. mediterraneus* Iablokoff-Khnzorian, 1972 and *S. minimus* (O. F. Müller, 1776)

Distribution in Iran: Lorestan (Jafari et al., 2013)

Distribution in the world: Palearctic: Algeria, Canary Islands, Egypt, France, Italy, Morocco, Maderia Archipelago, Portugal, Spain, Tunisia (Kovar, 2007), Iran (Jafari et al., 2013), Syria (Capra, 1976)

***S. mongolicus* Weise, 1890**

Distribution in Iran: Kerman & South Khorasan & Khuzestan (Jafari et al., 2013), Isfahan (Bagheri & Emami, 1998), Fars (Mosadegh & Aleosfoor, 2004)

Distribution in the world: Palearctic: China, Mongolia (Kovar, 2007), Iran (Jafari et al., 2013)

***S. nigrinus* Kugellan, 1794**

Distribution in Iran: Isfahan (Jafari et al., 2013), Ardebil (Lotfalizadeh, 2001)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007), Iran (Jafari et al., 2013)

***S. nubilus* (Mulsant, 1850)**

Distribution in Iran: Hormozgan (Fallahzadeh et al., 2013), Lorestan (Biranvand, 2014)

Distribution in the world: Afrotropical: Rwanda (Fursch, 1997); Oriental: India, Myanmar, Sri Lanka, Bangladesh (Poorani, 2004), Nepal (Ashfaque, 2012); Palearctic: wide distribution in western Palearctic (Kovar, 2007)

***S. pallipes* Mulsant, 1850**

Distribution in Iran: Chaharmahal and Bakhtiari & Golestan & Razavi Khorasan & Lorestan (Jafari et al., 2013), Kerman (Jafari et al., 2011), Isfahan (Bagheri & Emami, 1998), North Khorasan (Biranvand et al. in press b)

Distribution in the world: Palearctic: China, Iran, Kazakhstan, Russia, Tadjikistan, Turkmenistan, Uzbekistan (Kovar, 2007), Iran (Jafari et al., 2011)

***S. pharaonis* Motschulsky, 1851**

Comment: Synonyme with *S. araraticus* (lablokoff-Khuzorian, 1969)

Distribution in Iran: Chaharmahal and Bakhtiari & Kerman (Jafari et al., 2013), Gilan (Hai-Zadeh et al., 1998), Lorestan (Jafari et al., 2008), Fars (Yazdani & Ahmadi, 1991), Kermanshah (Fursch, 1977)

Distribution in the world: Palearctic: Armenia, Egypt, France, Germany, Iraq, Jordan, Turkey (Kovar, 2007), Iran (Fursch, 1977; Kovar, 2007), Lebanon (Fursch, 1977)

***S. magnomaculatus* Fursch, 1958**

Comment: Synonyme with *S. quadriguttatus* (Capra, 19274)

Distribution in Iran: Fars & Gilan & Golestan & Razavi Khorasan (Jafari et al., 2013), Sistan and Baluchestan (Modarres Najaf Abadi et al., 2008), Ardebil (Lotfalizadeh, 2001)

Distribution in the world: Palearctic: Albania, Armenia, Austria, Azerbaijan, Bosnia Herzegovina, Bulgaria, Croatia, France, Greece, Italy, Macedonia, Romania, Slovenia, Turkey (Kovar, 2007), Iran (Jafari et al., 2013)

***S. rubromaculatus* Goeze, 1777**

Distribution in Iran: Fars & Gilan (Jafari et al., 2013), Semnan (Dazyanian & Sahragard, 2000), Isfahan (Seifollahi et al., 2000), Ardebil (Lotfalizadeh, 2001), Kermanshah (Gholami moghadam et al., 2014), Lorestan (Biranvand, 2014)

Distribution in the world: wide distribution in western Palearctic (Kovar, 2007); Afrotropical (Kovar, 2007)

***S. subvillosus* Goeze, 1777**

Distribution in Iran: West Azerbaijan & Fars & Isfahan & Kerman & Razavi Khorasan & Lorestan & Markazi (Jafari et al., 2013), Mazandaran (Maafi et al., 1998), Ardebil (Lotfalizadeh, 2001)

Distribution in the world: wide distribution in western Palearctic, Iran (Kovar, 2007); Afrotropical (Kovar, 2007)

***S. suffrianioides* Sahlberg, 1913**

Including two subsp.: *S. suffrianioides apetzoides* Capra & Fursch, 1967 and *S. suffrianioides suffrianioides* J. R. Sahlberg, 1913

Comment: *S. suffrianioides* Sahlberg, 1913 is synonym with *S. pallipediformis* Günther, 1958

Distribution in Iran: Isfahan & Razavi Khorasan & Lorestan & Tehran (Jafari et al., 2013) Markazi (Ahmadi et al., 2012), Kermanshah, Yazd (Zare et al., 2014)

Distribution in the world: Palearctic: Austria, France, Germany, Iraq, Israel, Italy, Jordan, Lebanon, Poland, Romania, Russia, Slovakia, Syria, Turkey (Kovar, 2007), Iran (Borumand, 2000)

***S. syriacus* (Marseul, 1898)**

Distribution in Iran: Chaharmahal and Bakhtiari & Fars & Gilan & Golestan & Kerman & South Khorasan & Razavi Khorasan & Khuzestan & Lorestan (Jafari et al., 2013), Yazd (Zare Khormizi et al., 2013), Semnan (Dazyanian & Sahragard, 2000), Zanjan (Mohseni et al., 1998), Isfahan (Bagheri & Emami, 1998), Ardebil (Lotfalizadeh, 2002), Markazi (Ahmadi et al., 2012), Hamadan (Akhavan et al., 2013), Tehran (Samin & Shojai, 2013), North Khorasan (Biranvand et al. in press b)

Distribution in the world: Egypt, Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Syria (Kovar, 2007), Libya, Saudi Arabia, Turkey, Yemen (Alizadeh et al., 2013)

***S. testaceus* Motschulsky, 1837**

Distribution in Iran: Lorestan (Biranvand, 2014)

Distribution in the world: Palearctic: Albania, Kyrkyzstan, Tadzhikistan (Kovar, 2007), Iran (Biranvand, 2014)

Tribe Stethorini

Genus *Stethorus* Weise, 1885

***S. gilvifrons* Mulsant, 1850**

Distribution in Iran: Alborz (Farahbakhsh, 1961), Chaharmahal and Bakhtiari & Fars & Gilan & Golestan & South Khorasan & Razavi Khorasan & Khuzestan & Lorestan & Tehran & Isfahan (Jafari et al., 2013), Ardebil (Razmjo & Hajizadeh, 2000), Hamadan (Eghbalian et al., 2008), Kerman (Koochpayezadeh & Mossadegh, 1991), Yazd (Zare et al., 2014), North Khorasan (Biranvand et al. in press b)

Distribution in the world: Oriental: India (Mader, 1955; Lal & Kanakavalli, 1960); Palearctic: Afghanistan, Armenia, Azerbaijan, Bulgaria, Croatia, Cyprus, Egypt, France, Greece, Iran, Iraq, Italy, Lebanon, (Kovar, 2007), Pakistan (Ashfaq, 2012), Turkey (Efil et al., 2010), Saudi Arabia (Raimundo & Van Harten, 2000)

***S. pusillus* (Herbst, 1797)**

Comment: Synonyme with *S. punctillum* (Weise, 1891)

Distribution in Iran: West Azerbaijan & Chaharmahal and Bakhtiari & Gilan & Isfahan & Kerman & South Khorasan & Razavi Khorasan & Khuzestan & Tehran (Jafari et al., 2013), Fars (Alichi & Yazdani, 1989), Alborz (Vodjdani, 1965), Lorestan (Biranvand, 2014)

Distribution in the world: wide distribution in Palearctic (Kovar, 2007); Nearctic: USA (Gordon, 1985), Canada (Larson, 2013)

***S. siphonulus* (Kapur, 1948)**

Distribution in Iran: Khuzestan & Lorestan (Jafari et al., 2013)

Distribution in the world: Palearctic: China (Kovar, 2007), Iran (Jafari et al., 2013)

Subfamily STICHOLOTIDINAE

Tribe Sticholotidini

Genus *Coelopterus* Mulsant & Rey, 1852

***C. salinus* Mulsant & Rey, 1852**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province
 Distribution in the world: Afrotropical: Somalia (Plaza, 1986); Palearctic: Algeria France, Iran, Italy, Morocco, Portugal, Spain, Tunisia, (Kovar, 2007), Syria (Mader, 1955)

Genus *Pharoscymnus* Bedel, 1906

***P. angohranensis* Duverger, 1983**

Distribution in Iran: Angothran (Duverger, 1983)

Distribution in the world: Iran (Duverger, 1983)

***P. arabicus* Fursch, 1979**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: United Arab Emirates, Iran, Saudi Arabia (Kovar, 2007)

***P. brunneosignatus* Marder, 1949**

Distribution in Iran: North Khorasan (Biranvand et al. in press b), Razavi Khorasan (Ebrahimi et al. 2012)

Distribution in the world: Palearctic: China (Bielawski, 1975; Kovar, 2007), Mongolia (Kovar, 2007) and Iran (Ebrahimi et al., 2012, 2014)

***P. fleischeri* J. (Weise, 1883)**

Distribution in Iran: Recorded from Iran by Kovar (2007) without mention of province

Distribution in the world: Palearctic: Germany, Turkey (Kovar, 2007)

***P. flexibilis* (Mulstant, 1853)**

Distribution in Iran: Fars (Borumand, 2000)

Distribution in the world: Oriental: India, Ceylon (Korschefsky, 1931); Palearctic: Afghanistan, Pakistan, Iran (Kovar, 2007), Yemen, Oman (Raimundo & Van Harten, 2000)

***P. ovoideus* Sicard, 1907**

Distribution in Iran: Lorestan (Jafari & Kamali, 2007), Gilan (Hai-Zadeh et al., 1998), Fars (Lachinani & Ahmadi, 1993), Tehran (Abdi et al., 2012)

Distribution in the world: Palearctic: Algeria, Morocco, Tunisia, Jordan, Syria, Iran (Kovar, 2007), United Arab Emirates (Raimundo et al., 2008); Afrotropical (Kovar, 2007)

***P. pharoides* (Marsuel, 1868)**

Distribution in Iran: Fars (Ahmadi et al., 1993), Chaharmahal and Bakhtiari (Bagheri & Mossadegh, 1995)

Distribution in the world: Palearctic: Egypt, Israel, Syria, Libya, Saudi Arabia, Turkey, Iran; Afrotropical (Kovar, 2007)

***P. setulosus* (Chevrolat, 1861)**

Distribution in Iran: Kerman (Salehi et al., 2011), Fars (Yazdani & Ahmadi, 1992)

Distribution in the world: Palearctic: Algeria, United Arab Emirates, Egypt, Iran, Israel, Jordan Lebanon, Morocco, Saudi Arabia, Spain, Tunisia (Kovar, 2007).

DISCUSSION

According to the species distribution, the most widespread in Iran were the following species:

Hippodamia variegata and *Coccinella septempunctata* (recorded from all provinces of Iran), *Adalia bipunctata* (recorded from 26 provinces), *Oenopia conglobata* (recorded from 25 provinces), *Chilocorus bipustulatus* (recorded from 24 provinces).

Most species had limited distribution (recorded from less than 10 provinces).

The number of species recorded for each province is as follows:

Fars: (49), Lorestan: (47), Kerman: (44), Razavi Khorasan: (40), Tehran: (37), Isfahan: (36), Gilan: (34), Chaharmahal and Bakhtiari: (32), Khuzestan: (29), South Khorasan: (26), Golestan: (26), Kermanshah: (24), Mazandaran: (23), North Khorasan: (19), West Azerbaijan: (19), Ardebil: (18), Alborz: (17), Hamadan: (15), Yazd: (15), East Azerbaijan: (13), Semnan: (13), Markazi: (13), Ilam: (12), Sistan and Baluchestan: (11), Zanjan: (11), Kohgiluyeh and Boyer-Ahmad: (10), Hormozgan: (10), Qom: (9), Kordestan: (5), Qazvin: (5), Bushehr: (2)

The most species richness was belonging to provinces Fars, Lorestan and Kerman. Many scientists have recorded many ladybirds from the mentioned provinces and also they have rich and variable environments. On the other hand the least species richness was belonging to provinces Kordestan, Qazvin and Bushehr. Few scientists have recorded ladybirds from these provinces. They are small provinces and also Bushehr has a quit uniform environment.

According to the result of this study, the most species rich subfamily in Iran was Scymninae by almost 75 recorded species. The largest tribe was Scymnini by almost 60 recorded species and the largest genus was *Scymnus* by 28 recorded species.

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