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RESEARCH ARTICLE

New data on Spheciformes fauna (Hymenoptera: Ampulicidae, Sphecidae, Crabronidae) of Turkey

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Abstract: A faunistic account of the Turkish Ampulicidae, Crabronidae and Sphecidae is provided. The faunistic list includes data about 276 species and subspecies in 58 genera. Erroneous publication date for two species is corrected regarding the date of their first description: *Dolichurus corniculus* (Spinola, 1807) and *Nysson decemmaculatus* (Spinola, 1807). Horological data, phenology, and geographical distribution for all listed species are also presented. Comments on the interspecific variation in certain morphological characters for six species are given. New records for Turkish fauna are represented by the following species: *Ammophila gracillima* Taschenberg, 1869; *Didineis clavimana* Gussakovskij, 1937; *Nysson lapillus* de Beaumont, 1965; *Gorytes neglectus* Handlirsch, 1895; *Harpactus pulchellus* A. Costa, 1859; *Harpactus transcaucasicus* Nemkov, 1994; *Harpactus walteri* (Handlirsch, 1888); *Lestiphorus egregius* Handlirsch, 1893; *Stizus rufiventris* Radoszkowski, 1877; *Bembix tarsata* Latreille, 1809; *Bembix zonata* Klug, 1835; *Cerceris kohlii* Schletterer, 1887; *Mimesa tenuis* Oehlke, 1965; *Psenulus carinifrons carinifrons* (Cameron, 1902); *Tachytes argyreus* (F. Smith, 1856); *Larropsis punctulata melanaria* (Kohl, 1888); *Pison atrum* (Spinola, 1808); *Crossocerus exiguus* (Vander Linden, 1829); *Crossocerus ovalis* Lepeletier de Saint Fargeau and Brullé, 1835; *Ectemnius cavifrons cavifrons* (Thomson, 1870); *Ectemnius schlettereri schlettereri* (Kohl, 1888); *Ectemnius zonsteini* Jacobs, 2006. One taxon, *Mimesa jacobsoni transiliensis* is excluded from the fauna of Turkey.

Key words: Hymenoptera, Ampulicidae, Sphecidae, Crabronidae, fauna, new records, Turkey.

Introduction

The order Hymenoptera includes over 153 000 extant species around the world, grouped in 132 families 8423 extant genera. Amongst them Ampulicidae, Sphecidae, and Crabronidae embrace 9697 species from 267 genera (Aguiar *et al.* 2013). Currently, the Ampulicidae, Sphecidae, and Crabronidae fauna of Turkey is comparaviely well known. Turkey is one of the most interesting countries in the West Palearctic region, where most of the insect families including the Ampulicidae, Sphecidae and Crabronidae are known to occur. Thus, a number of faunistic studies about the families Ampulicidae, Sphecidae and Crabronidae have been conducted by foreign and native researchers in Turkey. Ljubomirov & Yıldırım (2008) prepared annotated catalogue of the Ampulicidae, Sphecidae and Crabronidae (Insecta: Hymenoptera) of Turkey, and a total of 530 species and 19 subspecies belonging to 78 genera were recorded in this catalogue. But, Straka (2005) and Hepdurgun *et al.* (2007) are not evaluated in this catalogue. Later, Pulawski & Prentice (2008), Dollfuss (2008a, 2008b, 2013a, 2013b, 2015), Tüzün & Yüksel (2010), Japoshvili & Ljubomirov (2012), Yıldırım (2012, 2014), Bayındır *et al.* (2013), Çubuk & Gülmez (2013) and Gulmez & Can (2015) reported several new records from Turkey, and a total number was reached to 2 species of 1 genus of Ampulicidae, 69 species and 5 subspecies of 12 genera of Sphecidae and 502 species and 15 subspecies of 65 genera of Crabronidae are recorded. In total, 573 species and 20 subspecies belonging to 78 genera of Ampulicidae, Sphecidae and Crabronidae are recorded from Turkey. As a result of the current study, the total number of species recorded from Turkey up to now is raised to 594 species and 20 subspecies of 78 genera of Ampulicidae, Sphecidae and Crabronidae and the distribution of previously known species has broadened. The aim of this paper is to bring new locality and phenology data on Ampulicidae, Sphecidae and Crabronidae in the territory of Turkey.

Material and methods

The materials of the Ampulicidae, Sphecidae and Crabronidae were collected from different localities of Turkey in 1980 and 2014. The insect samples for this study were obtained by sweeping the vegetation, especially different flowering plants with an insect net and by Malaise traps in Erzurum, Kars and Tunceli provinces of Turkey. Provinces for the collected material are given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET) and in the Institute of Biodiversity and Ecosystem Resaerch, Sofia.

Geographical distribution of species given from Pulawski (2015). Seasonal activity of species explained after review of the previous studies on this families in Turkey.

Results

The following list presents 276 species of 58 genera of Ampulicidae, Sphecidae and Crabronidae established from some provinces in Turkey. The following 22 taxa are newly recorded for Turkey: *Ammophila gracillima* Taschenberg, 1869; *Didineis clavimana* Gussakovskij, 1937; *Nysson lapillus* de Beaumont, 1965; *Gorytes neglectus* Handlirsch, 1895; *Harpactus pulchellus* A. Costa, 1859; *Harpactus transcaucasicus* Nemkov, 1994; *Harpactus walteri* (Handlirsch, 1888); *Lestiphorus egregius* Handlirsch, 1893; *Stizus rufiventris* Radoszkowski, 1877; *Bembix tarsata* Latreille, 1809; *Bembix zonata* Klug, 1835; *Cerceris kohlii* Schletterer, 1887; *Mimesa tenuis* Oehlke, 1965; *Psenulus carinifrons*

carinifrons (Cameron, 1902); *Tachytes argyreus* (F. Smith, 1856); *Larropsis punctulata melanaria* (Kohl, 1888); *Pison atrum* (Spinola, 1808); *Crossocerus exiguus* (Vander Linden, 1829); *Crossocerus ovalis* Lepeletier de Saint Fargeau and Brullé, 1835; *Ectemnius cavifrons* (Thomson, 1870); *Ectemnius schlettereri schlettereri* (Kohl, 1888); *Ectemnius zonsteini* Jacobs, 2006.

Family: Ampulicidae

***Dolichurus corniculus* (Spinola, 1807)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 25.VIII.2002, 1♂.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Britain, Turkey.

Remarks: *Dolichurus corniculus* is a fairly common, widespread species in mainland Europe having not clearly outlined range borders in south and east. Publication date for establishment of this taxon (without authorship changes) here is attributed to be 1807 instead of generally accepted year of 1808 (Passein d'Entrèves 1983).

Family: Sphecidae

***Chalybion (Chalybion) flebile* (Lepeletier de Saint-Fargeau, 1845)**

Material examined: Aydın: Atça, 80 m, 28.VII.2013, 1♂; Diyarbakır: Ergani, 920 m, 10.VII.2013, 1♀; Tunceli: Hozat, Buzlupınar, 1798 m, 2.VIII.2012, 2♂♂.

Seasonal activity: May – July.

Geographical distribution: South Europe, Turkey, north Iran, North Africa, Arabian Peninsula.

***Chalybion (Chalybion) omissum* (Kohl, 1889)**

Material examined: Erzurum: Pasinler, Çalıyazı, 2400 m, 10.VII.1997, 1♂; Kars: Sarıkamış, Akkurt, 1500 m, 19.VI.2004, 1♂.

Seasonal activity: June – July.

Geographical distribution: Sicily Island, Italy (mainland), Hungary, Southeast Europe, Turkey.

***Chalybion (Chalybion) walteri* (Kohl, 1889)**

Material examined: Antalya: Aksu, 15 m, 1.VII.2012, 1♂.

Seasonal activity: June – July.

Geographical distribution: Island of Rhodes, Turkey, Syria, Georgia, Turkmenistan, Uzbekistan, Kazakhstan, Iran.

***Sceliphron (Hensenia) curvatum* (F. Smith, 1870)**

Material examined: Samsun: Vezirköprü, Kunduz Mountain, 07.IX.2014, 1♀, 08.IX.2014, 1♀, 1♂, 09.IX.2014, 1♀.

Seasonal activity: September.

Geographical distribution: Tajikistan, Uzbekistan, Kyrgyzstan, southeast Kazakhstan, Afghanistan, North Pakistan, Northwest India, Nepal, introduced and secondary spread in Europe, Georgia, Turkey, Iraq, Argentina and Chile.

***Sceliphron (Hensenia) funestum* Kohl, 1918**

Material examined: Adıyaman: Atatürk Barajı, 450 m, 25.VI.2013, 1♂, 1♀; Antalya: Demre, Beymelek, 170 m, 29.VI.2013, 1♀, Manavgat, Beşkonak, 20.X.2012, 1♀.

Seasonal activity: June – August.

Geographical distribution: Greece, Turkey.

***Sceliphron (Sceliphron) arabs* (Lepelletier de Saint-Fargeau, 1845)**

Material examined: Malatya: Battalgazi, 2.VIII.1996, 1♀; Muş: 23.VI.1996, 1♀; Şanlıurfa: Bozova, 27.VI.2013, 1♂, 1♀; Tunceli: Çiçekli, 1104 m, 25.VII.2014, 1♀, Çemişgezek, Payamdüzü, 1238 m, 3.VIII.2012, 1♀, Mazgirt, Kalaycı, 1200 m, 28.VII.2012, 1♀.

Seasonal activity: June – August.

Geographical distribution: Georgia, Turkey, Iraq, Iran.

***Sceliphron (Sceliphron) destillatorium* (Illiger, 1807)**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 2♂♂; Ordu: Perşembe, Çaytepe, 10 m, 23.VI.2014, 1♂, Perşembe, Kaleyaka, 51 m, 23.VI.2014, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Syria, Turkmenistan, Uzbekistan, Tajikistan, south Kazakhstan, western Siberia (Kulunda steppe), northwest China, north Iran, North Africa.

***Sceliphron (Sceliphron) spirifex* (Linnaeus, 1758)**

Material examined: Adıyaman: Atatürk Barajı, 450 m, 25.VII.2013, 3♂♂; Antalya: 40 m, 3.IX.2011, 1♂, Aksu, 15.IX.2012, 1♂, Demre, Beymelek, 170 m, 29.VI.2013, 5♀♀, Korkuteli, Kargın, 820 m, 5.IX.2013, 2♀♀.

Seasonal activity: June – August.

Geographical distribution: South Europe, Crimea, Turkey, Syria, Iran, Arabian peninsula, Canary Islands, Cabo Verde, Africa.

***Isodontia splendidula* (A. Costa, 1858)**

Material examined: Tunceli: Mazgirt, Meşelik, 900 m, 12.VIII.2011, 1♂, 1♀, Pülümür, Kırmızı Köprü, 1276 m 19.VII.2014, 1♀.

Seasonal activity: August.

Geographical distribution: South Europe, Turkey.

***Sphex (Sphex) flavipennis* Fabricius, 1793**

Material examined: Antalya: Kepez, Odabaşı 305 m, 24.VI.2012, 2♀♀, 7.VIII.2012, 1♀; Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♂; Mersin: Silifke, Sömek, 4.IX.2011, 1♀; Şanlıurfa: Bozova, Yaylak, 453 m, 30.VIII.2012, 1♀; Tunceli: Nazımiye, Kutudere, 1330 m, 9.IX.2012, 1♀, Yiğitler, 1111 m, 9.VIII.2012, 1♀, Pülümür, Akdik, 1608 m, 23.VIII.2011, 1♂.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Syria, Iran, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, United Arab Emirates, North Africa.

***Sphex (Sphex) funerarius* Gussakovskij, 1934**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♀; Mersin: Ayvagediği, 28.VIII.2014, 1♂; Tunceli: Çiçekli, 1104 m, 25.VII.2014, 1♂, Mazgirt, Kalaycı, 1200 m, 20.VII.2011, 1♂, 28.VII.2012, 1♂, 20.VIII.2011, 1♀, Pülümür, Akdik, 1608 m, 20.VI.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, southwestern Siberia, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, Afghanistan, north China, North Africa.

***Sphex (Sphex) leuconotus* Bullé, 1833**

Material examined: Şanlıurfa: Bozova, Yaylak, 435 m, 30.VIII.2012, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Syria, Iraq, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, Afghanistan, North Africa.

***Sphex (Sphex) pruinosus* Germar, 1817**

Material examined: Ankara: Kalecik, Emeklikent, 725 m, 1.IX.2011, 2♀♀; Antalya: Aksu, 15 m, 01.VII.2012, 1♂, 1♀, 2.VII.2012, 2♂♂, Demre, Beymelek, 170 m, 2.VIII.2013, 2♀♀, Kepez, Odabaşı, 305 m, 24.VI.2012, 1♀, Manavgat, 40 m, 5.IX.2011, 1♂; Denizli: Çivril, Çakallar, 960 m, 2.VI.2013, 3♀♀, 1♂; Iğdır: 900 m, 29.VII.2002, 1♂; Isparta: Ayazmana, 1100 m, 30.VII.2011, 1♂, 6.VIII.2011, 1♀; Tunceli: Velkan, 1160 m, 9.VIII.2012, 2♀♀, Mazgirt, Meşelik, 1208 m, 2.VIII.2012, 2♂♂, Zaphan, 1196 m, 9.VIII.2012, 1♂, Pertek, Doluküp, 1126 m, 6.VIII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Syria, Turkmenistan, Kyrgyzstan, southern Kazakhstan, Iran, Afghanistan, north India, Yemen. North Africa, Ethiopia.

***Chilosphex argyrius* (Brullé, 1833)**

Material examined: Erzurum: Olur, Süngübayır, 1900 m, 2.VII.1998, 1♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 28.VII.2012, 1♀, Pülümür, Akdik, 1608 m, 20.VI.2011, 1♀.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Iraq, Kazakhstan.

***Palmodes melanarius* (Mocsáry, 1883)**

Material examined: Aksaray: Ağaçören, 10.VIII.2014, 1♂.

Seasonal activity: August.

Geographical distribution: South Europe, Turkey, Syria, Iraq, Turkmenistan, Kyrgyzstan, Kazakhstan, North Africa.

***Palmodes occitanicus* (Le Peletier de Saint-Fargeau & Audinet-Serville, 1828)**

Material examined: Antalya: Demre, Beymelek, 170 m, 2.VIII.2013, 2♀♀; Erzurum: Şenkaya, Gaziler, Çakırbaba Pass, 2450 m, 13.VIII.1998, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 25.VIII.2002, 3♀♀; Tunceli: Pülümür, Akdik, 1608 m, 2.VI.2011, 1♀.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Syria, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, south Siberia, Mongolia, north east China, Korea, North Africa.

***Palmodes orientalis* (Mocsáry, 1883)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 25.VIII.2009, 3♀♀; Burdur: 1025 m, 22.VI.2012, 1♀.

Seasonal activity: June – September.

Geographical distribution: Crimea, south west Russia, Turkey, Georgia, Uzbekistan, Kazakhstan, south Siberia, Mongolia.

***Palmodes strigulosus* (A. Costa, 1861)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 19.VII.2007, 7♀♀, 27.VII.2006, 1♀, 21.VIII.2007, 1♀, 3♂♂, 22.VIII.2007, 3♀♀.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Tajikistan, Kyrgyzstan, Kazakhstan, north Iran, western Siberia.

***Prionyx nudatus* (Kohl, 1885)**

Material examined: Antalya: Aksu, 15 m, 1.VII.2012, 1♂; Erzurum: Yarımca, 1950 m, 20.VII.2013, 1♀.

Seasonal activity: June – August.

Geographical distribution: South east Europe, Turkey, Uzbekistan, Kyrgyzstan, Kazakhstan, Iran, western Siberia, North Africa.

***Prionyx songaricus* (Eversmann, 1849)**

Material examined: Şanlıurfa: Bozova, Yaylak, 435 m, 30.VIII.2012, 1♀.

Seasonal activity: August – September.

Geographical distribution: Turkey, Syria, Iraq, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, Afghanistan.

***Prionyx viduatus* (Christ, 1791)**

Material examined: Antalya: Kepez, Odabaşı, 305 m, 15.VII.2012, 1♀.

Seasonal activity: June – August.

Geographical distribution: South Europe, Canary Islands, Turkey, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, western Siberia, north China, Iran, Arabian Peninsula, North Africa, Shri Lanka, Vietnam, Ryukyu Islands, Senegal, Guinea, Gabon, Somalia.

***Ammophila barbara* (Lepelletier de Saint-Fargeau, 1845)**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♀.

Seasonal activity: August – September.

Geographical distribution: Turkey, Syria, Israel, Jordan, United Arab Emirates, Oman, North Africa.

***Ammophila campestris* Latreille, 1809**

Material examined: Erzurum: Çat, Yukarı Çat, 2127 m, 18.VII.2012, 1♀.

Seasonal activity: July – September.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Siberia, Mongolia, north China, Korea, Tunisia.

***Ammophila gracillima* Taschenberg, 1869**

Material examined: Iğdır: Karakoyunlu, 980 m, 16.VIII.2005, 1♀.

Seasonal activity: August.

Geographical distribution: Turkey, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, north China, Mongolia, Iran, Afghanistan, Arabian Peninsula, North Africa, western India, Ethiopia.

Remarks: New record for Turkish fauna.

***Ammophila heydeni* Dahlbom, 1845**

Material examined: Antalya: Finike, Dağbağ, 350 m, 15.IX.2013, 1♂; Erzurum: Atatürk University field, 1850 m, 21.IX.2012, 1♀, Dadaşkent, 770 m, 14.VII.2010, 1♀; Karaman: 22.VII.2014, 1♀; Manisa: Kırkağaç, Öveçli, 190 m, 28.IX.2011, 1♀, Mersin: Ayvagediği, 31.VIII.2014, 1♀.

Seasonal activity: June - September.

Geographical distribution: South Europe, Turkey, Syria, Israel, Jordan, Armenia, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, western Siberia, north China, Mongolia, Iran, Yemen, North Africa.

***Ammophila sabulosa* (Linnaeus, 1758)**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♂; Erzincan: 850 m, 15.VIII.2012, 1♂; Erzurum: Olur, Ormanağzı, 960 m, 5.VIII.2012, 1♀; Tunceli: Mazgirt, 20.VIII.2011, 2♂♂, Kalaycı, 1200 m, 3♂♂, Meşelik, 900 m, 20.VIII.2011, 1♂, 914 m, 10.VIII.2012, 1♂, Nazımiye, Dereova, 1871 m, 9.VIII.2021, 1♀, Pülümür, Akdik, 19.VI.2011, 1608 m, 1♂, 20.VI.2011, 1608 m, 1♂, Kangallı, 1444 m, 8.VIII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Canary Islands, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, western and southern Siberia, north China, Mongolia, Korea, Iran, Pakistan, Nepal, India.

***Ammophila sareptana* Kohl, 1884**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 21.VIII.2007, 1♂, 1♀.

Seasonal activity: July – August.

Geographical distribution: Southeast Europe, Turkey, Kyrgyzstan, Kazakhstan.

***Ammophila terminata terminata* F. Smith, 1856**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 6♂♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Canary Islands, Turkey, Kyrgyzstan, Kazakhstan, western Siberia, north China, Mongolia, Tunisia.

Hoplammophila clypeata* (Mocsáry, 1883)*Material examined:** Tunceli: Pülümür, Akdik, 1608 m, 18.VI.2011, 1♂.**Seasonal activity:** June.**Geographical distribution:** South eastern Europe, Turkey.***Podalonia affinis* (W. Kirby, 1798)****Material examined:** Bayburt: Kopdağı, 2400 m, 5.IX.2012, 4♂♂.**Seasonal activity:** June – September.**Geographical distribution:** Europe, Great Briatin, Turkey, Jordan, Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, western and southern Siberia, north China, Mongolia, Arabian Peninsula, Iran, Pakistan, Korea, North Africa.***Podalonia fera* (Lepeletier de Saint-Fargeau, 1845)****Material examined:** Erzurum: Palandöken, Hancıgaz, 2930 m, 7.VII.2013, 1♀, Yarımca, 1950 m, 20.VII.2013, 5♂♂; Kahramanmaraş: Türkoğlu Mahallesi, 4.VIII.2014, 1♀; Mersin: Erdemli, Üçtepe, 120 m, 12.IX.2012, 1♀; Tunceli: Mazgirt, Meşelik, 900 m, 12.VIII.2011, 1♀.**Seasonal activity:** July – August.**Geographical distribution:** South Europe, Turkey, Syria, Turkmenistan, Uzbekistan, Kazakhstan, Iran.***Podalonia hirsuta hirsuta* (Scopoli, 1763)****Material examined:** Ankara: Kızılcahamam, Işıkdığı, 1650 m, 18 IX.2011, 3♀♀; Bartın: Yalıboyu, 25 m, 6.IX.2011, 1♀; Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♀, 2♂♂; Tunceli: Mazgirt, Kalaycı, 950 m, 10.V.2011, 2♀♀; Pülümür, Akdik, 1608 m, 18.VI.2011, 1♂.**Seasonal activity:** June – August.**Geographical distribution:** Europe, Great Briatin, Turkey, Syria, Israel, Armenia, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, western and southern Siberia, north China, Mongolia, Iran, Pakistan, North Africa.***Podalonia tydei tydei* (Le Guillou, 1841)****Material examined:** Erzurum: Atatürk University field, 1850 m, 5.VIII.2010, 1♂, Çatyolu, 2250 m, 6.VIII.2010, 1♂, Yarımca, 1950 m, 20.VII.2013, 1♂; Manisa: Kırkağaç, Öveçli, 190 m, 30.IX.2011, 1♀; Tunceli: Böğürtlen, 1040 m, 24.VII.2014, 1♂.**Seasonal activity:** May – September.**Geographical distribution:** South Europe, Canary Islands, Turkey, Syria, Iraq, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, western Siberia, Aranian Peninsula, Iran, Afghanistan, Pakistan, ? India, North Africa, Sudan, Ethiopia, Somalia, Kenya, Zimbabwe, South Africa.**Family: Crabronidae*****Astata affinis radoszkowskii* (Puławski, 1957)****Material examined:** Tunceli: Pertek, Mercimek, 1437 m, 30.VIII.2012, 2♀♀.**Seasonal activity:** May – August.**Geographical distribution:** Greece (Rhodes Island), Turkey.

Astata apostata* Mercet, 1910*Material examined:** Tunceli: Ovacık, Gözeler, 1352 m, 28.VII.2012, 1♂.**Seasonal activity:** June - August.**Geographical distribution:** South Europe, Turkey, western Iran.***Astata boops boops* (Schrank, 1781)****Material examined:** Erzurum: Horasan, Muratbağı, 1860 m, 24.VII.2011, 3♂♂, İspir, Çapans, 2150 m, 20.VIII.2009, 4♂♂, 12♀♀, Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 8♂♂, 13♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♀, Ovacık, Akyayık, 1315 m, 20.VII.2014, 1♂, Havuzlu, 1392 m, 20.VII.2014, 1♂, Pülümür, Ağlayan Kayalar, 1309 m, 9.VII.2014, 1♂, Armağan, 1681 m, 12.VIII.2011, 1♂, Sağlamtaş, 1757 m, 8.VIII.2012, 1♂.**Seasonal activity:** May – August.**Geographical distribution:** Europe, Great Briatin, Turkey, Syria, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, north China, Arabian Peninsula, Iran, North Africa.***Astata brevitarsis* (Pulawski, 1958)****Material examined:** Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 1♀; Tunceli: Ovacık, Gözeler, 1252 m, 27.VII.2012, 2♂♂.**Seasonal activity:** June - August.**Geographical distribution:** South east Europe, Turkey.***Astata costae* A. Costa, 1867****Material examined:** Ağrı: Hamur, 1650 m, 26.VII.2003, 1♀; Artvin: Yusufeli, İşhan, 700 m, 16.VI.2010, 1♀; Edirne: 29.VII.2003, 1♀; Erzurum: Güngörmez, 2000 m, 19.VIII.2009, 2♀♀, Horasan, Karaorgan, 1750 m, 27.VII.2003, 1♀, İspir, Çapans, 2150 m, 20.VIII.2009, 7♀♀, Tortum, Derekapı, 1400 m, 7.VI.2012, 1♀, Uzundere, Altınçanak, 1150 m, 8.IX.2005, 1♀; Iğdır: Suveren, 1000 m, 23.VI.2010, 1♀, Karakoyunlu, Alican, 850 m, 23.VI.2010, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 2♀♀; Konya: University field, 17.VII.1997, 1♀; Tunceli: Pülümür, Sağlamtaş, 1757 m, 8.VIII.2012, 1♂.**Seasonal activity:** June – August.**Geographical distribution:** South Europe, Turkey, Turkmenistan, Tajikistan, Kazakhstan, North Africa.***Astata gallica* de Beaumont, 1942****Material examined:** Erzurum: Tortum; Aksukapı, 1450 m, 29.VI.2003, 1♀, Yukarı Meydanlar, 9.VIII.2001, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 1♀.**Seasonal activity:** June – August.**Geographical distribution:** South Europe, Turkey.***Astata kashmirensis kashmirensis* Nurse, 1909****Material examined:** Erzurum: Aziziye, Kümbet, 1751 m, 9.VIII.2011, 1♂, Kombina, 1900 m, 22.VIII.2011, 1♀, Oltu, Toprakkale, 1416 m, 23.VI.2011, 1♂; Isparta: Ayazma, 1100 m, 10.VII.2011, 2♂♂; Kars: Akkurt, 1525 m, 22.VI.2010, 1♂, 1♀; Şanlıurfa: Bozova, Yaylak,

435 m, 30.VIII.2012, 2♂♂; Tunceli: Ovacık, 1271 m, 28.VIII.2012, 1♂, Gözeler, 1352 m, 28.VIII.2012, 1♂.

Seasonal activity: June - September.

Geographical distribution: Europe, Turkey, Turkmenistan, Uzbekistan, Kazakhstan, Iran, Pakistan.

***Astata miegii scapularis* Kohl, 1889**

Material examined: Aksaray: 14.VII.1996, 1♀; Antalya: Kepez, 112 m, 18.VI.2012, 1♂; Erzurum: İspir, Çapans, 2150 m, 20.VIII.2009, 2♀♀, Horasan, Muratbağı, 1860 m, 24.VIII.2011, 1♂; Isparta: Ayazma, 1100 m, 10.VII.2011, 1♂; Kars: Digor, Karaköy, 1700 m, 22.VIII.1997, 2♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 28.VIII.2011, 3♀♀, Pülümür, Dereboyu, 1709 m, 8.VIII.2012, 1♀, Hiver, 1800 m, 7.VIII.2012, 1♀, Kırmızı Köprü, 1276 m, 19.VII.2014, 1♂.

Seasonal activity: June - August.

Geographical distribution: South east Europe, Turkey.

***Astata minor* (Kohl, 1885)**

Material examined: Ağrı: Hamur, 1650 m, 26.VII.2003, 1♀; Erzincan: Çağlayan, 1600 m, 6.VII.2001, 1♀; Erzurum: Abdurrahmangazi, 2250 m, 14.VII.2008, 1♀, İspir, Çapans, 2150 m, 20.VII.2009, 1♀, Tekman, 8.VII.2004, 1♀, Tortum, Derekapı, 1010 m, 7.VI.2012, 1♀; Iğdır: Tuzluca, 870 m, 16.VI.2009, 1♀; Isparta: Ayazmana, 6.VIII.2011, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 15.VIII.2009, 4♂♂, 2♀♀; Kayseri: Çaytarla, 950 m, 18.VIII.2003, 1♀; Tunceli: Ovacık, Gözeler, 1252 m, 28.VIII.2012, 1♂, Köşeler, 1369 m, 5.VIII.2012, 1♂, Pülümür, Dereboyu, 1711 m, 8.VIII.2012, 1♀, Sağlamtaş, 1757 m, 8.VIII.2012, 1♂.

Seasonal activity: July – August.

Geographical distribution: Europe, Turkey, Israel, Turkmenistan, Uzbekistan, Kazakhstan, Siberia, Russian Far East, North Africa.

***Astata rufipes* (Mocsáry, 1883)**

Material examined: Bitlis: Adilcevaz, 20.VII.1999, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 2♀♀, 1♂; Tunceli: Pertek, Balpayam, 1297 m, 30.VIII.2012, 1♂, Mercimek, 1369 m, 30.VIII.2012, 2♀♀, 1♂, Pülümür, Közlüce, 1734 m, 7.VIII.2011, 1♀.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Turkmenistan, Uzbekistan, southern Kazakhstan.

***Dryudella tricolor eurygnatha* (Pulawski, 1967)**

Material examined: Tunceli: Közlüce, 1607 m, 7.VIII.2011, 1♀, Pülümür, Doğanpınar, 1454 m, 5.VIII.2011, 1♂, Pülümür, Zağge, 1172 m, 19.VII.2014, 1♂.

Seasonal activity: June - August.

Geographical distribution: South east Europe, Turkey, north Iran.

***Didineis clavimana* Gussakovskij 1937**

Material examined: Erzurum: Atatürk University field, 1850 m, 25.V.2004, 1♀.

Seasonal activity: May.

Geographical distribution: Southeast Europe, Turkey, Israel.

Remarks: New record for Turkish fauna.

***Brachystegus incertus* (Radoszkovsky, 1877)**

Material examined: Ağrı: Doğubeyazıt, 18.VI.2009, 1♂; Iğdır: 850 m, 18.VI.2009, 2♀♀, 1♂; Mersin: Ayvagediği, 28.VIII.2014, 1♀, 29.VIII.2014, 1♀; Tunceli: Pülümür, Yarbaşı, 1328 m, 4.VIII.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Turkey, southern Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, southern Kazakhstan, Iran, Pakistan.

***Brachystegus scalaris* (Illiger, 1807)**

Material examined: Erzurum: İspir, Madenköprübaşı, 1300 m, 18.VI.1994, 1♂; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♀.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Georgia, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Iran.

***Nysson decemmaculatus* (Spinola, 1807)**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 20.VIII.2011, 3♀♀, Uzundere, Çağlayan, 970 m, 27.V.2011, 1♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 4♂♂, 2♀♀.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Jordan, Tajikistan, Kazakhstan.

Remarks: Publication date for establishment of this taxon (without authorship changes) here is attributed to be 1807 instead of generally accepted year of 1808 – see remarks under *Dolichurus corniculus*.

***Nysson epeoliformis* (F. Smith, 1856)**

Material examined: Erzurum: Oltu, Vocational Training School fields, 1345 m, 24.VII.2008, 1♀.

Seasonal activity: July – August.

Geographical distribution: South Europe, Turkey, Armenia.

***Nysson fulvipes* A. Costa, 1859**

Material examined: Erzincan: Kemaliye, 13.V.1983, 1♀; Erzurum: İspir, Madenköprübaşı, 1350 m, 7.VII.1996, 1♀.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Kazakhstan.

***Nysson interruptus* (Fabricius, 1798)**

Material examined: Bayburt: Kopdağı, 2100 m, 16.VI.2000, 1♀, Maden, 1650 m, 16.VI.2000, 1♀; Erzurum: Aşkale, Kopdağı, 2200 m, 16.VI.2000, 1♂, Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♂, Tortum, Çamlıca, 1674 m, 16.VII.2012, 1♀.

Seasonal activity: May – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan.

***Nysson lapillus* de Beaumont, 1965**

Material examined: Iğdır: Bayraktutan, 900 m, 17.VIII.2005, 1♂.

Seasonal activity: August.

Geographical distribution: South east Europe, Turkey, Lebanon.

Remarks: New record for Turkish fauna.

***Nysson maculosus* (Gmelin, 1790)**

Material examined: Erzurum: Güngörmez, 2000 m, 19.VIII.2009, 2♀♀, Aziziye, Atlıkonak, 1760 m, 9.VIII.2011, 1♀, İspir, Çapans, 2150 m m, 20.VIII.2009, 1♀, Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 22.VI.2010, 1♀, 16.VII.2004, 4♂♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 3♂♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China, Sakhalin Island, Korea.

***Nysson militaris* (Gerstaecker, 1867)**

Material examined: Erzurum: Oltu, Çamlıbel, 1750 m, 28.VII.2003, 1♂, Uzundere, Altınçanak, 1132 m, 21.VII.2012, 1♀.

Seasonal activity: July – August.

Geographical distribution: South Europe, Turkey, Israel.

***Nysson trimaculatus trimaculatus* (Rossi, 1790)**

Material examined: Erzurum: Güngörmez, 2000 m, 19.VIII.2009, 2♂♂, İspir, İncesu, 2100 m, 20.VIII.2009, 1♂; Kars: Digor, 1700 m, 4.VI.2004, 1♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, north China, Kuril Islands.

***Nysson variabilis* (Chevrier, 1867)**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 20.VII.2011, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 16.IX.-7.X.2004, 1♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 2♂♂, 1♀.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Kazakhstan.

***Olgia spinulosa* de Beaumont, 1953**

Material examined: Erzurum: Atatürk University field, 1850 m, 17.VII.2003, 3♀♀.

Seasonal activity: July.

Geographical distribution: Macedonia, Bulgaria, Turkey, Armenia.

***Argogorytes fargeii* (Shuckard, 1837)**

Material examined: Bayburt: Demirözü, 1500 m, 20.VI.2009, 1♂, Maden, 1650 m, 16.VI.2000, 2♂♂, 2♀♀; Erzincan: Refahiye, 1500 m, 20.VI.2009, 1♂; Erzurum: Hınıs, Akören, 1828 m, 16.VI.2012, 1♂, Şenkaya, Akşar, 1275 m, 20.VIII.2011, 3♂♂; Tunceli:

Mazgirt, Kalaycı, 1200 m, 10.V.2011, 1♂, 3.VI.2011, 1♂, Pülümür, Boğalı, 1411 m, 3.VIII.2011, 1♂.

Seasonal activity: May – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, Mongolia.

***Argogorytes mystaceus mystaceus* (Linnaeus, 1761)**

Material examined: Bayburt: Maden, 1650 m, 16.VI.2000, 1♂, 2♀♀; Erzurum: Pazaryolu, Toprakkale, 2246 m, 19.VI.2014, 1♂.

Seasonal activity: June - July.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Gorytes albidulus* (Lepeletier de Saint Fargeau, 1832)**

Material examined: Bingöl: 1155 m, 30.V.2002, 4♂♂; Erzurum: Konaklı, 2000-2400 m, 22.VII.2000, 1♀, Oltu, Başaklı, 15.VI.1994, 1♂.

Seasonal activity: May - August.

Geographical distribution: Europe, Turkey, Georgia, Uzbekistan, Kazakhstan, southern Siberia, north Iran.

***Gorytes hebraeus* de Beaumont, 1953**

Material examined: Erzurum: Dereboğazı, 2070 m, 11.VIII.1994, 1♀.

Seasonal activity: July – August.

Geographical distribution: Turkey, Israel.

***Gorytes laticinctus laticinctus* (Lepeletier de Saint Fargeau, 1832)**

Material examined: Tunceli: Mazgirt, Meşelik, 900 m, 28.VIII.2011, 1♀.

Seasonal activity: July- August.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Kazakhstan, Algeria.

***Gorytes neglectus* Handlirsch, 1895**

Material examined: Artvin: Kafkasör, 1300 m, 27.VII.2004, 1♂, Genya Mountain, 1860 m, 28.VII.2004, 1♂; Rize: Çamlıhemşin, Halil Şişman, 360 m, 20.VI.2014, 1♂.

Seasonal activity: June – July.

Geographical distribution: East Europe, Turkey, Kazakhstan, southern Siberia, Sakhalin Island, Korea.

Remarks: New record for Turkish fauna.

***Gorytes pleuripunctatus pleuripunctatus* (A. Costa, 1859)**

Material examined: Erzurum: Horasan, Aşağı Çamlıkale, 2212 m, 13.VIII.2012, 1♂, Muratbağı, 1860 m, 24.VIII.2011, 1♀, Oltu, Kaledibi, 1074 m, 17.VII.2010, 1♂, Pasinler, Sansa Deresi, 1877 m, 17.VII.2011, 1♀, Şenkaya, Sındıran, 1409 m, 17.VII. 2010, 1♂, Tekman, Geyikli, 2185 m, 16.VII.2011, 1♂.

Seasonal activity: July – August.

Geographical distribution: South Europe, Turkey, Georgia, Azerbaijan, Kazakhstan.

***Gorytes quadrifasciatus* (Fabricius, 1804)**

Material examined: Erzurum: Konaklı, 2400 m, 22.VII.2000, 2♂♂, Narman, Çimenli, 2326 m, 30.VI.2012, 1♂, Oltu, Uzunoluk, Köroğlu, 12.VII.2004, 1♂, Şenkaya, Turnalı, 1750 m, 25.VII.1996, 1♂, Tortum, Derekapı, 1400 m, 15.VI.2010, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Mongolia, Sakhalin Island, Korea, Algeria.

***Gorytes quinquecinctus* (Fabricius, 1793)**

Material examined: Artvin: Yusufeli, Pamukçular, 700 m, 16.VI.2010, 1♂; Bayburt: Maden, 1650 m, 16.VI.2000, 1♂; Erzurum: Horasan, ArasVadisi, 1500 m, 4.VI.2000, 1♂, Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♀; Giresun: Görele, Çavuşlu, 0 m, 22.VI.2014, 5♂♂, 1♀, Piraziz, 16 m, 23.VI.2014, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 4.VIII.2005, 1♂; Ordu: Perşembe, Çaytepe, 10 m, 23.VI.2014, 1♂, Perşembe, Kaleyaka, 51 m, 23.VI.2014, 2♂♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 10.V.2011, 1♀, Meşelik, 900 m, 22.VIII.2011, 1♀, 28.VIII.2011, 1♀, Ovacık, Havuzlu, 1392 m, 20.VII.2014, 1♂, Pülümür, Armağan, 1689 m, 12.VIII.2011, 1♀, Dağyolu, 1783 m, 9.VII.2012, 1♀, Kabadal, 1577 m, 8.VIII.2012, 1♀.

Seasonal activity: May - August.

Geographical distribution: Europe, Great Briatin, Turkey, Azerbaijan, Kyrgyzstan, Uzbekistan, Kazakhstan, southern Siberia, North Africa.

***Gorytes quinquefasciatus quinquefasciatus* (Panzer, 1798)**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 2♂♂.

Seasonal activity: June – August.

Geographical distribution: Turkey, Syria, Lebanon, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan.

Remarks: The material from Erzurum in many color patterns correspond to the subspecies *levantinus* Pulawski, 1961. Schmid-Egger (2002: 183-184) put in doubt the validity of the subspecies *levantinus* but formally not synonymized it. The validity of the subspecies of *Gorytes quinquefasciatus levantinus* is doubtful because the main distinguishing features are differences in integumental color only (pale maculation on the head, antennae, some mesosomal and metasomal parts). Color patterns in the males from Erzurum agrees with the diagnosis of *levantinus* in many occasions but in some (e. g. coloration on antennae, clypeus, mesoscutellar disc) simply indicate the character states for the nominotypical subspecies. Since the studied material from Turkey consist too few specimens to quantify geographical variation we consider that the material from Erzurum belong to the nominotypical subspecies.

***Gorytes schlettereri ponticus* de Beaumont, 1967**

Material examined: Rize: İkizdere, Sivrikaya, 1871 m, 19.VI.2014, 1♀.

Seasonal activity: June – August.

Geographical distribution: Northern Turkey.

Remarks: Schmid-Egger (2002: 184) put in doubt the validity of the subspecies *ponticus* but formally not synonymized it.

***Gorytes schmiedeknechtii* Handlirsch, 1888**

Material examined: Antalya: Aspendos, 25.V.2009, 1♀; Erzurum: Oltu, Sütkans, 1750 m, 25.VI.1996, 1♂.

Seasonal activity: June - July

Geographical distribution: South Europe, Turkey, Azerbaijan.

***Gorytes sulcifrons sulcifrons* (A. Costa, 1869)**

Material examined: Erzurum: Oltu, Başaklı Mountain, 2100 m, 24.VII.2005, 1♂, Tekman, Hacıömer, 1825 m, 17.VI.2012, 1♀; Giresun: Eynesil, 0 m, 22.VI.2014, 1♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 10.V.2011, 1♀, Meşelik, 900 m, 14.VI.2011, 3♀♀, 1♂, 28.VIII.2011, 1♀, Pülümür, Armağan, 1689 m, 12.VIII.2011, 1♀, Dağyolu, 1783 m, 9.VIII.2012, 1♀, Kabadal, 1577 m, 8.VIII.2012, 1♀.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Armenia, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, North Africa.

***Harpactus affinis* (Spinola, 1808)**

Material examined: Erzurum: Horasan, ArasVadisi, 1500 m, 4.VI.2000, 1♀, Tekman, Körsu, 1984 m, 26.VI.2011, 1♂.

Seasonal activity: June – July.

Geographical distribution: South Europe, Turkey, Armenia, Azerbaijan.

***Harpactus elegans* Lepelletier de Saint-Fargeau, 1832**

Material examined: Artvin: Yusufeli, İshan, 700 m, 15.VI.2008, 1♀; Erzincan: Akyazı, 1202 m, 11.VI.2010, 1♂; Erzurum: Atatürk University field, 1850 m, 21.VI.2000, 1♂, Çat, Çirişli, 2000 m, 1.VII.2002, 1♀, Oltu, Çamlıbel, 1135 m, 21.VII.2010, 1♀, Pasinler, Kevenlik, 1843 m, 22.VI.2012, 1♂, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 1♂, Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♂.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Georgia, Armenia, Kazakhstan.

***Harpactus laevis* (Latreille, 1792)**

Material examined: Erzurum: Atatürk University field, 1850 m, 12.VI.2004, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 23.VI.2005, 1♂, 16.VII.2005, 6♂♂, 4♀♀, 7.X.2005, 1♂; Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 6♂♂, 4♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 18.VI.2011, 1♀, 20.VIII.2011, 7♂♂, 10♀♀, Meşelik, 1200 m, 12.VIII.2011, 1♀, 28.VIII.2011, 3♂♂, 8♀♀, 30.VIII.2011, 2♀♀, Pülümür, Sağlamtaş, 1757 m, 5.VIII.2012, 3♂♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China, Mongolia, Arabian Peninsula, Iran, North Africa.

***Harpactus pulchellus* A. Costa, 1859**

Material examined: Bingöl: Karlıova, Çobantaşı, 1455 m, 10.VIII.2004, 1♀; Erzurum: Aziziye, Ağzıaçık Pass, 19.VII.2003, 1♀, Oltu, Timrek, 2200 m, 14.VII.2004, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 4.IX.2002, 1♀; Gümüşhane: Torul, 10.VII.1994, 1♂, 1♀.

Seasonal activity: July – September.

Geographical distribution: South Europe, Turkey.

Remarks: New record for Turkish fauna.

***Harpactus transcaucasicus* Nemkov, 1994**

Material examined: Artvin: Yusufeli, Pamukçular, 700 m, 16.VI.2010, 1♂.

Seasonal activity: June.

Geographical distribution: Turkey, Azerbaijan.

Remarks: New record for Turkish fauna.

***Harpactus transiens* A. Costa, 1887**

Material examined: Erzincan: 1250 m, 14.VI.1994, 1♀, Üzümlü, 16.VI.1994, 1♂; Kars: Akkurt, 1550 m, 19.VI.2004, 1♀, Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 1♀.

Seasonal activity: June – July.

Geographical distribution: South Europe, Turkey, Armenia.

***Harpactus walteri* (Handlirsch, 1888)**

Material examined: Diyarbakır: Dicle University field, 700 m, 1.VI.2002, 4♂♂.

Seasonal activity: June.

Geographical distribution: Turkey, Turkmenistan, southern Kazakhstan.

Remarks: New record for Turkish fauna.

***Hoplisoides craverii craverii* (A. Costa, 1867)**

Material examined: Artvin: 300 m, 16.V.2005, 1♂; Erzurum: Horasan, ArasVadisi, 1500 m, 4.VI.2000, 2♀♀; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 5♂♂, TCK Çeşmesi, 1500 m, 8.VI.2005, 1♀.

Seasonal activity: June - July.

Geographical distribution: South Europe, Turkey, southern Kazakhstan.

***Hoplisoides latifrons* (Spinola, 1808)**

Material examined: Kars: Sarıkamış, Karakurt, TCK Çeşmesi, 1500 m, 8.VI.2005, 2♀♀.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Tajikistan, Kazakhstan.

***Hoplisoides punctuosus punctuosus* (Eversmann, 1849)**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 5♀♀, 1♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Syria, Turkmenistan, Kazakhstan, southern Siberia.

***Lestiphorus bicinctus* (Rossi, 1794)**

Material examined: Erzurum: Narman, Mahmutçavuş, 1560 m, 16.VII.2012, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, western Siberia.

***Lestiphorus egregius* Handlirsch, 1893**

Material examined: Erzincan: 1250 m, 18.VII.1997, 2♀♀.

Seasonal activity: July.

Geographical distribution: Turkey, Armenia, eastern Uzbekistan, western Tajikistan.

Remarks: New record for Turkish fauna.

***Psammaecius punctulatus* (Vander Linden, 1829)**

Material examined: Antalya: Arapsuyu, 4.VI.2002, 1♂; Erzincan: 1250 m, 14.VI.1994, 1♀; Erzurum: Oltu, Çamlıbel, 1661 m, 30.VI.2012, 1♂, Şenkaya, Penek, 1145 m, 31.VII.2011, 1♂; Tunceli: Pülümür, Sağlamtaş, 1757 m, 5.VIII.2012, 1♂, 1♀

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Israel, Armenia, Uzbekistan, Kazakhstan, Iran, North Africa.

***Ammatomus coarctatus* (Spinola, 1808)**

Material examined: Antalya: Arapsuyu, 4.VII.2002, 1♂; Erzurum: Hınıs, 1742 m, 2.VII.2010, 1♂, İspir, Madenköprübaşı, 1245 m, 4.VIII.2012, 1♂, Olur, Köprübaşı, 994 m, 19.VII.2012, 1♂, Şenkaya, Paşalı, 1173 m, 31.VII.2010, 2♂♂, Tortum, Aktaş, 1705 m, 31.VII.2011, 1♂; Iğdır: Bayraktutan, 900 m, 17.VIII.2005, 1♂, Melekli, 16.VIII.2005, 925 m, 4♂♂, Tuzluca, Gaziler, 1020 m, 18.VII.2005, 1♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♂, Meşelik, 900 m, 30.VIII.2011, 1♀.

Seasonal activity: July - August.

Geographical distribution: South Europe, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, North Africa.

***Ammatomus rogenhoferi* (Handlirsch, 1888)**

Material examined: Bilecik: Gölpazarı, Dereli, 490 m, 25.VI.2010, 1♂; Erzurum: Narman, Semikale, 1541 m, 10.VII.2011, 1♀, Şenkaya, Akşar, 1275 m, 10.VIII.2011, 2♀♀, 1♂, Tortum, Derekapı, 1400 m, 15.VI.2010, 1♂.

Seasonal activity: June – August.

Geographical distribution: South east Europe, Turkey, Armenia, Georgia, Azerbaijan, Kazakhstan, China.

***Sphecius antennatus* (Klug, 1845)**

Material examined: Erzurum: Karaçoban, Bozyar, 1615 m, 16.VII.2011, 1♀.

Seasonal activity: May - July.

Geographical distribution: South Europe, Turkey, Syria, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Iran.

***Sphecius nigricornis* (Dufour, 1838)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 2♂♂, 2♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 12.VII.2011, 1♀, Meşelik, 900 m, 12.VIII.2011, 1♀.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Kazakhstan, Algeria.

***Bembecinus nigrolabrum* Schmid-Egger, 2004**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 2♀♀.

Seasonal activity: June - August.

Geographical distribution: Eastern Turkey.

***Bembecinus peregrinus* (F. Smith, 1856)**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 2♀♀, Penek, 1145 m, 31.VII.2011, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 18♂♂, 25♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 22.VIII.2011, 5♀♀, Meşelik, 900 m, 14.VI.2011, 2♂♂, 2♀♀, 30.VIII.2011, 1♂, Pertek, Kartallı Çeşme, 1393 m, 30.VIII.2012, 1♀, Pülümür, Ağlayan Kayalar, 1309 m/19.VII.2014, 1♀, Akdik, 1608 m, 13.VI.2011, 1♂, 18.VI.2011, 1♂, 19.VI.2011, 1♂, 1♀.

Seasonal activity: June – August.

Geographical distribution: South east Europe, Turkey, Israel, Jordan, Iran.

***Bembecinus rhodius* (de Beaumont, 1960)**

Material examined: Tunceli: Mazgirt, Kalaycı, 1200 m, 3.VI.2011, 1♀, 18.VI.2011, 1♀, 20.VIII.2011, 1♀, Meşelik, 900 m, 12.VIII.2011, 1♀, 14.VIII.2011, 1♀, 22.VIII.2011, 1♀, 30.VIII.2011, 1♀, Pülümür, Akdik, 1608 m, 12.VI.2011, 1♀, Kırmızı Köprü, 1276 m, 19.VII.2014, 1♀.

Seasonal activity: June – August.

Geographical distribution: Greece (Islands of Crete, Karpathos and Rhodes), Turkey.

***Bembecinus tridens* (Fabricius, 1781)**

Material examined: Erzurum: Narman, Kışlaköy, 1892 m, 13.VIII.2012, 1♀, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 3♂♂, Olur, Ormanağzı, 935 m, 5.VIII.2012, 1♂; Iğdır: Bayraktutan, 17.VIII.2005, 5♀♀, 20♂♂; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 10♂♂, 12♀♀; Tunceli: Geyiksuyu, 1351 m, 17.VII.2012, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Syria, Israel, Tajikistan, Kazakhstan, southern Siberia, north China, Oman, Iran, Japan, North Africa, Sudan.

***Stizoides tridentatus tridentatus* (Fabricius, 1775)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 6♀♀.

Seasonal activity: May - August.

Geographical distribution: South Europe, Turkey, Turkmenistan, Kazakhstan, Iran, North Africa.

***Stizus bipunctatus* (F. Smith, 1856)**

Material examined: Konya: Güneysınır, Gurağaç, 1017 m, 22.VI.1999, 1♂.

Seasonal activity: June – July.

Geographical distribution: South Europe, Turkey, Uzbekistan, Tajikistan, Kazakhstan, Afghanistan.

***Stizus ruficornis* (J. Förster, 1771)**

Material examined: Denizli: Çivril, Çakallar, 950 m, 2.VII.2013, 2♂♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Syria, Israel, Turkmenistan, Tajikistan, Kazakhstan, north China, Arabian Peninsula, Socotra Island, North Africa, Gambia, Ethiopia, Ghana.

***Stizus rufiventris* Radoszkowski, 1877**

Material examined: Mersin: Aydıncık, 27.VI.2006, 1♀, 7♂♂, 2.VIII.2006, 2♂♂, 2♀♀.

Seasonal activity: August.

Geographical distribution: Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Mongolia, Iran.

Remarks: New record for Turkish fauna.

***Bembix bidentata* (Vander Linden, 1829)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 3♂♂, 4♀♀; Tunceli: Çemçeri, 1494 m, 23.VII.2012, 1♀, Çiçekli, 1104 m, 25.VII.2014, 1♂, 1♀, Kocalar, 1159 m, 14.VII.2014, 1♂, Mazgirt, Meşelik, 1208 m, 2.VIII.2011, 1♀, Nazımiye, Dereova, 1871 m, 9.VIII.2012, 1♀, Pülümür, Akdik, 1608 m, 19.VI.2012, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Kazakhstan, southern Siberia, Iran.

***Bembix diversipes* F. Morawitz, 1889**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 2♀♀.

Seasonal activity: June – August.

Geographical distribution: Turkey, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Iran.

***Bembix eburnea* (Radoszkovsky, 1877)**

Material examined: Tunceli: Ovacık, Ovacık Valley, 1486 m, 5.VIII.2012, 1♀.

Seasonal activity: July – August.

Geographical distribution: Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, north China, Iran, Afghanistan.

***Bembix megerlei* Dahlbom, 1845**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 19.VI.2013, 3♀♀, 21.VIII.2007, 1♀.

Seasonal activity: June - July.

Geographical distribution: South Europe, Turkey, Uzbekistan, Kazakhstan, North Africa.

***Bembix oculata oculata* Panzer, 1801**

Material examined: Erzurum: Oltu, Sarısaz, 1400 m, 20.VIII.2007, 1♀; Kahramanmaraş: Türkoğlu Mahallesi, 4.VIII.2014, 1♂.

Seasonal activity: June - September.

Geographical distribution: Europe, Canary Islands, Turkey, Syria, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, north China, Arabian Peninsula, Iran, Afghanistan, North Africa, Sudan.

***Bembix rostrata rostrata* (Linnaeus, 1758)**

Material examined: Tunceli: Pülümür, Akdik, 1608 m, 19.VI.2012, 1♂, Pülümür Valley, 1015 m, 19.VII.2014, 1♀.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Turkmenistan, Tajikistan, Kazakhstan, southern Siberia, north China, north Iran, North Africa.

***Bembix tarsata* Latreille, 1809**

Material examined: Aksaray: Ağaçoören, 30.VII.2014, 1♀.

Seasonal activity: July.

Geographical distribution: Europe, Turkey.

Remarks: New record for Turkish fauna.

***Bembix zonata* Klug, 1835**

Material examined: Erzurum: 12.VIII.1996, 1♂, Atatürk University field, 1850 m, 22.VI.1994, 1♂, Dumlu, 1800 m, 20.VII.1994, 1♂, Kargapazarı Mountains, 2400 m, 22.VII.2000, 14.VII.1997, 1♂, Konaklı, 2400 m, 22.VII.2000, 5♂♂, Palandöken, 2400 m, 12.VII.1992, 1♂, 17.VII.1990, 1♂, Umudum Plateau, 1800 m, 8.VIII.1991, 1♂ Oltu, Sütkans, 1750 m, 18.VI.1996, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey.

Remarks: New record for Turkish fauna.

***Philanthinus quattuordecimpunctatus* (F. Morawitz, 1888)**

Material examined: Erzurum: Horasan, Muratbağı, 1860 m, 24.VIII.2011, 35♂♂, 40♀♀, Narman, Kışlaköy, 1892 m, 13.VIII.2012, 4♂♂, 6♀♀, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 2♀♀; Tunceli: Ovacık, Gözeler, 1412 m, 20.VII.2014, 1♀.

Seasonal activity: June – September.

Geographical distribution: East Europe (Voronezh district), Turkey, Turkmenistan, Kazakhstan, southern Siberia, China.

***Philanthus kohli* F. Morawitz, 1890**

Material examined: Tunceli: Çiçekli, 1104 m, 25.VII.2014, 1♀.

Seasonal activity: June - August.

Geographical distribution: Turkey, Turkmenistan.

***Philanthus reinigi* (Bischoff, 1930)**

Material examined: Tunceli: Pülümür, Dağyolu, 1783 m, 9.VIII.2012, 2♂♂.

Seasonal activity: July - August.

Geographical distribution: Turkey, Tajikistan, Kazakhstan.

***Philanthus triangulum triangulum* (Fabricius, 1775)**

Material examined: Adıyaman: Atatürk Barajı, 450 m, 22.VII.2013, 1♀; Aydın: Atça, 80 m, 18.IX.2013, 1♂; Bayburt: Kopdağı, 2400 m, 5.IX.2012, 8♂♂, 5♀♀; Erzurum: Palandöken, 2400 m, 7.X.2012, 3♀♀, Yarımca, 1950 m, 20.VII.2010, 1♂, Horasan, Muratbağı, 1860 m, 24.VIII.2011, 1♂, Oltu, Sarısaz, 1421 m, 5.VIII.2012, 5♀♀; Ordu: Turnasuyu, 10 m, 23.VI.2014, 1♂; Şanlıurfa: Bozova, Yaylak, 435 m, 30.VIII.2011, 2♂♂; Trabzon: Vakfikebir, 5 m, 24.VI.2014, 1♂; Tunceli: Pertek, Balpayam, 1297 m, 30.VIII.2012, 5♂♂, 1♀, Kartallıçeşme, 1393 m, 30.VIII.2012, 2♂♂, Pülümür, Kangallı, 1444 m, 8.VIII.2012, 1♀, Pülümür Valley, 1015 m, 19.VII.2014, 2♀♀, Sağlamtaş, 1701 m, 13.VIII.2011, 2♂♂.

Seasonal activity: June - September.

Geographical distribution: Europe, Canary Islands, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Arabian Peninsula, Iran, Afghanistan, North Africa.

***Philanthus venustus* (Rossi, 1790)**

Material examined: Erzurum: Narman, Kışlaköy, 1892 m, 13.VIII.2012, 1♂; Tunceli: Mazgirt, Kalaycı, 1200 m, 28.VIII.2011, 1♂.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Syria, Israel, Kazakhstan, Mongolia, Egypt.

***Cerceris albicolor* (Shestakov, 1918)**

Material examined: Tunceli: Pülümür, Doğanpınar, 1483 m, 5.VII.2011, 1♂.

Seasonal activity: July.

Geographical distribution: South east Europe, Turkey, Kazakhstan, southern Siberia.

***Cerceris angustata angustata* F. Morawitz, 1893**

Material examined: Tunceli: Sütlüce, 1633 m, 20.VIII.2014, 2♂♂.

Seasonal activity: July - August.

Geographical distribution: Turkey, Armenia, Turkmenistan, Tajikistan, Kazakhstan.

***Cerceris arenaria arenaria* (Linnaeus, 1758)**

Material examined: Erzurum: Oltu, Çamlıbel, 1661 m, 20.VI.2012, 1♂, Olur, Olurdere, 19.VII.2012, 1♂, Şenkaya, Penek, 1145 m, 31.VII.2011, 1♂, Turnalı, 1750 m, 28.VII.1994, 1♂, Tortum, Şenyurt, 21.VI.2012, 1♂, Uzundere, Çamlıyamaç, 7.VIII.2011, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 24.IX.2007, 1♂; Tunceli: Kocalar, 1159 m, 14.VII.2014, 2♂♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Armenia, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Iran, North Africa.

***Cerceris bicincta bicincta* Klug, 1835**

Material examined: Erzurum: Atatürk University field, 1850 m, 10.VI.2000, 1♂, 20.VII.1993, 1♂, Tortum, Uzunkonak, 12.VII.2001, 1♂; Kars: Digor, Bostankale, 1770 m, 7.VII.2005, 1♂; Tunceli: Pülümür, Boğalı, 1411 m, 3.VIII.2011, 1♀.

Seasonal activity: May – August.

Geographical distribution: South Europe, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Russian Far East, Korea, North Africa.

***Cerceris bracteata* Eversmann, 1849**

Material examined: Erzurum: Atatürk University field, 1850 m, 16.VI.2007, 1♂, Çat, Parmaksız, 18.VI.2012, 1♂, Horasan, ArasVadisi, 1500 m, 4.VI.2000, 3♂♂.

Seasonal activity: May – July.

Geographical distribution: South Europe, Turkey, Uzbekistan, Kazakhstan, southern Siberia.

***Cerceris bupresticida bupresticida* Dufour, 1841**

Material examined: Erzurum: Konaklı, 2400 m, 22.VII.2000, 1♂, Horasan, Çayırözü, 1794 m, 21.VIII.2011, 1♂, Narman, Kışlaköy, 1892 m, 13.VIII.2012, 1♂; Tunceli: Çiçekli, 1104 m, 25.VII.2014, 1♂, Doluküp, 1226 m, 25.VIII.2014, 1♂, Kocalar, 1159 m, 14.VII.2014, 5♂♂, Sütluçe, 1633 m, 20.VIII.2014, 2♂♂, Nazımiye, Yiğitler, 1111 m, 9.VIII.2012, 1♂, Pülümür, Balpayam, 1954 m, 19.VIII.2011, 1♂, Sağlamtaş, 1757 m, 8.VIII.2012, 1♂.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Iraq, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Iran, Afghanistan, North Africa.

***Cerceris conica* Shestakov, 1918**

Material examined: Erzurum: Atatürk University field, 1850 m, 7.VI.1996, 1♂.

Seasonal activity: June.

Geographical distribution: Turkey, Armenia, Kazakhstan.

***Cerceris dorsalis* Eversmann, 1849**

Material examined: Mersin: Silifke, Buğsak, 2.IX.1987, 1♂; Tunceli: Böğürtlen, 1040 m, 24.VII.2014, 4♂♂, Çiçekli, 1104 m, 25.VII.2014, 2♂♂, Doluküp, 1226 m, 25.VIII.2014, 1♂.

Seasonal activity: July - September.

Geographical distribution: East Europe (Volgograd and Rostov district), Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Mongolia.

***Cerceris eryngii eryngii* Marquet, 1875**

Material examined: Erzurum: Oltu, Çamlıbel, 1750 m, 2. VII.1999, 1♀, Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♂, Pertek, Balpayam, 30.VIII.2012, 1297 m, 1♂.

Seasonal activity: July – November.

Geographical distribution: South Europe, Turkey, Uzbekistan, Kazakhstan, southern Siberia, Arabian Peninsula, Iran.

***Cerceris euryanthe euryanthe* Kohl, 1888**

Material examined: Erzurum: Aziziye, Rizkent, 2088 m, 24.VI.2012, 1♂.

Seasonal activity: April – July.

Geographical distribution: Turkey, Georgia.

***Cerceris eversmanni caucasica* Shestakov, 1915**

Material examined: Artvin: Borçka, Karagöl, 1050 m, 8.VII.1994, 1♀; Yusufeli, Altıparmak, 1100 m, 5.VII.1994, 1♂, Yusufeli, Sarıgöl, 700 m, 5.VIII.1994, 1♂; Bayburt: Kopdağı, 2400 m, 21.VIII.2008, 2♀♀; Erzurum: Oltu, Çamlıbel, 1750 m, 2.VII.1997, 1♂, Pasinler, Pelitli, 2000 m, 14.VII.1998, 1♂, Tortum, Şenyurt, 2300 m, 22.VIII.1991, 3♀♀, Şenkaya, Turnalı, 1750 m, 28.VII.1993, 1♂, 1♀.

Seasonal activity: July - August.

Geographical distribution: Turkey, Azerbaijan.

***Cerceris fimbriata fimbriata* (Rossi, 1790)**

Material examined: Erzurum: Oltu, Vocational Training School fields, 1375 m, 24.VII.2008, 1♀; Kars: Kağızman, 1100 m, 16.VI.1999, 1♀.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Syria, Armenia, Georgia, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan.

***Cerceris flavicornis* Brullé, 1833**

Material examined: İstanbul: Üsküdar, 63 m, 12.VII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Turkmenistan, Uzbekistan, Kazakhstan.

***Cerceris flavilabris flavilabris* (Fabricius, 1793)**

Material examined: Erzurum: Atatürk University field, 1850 m, 19.VIII.1987, 1♂, Horasan, Çamlıkale, 13.VIII.2012, 1♂, Oltu, Sarısaz, 1400 m, 30.VIII.2012, 1♂, Olur, Taşlıköy, 900 m, 6.VII.2012, 1♂, Pasinler, Büyükdere, 1850 m, 12.VIII.2012, 1♂, Yiğitpınarı, 1815 m, 22.VII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Armenia, Turkmenistan, Uzbekistan, Kazakhstan, southern Siberia, north China, Iran, North Africa.

***Cerceris gusenleitneri* K. Schmidt, 2000**

Material examined: Bayburt: Kopdağı, 2400 m, 21.VIII.2008, 1♀; 5.IX.2012, 2♀♀; Erzurum: Güzelyayla, 2000 m, 19.VIII.2009, 1♂, Çat, Aşağı Çat, 2089 m, 16.VI.2012, 1♂.

Seasonal activity: July - September.

Geographical distribution: Turkey, north Iran.

***Cerceris inara* de Beaumont, 1967**

Material examined: Erzurum: Uzundere, Dikyar, 1100 m, 2.VII.1994, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 1♂;

Seasonal activity: July – August.

Geographical distribution: Turkey.

***Cerceris interrupta interrupta* (Panzer, 1799)**

Material examined: Erzurum: Atatürk University field, 1850 m, 20.VII.1993, 1♂, 10.VIII.1992, 1♂, 17.VIII.1992, 1♂, 20.VIII.2010, 2♀♀, 21.VIII.2007, 1♂, Aşkale, 2060 m, 9.VIII.1994, 1♂, Pasinler, Çöğender, 1768 m, 30.VII.2011, 1♂.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Cerceris kohlii* Schletterer, 1887**

Material examined: Erzincan: Erzincan, 19.VI.1992, 1♂; Erzurum: Atatürk University field, 1850 m, 10.VIII.1993, 1♂.

Seasonal activity: June – August.

Geographical distribution: Turkey, Armenia.

Remarks: New record for Turkish fauna.

***Cerceris quadricincta quadricincta* (Panzer, 1799)**

Material examined: Erzurum: Horasan, Muratbağı, 1859 m, 21.VIII.2011, 2♂♂, Narman, Toygarlı, 2123 m, 30.VII.2011, 2♀♀; Giresun: Görele, Çavuşlu, 10 m, 22.VI.2014, 2♂♂, Tirebolu, 6 m, 24.VI.2014, 1♂; Ordu: Perşembe, Çaytepe, 10 m, 23.VI.2014, 3♂♂, 1♀; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♂, Mazgirt, Zaphan, 1196 m, 19.VIII.2012, 1♀.

Seasonal activity: May – August.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Uzbekistan, Kazakhstan, southern Siberia, north Iran.

***Cerceris quadrifasciata* (Panzer, 1799)**

Material examined: Bayburt: Maden, 1650 m, 16.VI.2000, 2♂♂; Erzurum: Horasan, ArasVadisi, 1500 m, 4.VI.2000, 1♂.

Seasonal activity: June - July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China, Sakhalin Island, Korea, North Africa.

***Cerceris quinquefasciata quinquefasciata* (Rossi, 1792)**

Material examined: Erzurum: Aziziye, Demirgeçit, 1747 m, 5.VII.2012, 1♂, Horasan, Dönertaş, 2009 m, 13.VIII.2012, 1♂, Narman, Toygarlı, 2013 m, 30.VII.2011, 1♀, Pasinler, Büyüktüy, 1819 m, 30.VII.2011, 1♂, Tortum, Akbaba, 31.VII.2011, 1♂; Tunceli: Hozat, Buzlupınar, 1789 m, 2.VIII.2012, 2♂♂, Pülümür, Armağan, 1689 m, 12.VIII.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Cerceris rubida rubida* (Jurine, 1807)**

Material examined: Antalya: Arapsuyu, 4.IX.2002, 1♂; Erzurum: Atatürk University field, 1850 m, 3.VII.2007, 1♂, 7.VII.2007, 1♂, Aşkale, Kandilli, 1737 m, 1.VIII.2010, 1♂, Yaylayolu, 2108 m, 5.VII.2012, 1♂, Aziziye, 1830 m, 9.VIII.2011, 1♀, Kümbet, 1751 m, 9.VIII. 2011, 1♂, Horasan, Çayırözü, 1794 m, 21. VIII.2011, 1♂, Hacıahmet, 1823 m, 13.VIII.2012, 2♂♂, Kırkgözeler, 1599 m, 29.VII.2010, 1♂, Muratbağı, 1860 m, 24.VIII.2011, 2♂♂, Yeşildere, 1684 m, 28.VIII.2011, 1♂, Narman, Çimenli, 30.VI.2012, 1♀, Kışlaköy, 13.VIII. 2012, 1♂, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♂, Pasinler, Büyükdere, 1759 m, 12.VIII.2012, 13♂♂, Kevenlik, 1843 m, 22.VI.2010, Pazaryolu, 1450 m, 24.VII.2011, 1♂, Şenkaya, Akşar, 1275 m, 10.VIII.2011, 3♂♂, Tortum, Pehlivanlı, 1158 m, 21.VII.2012, 1♂, Uzundere, Gölbaşı, 14.VIII.2012, 1♂; Tunceli: Kocalar, 1159 m, 14.VII.2014, 4♂♂, Sütlüce, 1633 m, 20.VIII.2014, 2♀♀, Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♀, Nazımiye, Doğantaş, 1635 m, 9.VIII.2012, 2♀♀, Ovacık, Ziyaret, 1318 m,

4.VIII.2012, 1♂, Pertek, Kartallıçeşme, 1393 m, 30.VIII.2012, 1♂, Yeniköy, 1388 m, 30.VIII.2012, 1♂, Pülümür, Akdik, 1608 m, 11.VIII.2011, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Syria, Georgia, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Iran.

***Cerceris ruficornis ruficornis* (Fabricius, 1793)**

Material examined: Erzurum: Aşkale, Yaylayolu, 2108 m, 3.VI.2012, 1♀, Köprüköy, Ataköy, 1798 m, 17.VI.2012, 1♀, Narman, Çimenli, 2326 m, 30.VI.2012, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Uzbekistan, Kazakhstan, southern Siberia, north China.

***Cerceris rybyensis rybyensis* (Linnaeus, 1771)**

Material examined: Bayburt: Kopdağı, 2100 m, 16.VI.2000, 1♂; Erzurum: Aziziye, Kümbet, 1836 m, 9.VIII.2011, 1♂, Horasan, Aras Vadisi, 1500 m, 4.VI.2000, 1♀, Şenkaya, Turnalı, 2000 m, 12.VI.1992, 1♂, 25.VIII.2000, 1♂, Tortum, Arılı, 1450 m, 24.VIII.1993, 1♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, north Iran, north west India, Korea, North Africa.

***Cerceris sabulosa sabulosa* (Panzer, 1799)**

Material examined: Adana: Karaisalı, Kızıldağ, Akpınar, 1650 m, 22.VII.2007, 1♂; Antalya: Belkız, 3.VIII.1994, 1♂, Karain, 2.VI.2009, 1♂; Bayburt: Kopdağı, 2400 m, 5.IX.2012, 6♂♂, 5♀♀; Erzurum: Boğazgören, 1168, m, 19.VII.2012, 1♂, Atatürk University field, 1850 m, 15.VIII.1993, 1♀, Aşkale, Çayköy, 1876 m, 23.VII.2011, 1♂, Aziziye, Özbek, 1930 m, 5.VIII.2011, 1♂, Çat, Kom, 2206 m, 5.VII.2012, 1♂, Parmaksız, 2103 m, 18.VI.2012, 1♂, Horasan, Aşağı Çamlıkale, 2242 m, 13.VIII. 2012, 1♂, Çayırözü, 1794, 21.VIII.2011, 1♂, Değirmenli, 1643 m, 13.VIII.2011, 1♂, Muratbağı, 1860 m, 24.VIII.2011, 1♂, Narman, Kışlaköy, 1892 m, 13.VIII.2012, 4♂♂, 1♀, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 8♂♂, 3♀♀, 30.VIII.2012, 1♂, Subatık, 1450 m, 21.IX.2000, 1♂, Olur, Köprübaşı, 996 m, 6.VII.2012, 1♂, Ormanağzı, 935 m, 5.VIII.2012, 1♂, Sungübayır, 23.VII.1992, 2♀♀, 1.IX.1993, 1♂, 1♀, Pasinler, 1742m 17.VII.2011, 1♀, Büyükdere, 1759 m, 12.VIII.2012, 1♂, Porsuk, 1800 m, 2.IX.1999, 1♀, Serçeboğazı, 12.VIII.2012, 1♂, Tortum, Akbaba, 1421 m, 30.VIII.2012, 2♂♂, Uzundere, Sapaca, 1082 m, 2♂♂; Giresun: Eynesil, Dizgine, 49 m, 22.VI.2014, 1♂, Görele, Çavuşlu, 0 m, 22.VI.2014, 13♂♂, 3♀♀, Görele, Haydarlı, 10 m, 22.VI.2014, 3♂♂; Ordu: Perşembe, Alıca, 4 m, 22.VI.2014, 1♂, 1♀, Kaleyaka, 51 m, 23.VI.2014, 1♂, Turnasuyu, 1 m, 23.VI.2014, 1♂; Trabzon: Araklı, Küçükdere, 33 m, 21.VI.2014, 1♀, Yomra, 401 m, 21.VI.2014, 1♂; Tunceli: 914 m, 10.VIII.2012, 1♀, Demirkapı, 1494 m, 23.VII.2014, 1♂, Doluküp, 1226 m, 25.VIII.2014, 1♂, Kocalar, 1159 m, 14.VII.2014, 4♂♂, Mazgirt, Kalaycı, 1256 m, 9.IX.2014, 1♂, Ovacık, 1264 m, 4.VIII.2012, 1♂, Gözeler, 1212 m, 28.VII.2012, 1♂, Ziyaret, 1318 m, 4.VIII.2012, 2♀♀, Pertek, Balpayam, 1797 m, 30.VIII.2012, 2♂♂, Kartallıçeşme, 1393 m, 30.VIII.2012, 1♂, 1♀, Mercimek, 1436 m, 30.VIII.2012, 1♂, Pülümür, Armağan, 1681 m, 12.VIII.2011, 1♂, Doğanpınar, 1454 m, 5.VIII.2011, 1♂, Sağlamtaş, 1701 m, 8.VIII.2012, 1♀, 13.VIII.2011, 2♂♂, 2♀♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Iraq, Georgia, Armenia, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Arabian Peninsula, north Iran, North Africa.

Remarks: The specimens of this species from Tunceli province show considerable variation in pale coloration of the legs. Both males and females show variation in the coloration of the hind femora; some have no pale coloration at all, some have a little bit of lemon yellow coloration on outer surface at the apex and some have quite a bit of lemon yellow coloration on the femoral tegument. Color characters of the hind legs have been employed by de Beaumont (1967: 281-283) and by Schmidt (2000: 135, 141, 166) to differentiate the species *Cerceris maculicrus* based on material from Turkey, Syria and Lebanon. The present establishment of such wide variation leads to the point that *C. maculicrus* had been incorrectly described and supported as separate species based, in large part, on the differences in its coloration.

***Cerceris seleukos* K. Schmidt, 2000**

Material examined: Tunceli: Ovacık, Havuzlu, 1392 m, 20.VII.2014, 1♂.

Seasonal activity: July.

Geographical distribution: Turkey.

***Cerceris specularis specularis* A. Costa, 1867**

Material examined: Artvin: Yusufeli, Pamukçular, 700 m, 16.VI.2010, 1♂; Erzincan: 1250 m, 14.VI.1994, 1♂, 11.VII.1994, 1♂, 18.VII.1997, 1♂, 26.VII.1982, 1♂; Erzurum: Atatürk University field, 1850 m, 3.VII.1997, 1♂, 19.VII.1993, 1♂, 20.VII.1993, 1♂, 11.VIII.1993, 1♂, 20.VIII.2012, 4♂♂, Dutçu, 1950 m, 30.VI.1993, 1♂, Aşkale, Merdiven, 1706 m, 9.VIII.2011, 1♂, Horasan, Aşağı Çamlıkale, 2242 m, 13.VIII.2012, 1♂, Oltu, Çamlıbel, 1750 m, 2.VII.1997, 1♂, Sarısaz, 1421 m, 30.VIII.2012, 1♂, Pasinler, Yiğitpınarı, 1825 m, 22.VII.2012, 1♂, Pazaryolu, Kumaşkaya, 1800 m, 27.VII.2011, 1♀, Şenkaya, Akşar, 1275 m, 10.VIII.2011, 3♂♂, 1♀, Tortum, Akbaba, 2073 m, 31.VII. 2011, 1♀, Pehlivanlı, 12.VII.1992, 1♂; Tunceli: Kocalar, 1159 m, 14.VII.2014, 4♂♂, Hozat, Buzlupınar, 1798 m, 2.VIII.2012, 1♀.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Syria, Georgia, Uzbekistan, Tajikistan, Kazakhstan, North Africa.

***Cerceris spinipectus spinipectus* F. Smith, 1856**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 1♀.

Seasonal activity: August.

Geographical distribution: Turkey, Jordan, Kazakhstan, Arabian Peninsula, north Iran, North Africa.

***Cerceris straminea hebraea* de Beaumont, 1959**

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 10.VIII.2011, 1♂.

Seasonal activity: August.

Geographical distribution: Turkey, Israel.

***Cerceris stratiotes* Schletterer, 1887**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 1♂; Tunceli: Pülümür, Doğanpınar, 1483 m, 5.VIII.2012, 1♂.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Armenia, Kazakhstan.

***Cerceris stratonike* K. Schmidt, 2000**

Material examined: Erzurum: Aşkale, Yaylayolu, 2108 m, 3.VI.2012, 1♀.

Seasonal activity: June – July.

Geographical distribution: Turkey.

***Cerceris tetradonta* Cameron, 1890**

Material examined: Tunceli: Böğürtlen, 1040 m, 24.VII.2014, 2♂♂.

Seasonal activity: July.

Geographical distribution: Turkey, Uzbekistan, Tajikistan, Kazakhstan, India, Shri Lanka.

***Cerceris tuberculata gemmina* (Shestakov, 1927)**

Material examined: Tunceli: Mazgirt, Kalaycı, 950 m, 25.VIII.2011, 1♀, Nazimiye, Dereova, 1871 m, 9.VIII.2012, 2♂♂.

Seasonal activity: July – August.

Geographical distribution: North east Turkey, Azerbaijan.

***Cerceris tuberculata tuberculata* (de Villers, 1789)**

Material examined: Erzurum: Aydın, Atça, 80 m, 18.IX.2013, 1♂.

Seasonal activity: September.

Geographical distribution: South Europe, western Turkey, Israel, Turkmenistan, Uzbekistan, Kazakhstan, Iran.

***Cerceris vagans* Radoszkowski, 1877**

Material examined: Adıyaman: Hasancık, 650 m, 3.VII.2008, 1♂.

Seasonal activity: July.

Geographical distribution: Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran (Atbaei *et al.* 2015), Afghanistan, Pakistan.

***Entomosericus concinnus* (Dahlbom, 1845)**

Material examined: Erzincan: Kemah, Gülkaynak, 1200 m, 25.V.2001, 1♀.

Seasonal activity: May – August.

Geographical distribution: South east Europe, Turkey, Syria, North Africa.

***Entomosericus hauseri* Schmid-Egger, 2000**

Material examined: Diyarbakır: Dicle University field, 700 m, 1.VI.2002, 2♀♀, 4♂♂.

Seasonal activity: June.

Geographical distribution: Turkey, Israel.

***Mimesa crassipes* A. Costa, 1871**

Material examined: Ankara: Şereflikoçhisar, 19.VIII.1996, 1♂; Erzurum: Atatürk University field, 1850 m, 20.VI.1994, 1♀, 14.VII.1993, 1♀, 19.VII.1994, 1♀, Palandöken, 2400 m, 23.VII.1996, 4♀♀, Oltu, Başaklı Mountain., 2100 m, 24.VII.2005, 1♀, Timrek, 2200 m, 14.VII.2004, 1♂, Tortum, 4.VIII.2004, 2♂♂, 1♀; Iğdır: Tuzluca, Menderes, 1100 m, 23.VI.2010, 2♂♂; Tunceli: Ovacık, Havuzlu, 1392 m, 20.VII.2014, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China.

Remarks: *Mimesa crassipes* is probably the most morphologically variable species of genus *Mimesa* in Turkey. There is significant variation in material from Erzurum and Iğdır provinces in integumental sculpture of the mesoscutellum and mesopleuron and in the integumental coloration of tarsal segments, ranging from pale yellow to dark brown. Many specimens from Erzurum have pale yellow tarsi, which is presumably affected by the temperature and humidity during development, thus could not be considered as taxonomically reliable. As such, the account of the taxon *Mimesa jacobsoni transiliensis* for Turkish fauna (Yıldırım & Ljubomirov (2007)) was wrong. The later taxon should be excluded from Turkish fauna.

***Mimesa equestris* (Fabricius, 1804)**

Material examined: Erzurum: Atatürk University field, 1850 m, 6.VIII.1992, 1♂, 15.VIII.1993, 1♀, 28.VIII.1992, 4♀♀, Konaklı, 2400 m, 22.VII.2000, 1♂, Palandöken, 2400 m, 6.VII.1996, 1♀, 19.VII.1993, 1♂, 23.VII.1996, 1♂, 19.VIII.1993, 1♀, Olur, Sarıbaşak, 24.VIII.1992, 1♀, Süngübayır, 20.VIII.1992, 2♀♀, 1.IX.1993, 2♀♀; Kars: Sarıkamış, Karakurt, TCK Çeşmesi, 1500 m, 19.VIII.2003, 1♂.

Seasonal activity: July – September.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan.

***Mimesa fallax* F. Morawitz, 1893**

Material examined: Erzurum: Atatürk University field, 1850 m, 10.VI.2000, 1♂.

Seasonal activity: June.

Geographical distribution: Turkey, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia.

***Mimesa grandii* Maidl, 1933**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♂; Erzurum: Atatürk University field, 1850 m, 25.VII.1994m 1♀, 10.VIII.1992, 1♂, 15.VIII.1993, 1♂, Palandöken, 2400 m, 19.VIII.1993, 1♂, Pazaryolu, 27.VIII.1992, 1♀.

Seasonal activity: July – September.

Geographical distribution: Europe, Turkey, Kazakhstan, Iran, North Africa.

***Mimesa lutaria lutaria* (Fabricius, 1787)**

Material examined: Erzurum: Atatürk University field, 1850 m, 28.VII.2013, 1♀, Oltu, Başaklı Mountain, 2100 m, 24.VII.2005, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, Mongolia, North America.

***Mimesa tenuis* Oehlke, 1965**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♂.

Seasonal activity: September.

Geographical distribution: Europe, Turkey.

Remarks: New record for Turkish fauna.

***Mimesa vindobonensis* Maidl, 1914**

Material examined: Erzurum: Atatürk University field, 1850 m, 10.VI.2000, 2♂♂, 27.VI.2004, 1♂, 4.VII.2004, 1♂, 12.VII.1993, 1♂, Oltu, Sarısaz, 1421 m, 21.VI.2000, 1♂, Tekman, 8.VII.2004, 1♂.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China, Mongolia.

***Mimumesa atratina* (F. Morawitz, 1891)**

Material examined: Erzurum: Aşkale, Küçükgeçit, 1709 m, 23.VII.2011, 1♀.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Russian Far East, Japan, Canada.

***Mimumesa unicolor* (Vander Linden, 1829)**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 1♀; Erzurum: Olur, Köprübaşı, 1000 m, 25.VI.2001, 1♂, Pasinler, Ügümü, 1600 m, 10.VII.2007, 1♀; Iğdır: Melekli, 16.VIII.2005, 925 m, 1♀, Karakoyunlu, Alican, 850 m, 23.VI.2010, 1♂; Isparta: Dere Mahallesi, 1150 m, 24.V.2004, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Iraq, Israel, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Afghanistan, Pakistan.

***Psenulus carinifrons carinifrons* (Cameron, 1902)**

Material examined: Kahramanmaraş: Türkoğlu Mahallesi, 4.VIII.2014, 1♀.

Seasonal activity: August.

Geographical distribution: Turkey (probably introduced), south Pakistan, north India, Thailand.

Remarks: It is new record for Turkish fauna. This species can be readily distinguished from all other known Palaearctic species, strictly on the basis of color. Both males and females have intensive yellow markings on some parts of mesosoma and legs while other Western and Central Palaearctic *Psenulus* are completely black. *Psenulus carinifrons* is widely distributed in Oriental Region, Australia, and partly in eastern Palaearctic Region (Japan). It encompasses currently six subspecies. The nearest locality where the nominotypical subspecies has been recorded from until now is Karachi (south Pakistan). The establishment in central part of Turkey probably is caused by accidental introduction.

***Psenulus laevigatus* (Schenck, 1857)**

Material examined: Erzurum: Oltu, Başaklı Mountain, 1850 m, 4.VII.2004, 1♀; Rize: Ayder, Çamlıhemşin, 1550 m, 30.VII.2000, 1♀.

Seasonal activity: July.

Geographical distribution: Europe, Turkey, southern Siberia, north China, Russian Far East, Kuril Islands, Korea, Japan.

***Psenulus meridionalis* de Beaumont, 1937**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 3♂♂; Bingöl: 1150 m, 20.VI.2002, 1♂, Karlıova, Soğukçeşme, 1415 m, 10.VIII.2004, 1♀; Erzincan: Refahiye, 1500 m, 20.VI.2009, 1♂; Erzurum: İspir, 1400 m, 29.VIII.2003, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 4.VIII.2005, 1♂, 5.VIII.2002, 1♂, 15.VIII.2005, 18♂♂, 25♀♀, 19.VIII.2003, 1♀, 23.VIII.2002, 1♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Syria, Jordan, southern Siberia.

***Psenulus pallipes pallipes* (Panzer, 1798)**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 1♂, 1♀; Erzurum: Köprüköy, Örentaş, 4.VII.2004, 2♂♂, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 2♂♂, Tortum, Esendurak, 1400 m, 11.VII.2004, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2005, 2♀♀, 1♂; Ordu: Perşembe, Çaytepe, 10 m, 23.VI.2014, 1♂; Tunceli: Pülümür, Kuzulca, 1351 m, 6.VIII.2011, 1♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, north China, Sakhalin Island, Kuril Islands.

***Psenulus schencki* (Tournier, 1889)**

Material examined: Diyarbakır: Dicle University field, 700 m, 1.VI.2002, 1♀; Erzurum: Atatürk University field, 1850 m, 25.VI.1992, 1♀, Oltu, Timrek, 2200 m, 14.VII.2004, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2005, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Georgia, southern Siberia, North Africa.

***Diodontus brevilabris* de Beaumont, 1967**

Material examined: Antalya: Düzcamlı, 200 m, 30.V.2004, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2005, 1♂.

Seasonal activity: May – August.

Geographical distribution: East Europe, Turkey.

***Diodontus luperus* Shuckard, 1837**

Material examined: Erzurum: Aziziye, Ağzıaçık, 2100 m, 8.VII.2004, 2♀♀, İspir, Güzelyurt, 2400 m, 8.VII.2004, 2♀♀, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♂, 1♀, Tekman, 8.VII.2004, 1♂, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Mongolia.

***Diodontus minutus minutus* (Fabricius, 1793)**

Material examined: Erzurum: Oltu, Başaklı, 1600 m, 15.VI.2011, 1♀, Sarısaz, 1421 m, 30.VIII.2012, 1♂, 1♀, Subatık, 1450 m., 27.VIII.2002, 1♀.

Seasonal activity: June- August.

Geographical distribution: Europe, Great Briatin, Turkey, Iraq, Turkmenistan, Tajikistan, Kazakhstan, southern Siberia, Iran, Afghanistan, North America.

***Diodontus temporalis* Kohl, 1901**

Material examined: Şanlıurfa: Atatürk Barajı, 450 m, 9.V.2002, 1♀.

Seasonal activity: May.

Geographical distribution: Turkey, Israel, Jordan, Kazakhstan.

***Diodontus tristis* (Vander Linden, 1829)**

Material examined: Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 3♂♂, Subatık, 1450 m, 30.VIII.2002, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Tajikistan, Kazakhstan, southern Siberia, Russian Far East, Iran.

***Passaloecus corniger corniger* Shuckard, 1837**

Material examined: Tunceli: Pülümür, Balpayam, 1945 m, 19.VIII.2011, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Morocco.

***Passaloecus gracilis* (Curtis, 1834)**

Material examined: Erzurum: Tortum, Kırmalı, 1850 m, 3.VIII.2004, 1♀; Isparta: 1150 m, 24.V.2004, 1♂.

Seasonal activity: May – August.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Kazakhstan, southern Siberia, Iran, Morocco.

***Passaloecus pictus* Ribaut, 1952**

Material examined: Erzurum: Tekman, 8.VII.2004, 1♂; Kars: Sarıkamış, Karakurt, TCK Çeşmesi, 1500 m, 19.VIII.2003, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Turkey, Syria, North Africa, Brazil (introduced in Sao Paulo).

***Passaloecus singularis singularis* Dahlbom, 1844**

Material examined: Artvin: Genya Mountain, 1860 m, 28.VII.2004, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 5.VIII.2011, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Russian Far East, North America.

***Pemphredon inornata* Say, 1824**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂; Giresun: Keşap, Güneyköy, 315 m, 25.IX.2012, 1♀.

Seasonal activity: June - September.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Uzbekistan, Kazakhstan, southern Siberia, north China, Mongolia, Japan, Algeria, North America.

***Pemphredon lethifer* (Shuckard, 1837)**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 2♂♂, 4♀♀; Bayburt: Kopdağı, 2400 m, 5.IX.2012, 2♀♀, Maden, 1650 m, 16.VI.2000, 1♂; Erzurum: İspir, Gülyurt, 2400 m, 7.VII.2004, 1♂, Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂, Uzundere, Çamlıyamaç, 1282 m, 14.VIII.2012, 1♀; Giresun: Keşap, Güneyköy, 315 m, 25.IX.2012, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 2♂♂, 2♀♀; Rize: İkizdere, Tulumpınar, 1170 m, 19.VI.2014, 1♀; Trabzon: Vakfikebir, 5 m, 24.VI.2014, 1♂.

Seasonal activity: May – September.

Geographical distribution: Europe, Great Briatin, Turkey, Israel, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Iran, Afghanistan, Korea, Japan, North Africa.

***Pemphredon lugubris* (Fabricius, 1793)**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 2♀♀; Erzurum: Şenkaya, Turnalı, 1750 m, 20.VI.1997, 2♀♀, Totum, Derekapı, 1282 m, 5.VIII.2010, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 2♀♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, north China, Russian Far East, Iran, Korea, Japan, North America.

***Pemphredon rugifer* (Dahlbom, 1844)**

Material examined: Bitlis: Tatvan, Nemrut Mountain, 2000 m, 23.VII.2003, 1♂; Iğdır: Bayraktutan, 950 m, 17.VIII.2005, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 2♀♀; Tunceli: Mazgirt, Meşelik, 1208 m, 2.VIII.2012, 1♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Russian Far East, Sakhalin Island, Korea, Japan, North Africa, North America.

***Mellinus arvensis* (Linnaeus, 1758)**

Material examined: Erzurum: Atatürk University field, 22.VIII.1988, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 7.X.2005, 1♀.

Seasonal activity: August – November.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Dinetus pictus* (Fabricius, 1793)**

Material examined: Erzurum: Dadaşköy, 1086 m, 4.VIII.2011, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Syria, Kazakhstan.

***Larra anathema* (Rossi, 1790)**

Material examined: Aksaray: Ağaçören, 10.VIII.2014, 1♀; Ankara: Kızılcahamam, Işıkdagi, 1650 m, 18.IX.2011, 1♀; Artvin: Yusufeli, 1350 m, 22.VII.2003, 1♂; Iğdır: 900 m, 31.VII.2000, 2♂♂; Kars: Sarıkamış, Karakurt, 1500 m, 16.VII.2005, 1♂; Tunceli: Velkan, 1168 m, 9.VIII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Tajikistan, Kazakhstan, North Africa.

***Liris festinans praetermissus* (Richards, 1928)**

Material examined: Antalya: Arapsuyu, Azmak, 15.X.2003, 3♀♀.

Seasonal activity: September.

Geographical distribution: South Europe, Turkey, Kazakhstan, Arabian Peninsula, Iran, Afghanistan.

***Tachysphex brullii brullii* (F. Smith, 1856)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2007, 2♀♀; Osmaniye: Bahçe, 300 m, 13.V.2002, 1♂; Tunceli: Ovacık, Gözeler, 1212 m, 28.VII.2012, 1♂.

Seasonal activity: May - August.

Geographical distribution: Europe, Turkey, Turkmenistan, Kazakhstan.

***Tachysphex albocinctus* (Lucas, 1849)**

Material examined: Tunceli: Pülümür, Pülümür Vadisi, 1015 m, 19.VII.2014, 1♀.

Seasonal activity: July.

Geographical distribution: South Europe, Turkey, Syria, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran, Pakistan, India, Africa.

***Tachysphex consocius* Kohl, 1894**

Material examined: Erzurum: Oltu, Başaklı, 2100 m, 24.VII.2011, 1♀, Subatık, 1450 m, 4.VIII.2002, 5♀♀.

Seasonal activity: June - August

Geographical distribution: Europe, Turkey, Syria, Lebanon, Israel, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran, Afghanistan, India, Sri Lanka, Africa.

Remarks: The five female specimens from Erzurum province show variability in certain morphological characters previously considered to be of taxonomic importance. The micropunctuation of mesopleuron vary from fine and hardly discernible all over to well printed with shiny intraspaces in lower or upper half, or all over. The presence or absence of the medial extension of the clypeal lip can vary in the strength of its expression. Two specimens have traces of extension, while in the others the lip margin is straight. The color of the first metasomal segment can vary from brownish to completely black. In view of this character variation, the other species that recently are considered valid and closely related to *consocius* (e. g. *grandii* de Beaumont, 1965; *humilis* Straka, 2005; *karasi* Straka, 2005 –

Straka (2005)) merely appear variations. Since we have not studied types of any of the forementioned species and we have not examined specimens from wider areas we do not propose synonymy for anyone of them but prefer to connect the identity of Erzurum material with oldest described taxon, *consocius*.

***Tachysphex costae* (De Stefani Perez, 1882)**

Material examined: Konya: Güneysınır, Gurağaç, 1020 m, 27.VIII.2005, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Canary Islands, Turkey, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Yemen, Iran, Pakistan, Africa.

***Tachysphex ferrugineus* Puławski, 1971**

Material examined: Ağrı: Doğubeyazıt, 15.VI.2001, 1♂.

Seasonal activity: June.

Geographical distribution: East Europe (southmost territories), Turkey, Kazakhstan.

***Tachysphex fugax* (Radoszkowski, 1877)**

Material examined: Tunceli: Demirkapı, 1494 m, 23.VII.2014, 1♂.

Seasonal activity: July – August.

Geographical distribution: Europe, Turkey, Syria, Israel, Georgia, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran, Seychelles, Comoro Islands, Madagascar, Africa.

***Tachysphex fulvitaris* (A. Costa, 1867)**

Material examined: Burdur: 24.IX.1993, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 19.VIII.2007, 26♀♀, 12♂♂, 29.VIII.2002, 10♂♂, 30♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 3♀♀, 1♂, Meşelik, 900 m, 20.VIII.2011, 1♀.

Seasonal activity: May – September.

Geographical distribution: Europe, Turkey, Israel, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Iran, Pakistan, Africa.

***Tachysphex graecus* Kohl, 1883**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 22.VII.2002, 1♀; 3.VIII.2002, 2♀♀, 4.VIII.2005, 1♀, 8.VIII.2003, 2♀♀, 17.VIII.2005, 1♀, 31.VIII.2002, 1♀; Tunceli: Çiçekli, 1104 m, 25.VII.2014, 1♀, Pülümür, Ağlayan Kayalar, 1309 m/19.VII.2014, 1♂.

Seasonal activity: July – August.

Geographical distribution: Greece, Turkey, Israel.

***Tachysphex helveticus* Kohl, 1885**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 13.VI.2006, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Jordan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Mongolia, Egypt.

***Tachysphex incertus* (Radoszkovsky, 1877)**

Material examined: Antalya: Arapsuyu, Azmak, 20.VI.2002, 1♀; Erzurum: Kombina, 1900 m, 22.VIII.2011, 1♂, Oltu, 1275 m, 20.VII.2011, 1♀, Şenkaya, Akşar, 1275 m, 10.VIII.2011,

1♀; Kars: Sarıkamış, Karakurt, 1500 m, 29.VI.2003, 1♂, 4.VIII.2006, 1♂, 23.VIII.2002, 10♂♂, 24♀♀, 24.IX.2007, 14♂♂, 25♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 2♂♂, Meşelik, 28.VIII.2011, 900 m, 1♂, Zahpan, 1176 m, 19.VIII.2012, 1♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran, Afghanistan, Pakistan, North Africa.

Tachysphex julliani Kohl, 1883

Material examined: Ankara: Şereflikoçhisar, Beçenek Deresi, 26.VIII.2003, 1♀; Konya: Güneysınır, Gurağaç, 1020 m, 8.VIII.2002, 6♀♀, 1♂.

Seasonal activity: July – August.

Geographical distribution: South Europe, Turkey, Lebanon, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Iran, Pakistan, North Africa.

Tachysphex latifrons Kohl, 1884

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1800 m, 13.VI.2011, 1♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 28.IV.2011, 1♀.

Seasonal activity: April - July.

Geographical distribution: Turkey, Israel, southern Kazakhstan, north China, southern Siberia, North Africa.

Tachysphex mediterraneus Kohl, 1883

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 23.VIII.2002, 1♀.

Seasonal activity: August.

Geographical distribution: South Europe, Turkey, Israel, Jordan, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, southern India, Africa.

Tachysphex mocsaryi Kohl, 1884

Material examined: Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♂.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Afghanistan, North Africa, Senegal, Burkina Faso, Niger.

Tachysphex morawitzi (Puławski, 1971)

Material examined: Erzurum: Güzelyayla, 1900 m, 29.VIII.1992, 1♀, Konaklı, 2400 m, 22.VII.2000, 3♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 2♀♀, Meşelik, 900 m, 12.VIII.2011, 1♀.

Seasonal activity: July – August.

Geographical distribution: Turkey, east Uzbekistan, Tajikistan, Kazakhstan.

Remarks: As it was shown recently (Ljubomirov & Yıldırım (2008) *Tachysphex morawitzi* ranges widely in eastern Turkey. Present records from Tunceli province confirm its affinities to inhabit places of high altitude. *Tachysphex bouceki* Straka, 2005 known by type series only, has been gathered in similar altitude range in the provinces Adiyaman, Bayburt, and Kayseri (Straka (2005)). It seems to be identical with *morawitzi*.

Tachysphex nitidissimus* de Beaumont, 1952*Material examined:** Erzurum: Oltu, Başaklı Mountain, 2100 m, 24.VII.2005, 1♀.**Seasonal activity:** May – August.**Geographical distribution:** South east Europe, Turkey, Syria, Lebanon, Israel, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, Pakistan, North Africa.***Tachysphex nitidus* (Spinola, 1806)****Material examined:** Tunceli: Pülümür, Sağlamtaş, 13.VIII.2011, 1701 m, 1♀.**Seasonal activity:** May – July.**Geographical distribution:** Europe, Great Briatin, Canary Islands, Turkey, Turkmenistan, Tajikistan, Kazakhstan, Arabian Peninsula, North Africa.***Tachysphex obscuripennis obscuripennis* (Schenck, 1857)****Material examined:** Kars: Sarıkamış, Karakurt, 1500 m, 9.VIII.2003, 1♂; Kırıkkale: Akarcaköyü, 1075 m, 21.VIII.2003, 1♂; Erzurum: Narman, Kireçli Dağı, 2400 m, 2.VII.2000, 1♂.**Seasonal activity:** June – August.**Geographical distribution:** Europe, Great Briatin, Turkey, Morocco.**Remarks:** *Tachysphex obscuripennis* is morphologically variable species, prone to intraspecific phenotypic variation, especially regarding important “diagnostic” characters such as punctuation of the head, mesoscutum and depth and coloration of of the male forefemoral notch. In a series of speimens from south Bulgaria (Milevska Planina Mountain, Malashevka Planina Mountain, Sredna Gora Mountains, Rila Mountain, Rhodopi Mountains, Tundzha river valley) and central (Amanus Mountains) and east Turkey (Erzurum and Kars provinces) the punctuation of the head and mesoscutum could vary from comparatively dense (punctures separated 0.3 – 0.5× than their own diameter, with interspaces completely microreticulate) to more or less sparsed (punctures separated 0.8 – 1.0× than their own diameter, with interspaces either microreticulate or shiny). The dept of the forefemoral notch in males varies in its amount of expression and in addition, the bottom of the notch can vary from reddish-brown to nearly black. The mentioned variations cover the diagnosis of *Tachysphex picnic* van Ooijen, 1987.***Tachysphex panzeri* (Vander Linden, 1829)****Material examined:** Kars: Sarıkamış, Karakurt, 1500 m, 15.VIII.2002, 3♂♂, 5♀♀; 23.VIII.2002, 1♂; Tunceli: Pertek, Kartallıçeşme, 1393 m, 30.VIII.2012, 1♀.**Seasonal activity:** June – August.**Geographical distribution:** Europe, Canary Islands, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Arabian Peninsula, India, Shri Lanka, North Africa, Mauritania, Senegal, Gambia, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Ethiopia.***Tachysphex persa nigripes* (Pulawski, 1967)****Material examined:** Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♀.**Seasonal activity:** August.**Geographical distribution:** South east Europe, west Turkey, Tajikistan, west Kazakhstan.

***Tachysphex persa persa* Gussakovskij, 1933**

Material examined: Erzurum: Oltu, Çataksu, 909 m, 6.VII.2012, 1♀.

Seasonal activity: June - July.

Geographical distribution: East Turkey, east Kazakhstan, Iran, Egypt.

***Tachysphex pompiliformis* (Panzer, 1803)**

Material examined: Bayburt: Maden, 1650 m, 16.VI.2000, 1♀; Erzincan: 1250 m, 14.VI.1994, 1♂, Erzurum: Konaklı, 2400 m, 22.VII.2000, 1♀, Aşkale-Kopdağı, 2200 m, 16.VI.2000, 1♀, İspir, İspir Pass 2100 m, 18.VI.1994, 1♂, Pazaryolu, Kumaşkaya, 1800 m, 13.VI.2011, 1♂; Giresun: Görele, Çavuşlu, 10 m, 22.VI.2014, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 19.VI.2007, 1♀, 21.VI.2003, 12♂♂, 10♀♀, 22.VII.2004, 1♀, 19.VIII.2003, 1♀; Tunceli: Mazgirt, Meşelik, 900 m, 30.VIII.2011, 1♂, Pülümür, Dağyolu, 1357 m, 9.VIII.2012, 1♂.

Seasonal activity: May - September.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north China, Mongolia, Russian Far East, Sakhalin Island, Korea, Pakistan, India, North Africa, North America.

***Tachysphex psammobius* (Kohl, 1880)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 19.VI.2007, 2♀♀.

Seasonal activity: June.

Geographical distribution: Europe, Turkey, Israel, Kazakhstan, southern Siberia, North Africa, North America (Colorado, Arizona, Nevada, California).

***Tachysphex stachi* de Beaumont, 1936**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂.

Seasonal activity: June.

Geographical distribution: Turkey, Georgia, southern Kazakhstan.

***Tachysphex subdentatus* F. Morawitz, 1893**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 24.IX.2007, 8♀♀, 1♂.

Seasonal activity: June – August.

Geographical distribution: East Europe (southmost territories), Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, Iran.

***Tachysphex tarsinus* (Lepeletier de Saint Fargeau, 1845)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2007, 14♀♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Tajikistan, Kazakhstan, southern Siberia, north China, Arabian Peninsula, North Africa, Mauritania.

***Tachysphex unicolor unicolor* (Panzer, 1809)**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2009, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, north China, Iran, Afghanistan, North Africa.

***Tachytes argyreus* (F. Smith, 1856)**

Material examined: Erzurum: 1900 m, 15.VII.1986, 1♂.

Seasonal activity: July.

Geographical distribution: Turkey, Kazakhstan, Sinai and Arabian Peninsula, Iran, India.

Remarks: New record for Turkish fauna.

***Tachytes freygessneri* Kohl, 1881**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 1♂; Denizli: Çivril, Çakallar, 960 m, 2.VII.2013, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2009, 1♀.

Seasonal activity: June – Septembert.

Geographical distribution: South Europe, Turkey, Kazakhstan, north China, North Africa.

***Tachytes obsoletus obsoletus* (Rossi, 1792)**

Material examined: Erzurum: Şenakya, Akşar, 1275, 10.VIII.2011, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 22.VI.2010, 1♂, 29.VI.2003, 6♀♀, 1♂, 19.VII.2007, 5♀♀; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Uzbekistan, Kazakhstan, southern Siberia, north China, Sinai Peninsula, north Iran.

***Tachytes panzeri panzeri* (Dufour, 1841)**

Material examined: Erzurum: Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2009, 1♀, 21.VIII.2007, 7♂♂, 5♀♀; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, North Africa.

***Larropsis (Ancistromma) asiatica* (Gussakovskij, 1935)**

Material examined: Antalya: Arapsuyu, Azmak, 15.X.2003, 1♀; Erzurum: Oltu, Subatik, 1450 m, 14.IX.2002, 1♀; Iğdır: 950 m, 1.VII.1992, 2♀♀; Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♀.

Seasonal activity: July – November.

Geographical distribution: Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran.

***Larropsis (Ancistromma) punctulata melanaria* (Kohl, 1888)**

Material examined: Erzurum: Oltu, 1275 m, 25.VIII.1993, 1♂.

Seasonal activity: August.

Geographical distribution: East Turkey, Azerbaijan.

Remarks: New record for Turkish fauna.

***Prosopigastra orientalis* de Beaumont, 1947**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 5.VIII.2003, 1♀; Iğdır: Suveren, 1000 m, 23.VI.2010, 1♀.

Seasonal activity: June - August.

Geographical distribution: South Europe, Turkey, Uzbekistan, Tajikistan, Kazakhstan, Iran.

***Miscophus (Miscophus) bicolor bicolor* Jurine, 1807**

Material examined: Erzurum: Oltu, Subatık, 1450 m, 27.VIII.2002, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 5.VIII.2003, 1♀.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Russian Far East, Sakhalin Island, Iran, Korea, Egypt.

***Pison atrum* (Spinola, 1808)**

Material examined: Karabük: 27.VIII.1996, 1♀.

Seasonal activity: August.

Geographical distribution: Europe, Turkey, Kazakhstan, North Africa.

Remarks: New record for Turkish fauna.

***Pison sericeum* Kohl, 1888**

Material examined: Ankara: Şereflikoçhisar, 8.VII.1998, 1♀; Erzurum: Oltu, Subatık, 1450 m, 11.VII.1999, 1♀; Konya: Güneysınır, Gurağaç, 1020 m, 8.VIII.2002, 1♀; Tunceli: Ovacık, Akyayık, 1315 m, 20.VII.2014, 1♂, Havuzlu, 1392 m, 20.VII.2014, 1♂.

Seasonal activity: July – August.

Geographical distribution: South Europe, Turkey, Iran.

***Trypoxylon albipes* F. Smith, 1856**

Material examined: Tunceli: Çiçekli, 1104m, 25.VII.2014, 2♀♀.

Seasonal activity: June - July.

Geographical distribution: South Europe, Turkey, Syria, Israel, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Pakistan, North Africa.

***Trypoxylon attenuatum* F. Smith, 1851**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♂; Erzurum: Oltu, 1275 m, 18.VI.2011, 1♂, Sarısaz, 1400 m, 10.VII.2012, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 19.VIII.2007, 1♀, 21.VIII.2007, 4♂♂, 13♀♀; Tunceli: Pülümür, Közlüce, 1734 m, 7.VIII.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Canary Islands, Turkey, Uzbekistan, Kazakhstan, southern Siberia, north China, north Iran, North Africa, North America (Ontario, Vermont).

***Trypoxylon clavicerum clavicerum* Lepelletier de Saint-Fargeau & Audinet-Serville, 1828**

Material examined: Giresun: Keşap, Güneyköy, 315 m, 22.VII.2012, 1♂.

Seasonal activity: June - July.

Geographical distribution: Europe, Great Briatin, Canary Islands, Turkey, Israel, Georgia, Kazakhstan, North America.

***Trypoxylon deceptorium* Antropov, 1991**

Material examined: Bingöl: Karlıova, Çobantaşı, 1455 m, 10.VIII.2004, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2007, 8♀♀; Tunceli: Mazgirt, Zahpan, 1176 m, 19.VIII.2012, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Syria, Lebanon, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia.

***Trypoxylon fronticorne fronticorne* Gussakovskij, 1936**

Material examined: Rize: Çamlıhemşin, Çat, 1054 m, 20.VI.2014, 1♀.

Seasonal activity: June.

Geographical distribution: Europe, Turkey, Azerbaijan, Kazakhstan, southern Siberia, north China, Russian Far East.

***Trypoxylon kolazyi* Kohl, 1893**

Material examined: Erzurum: Oltu, 1275 m, 18.VI.2011, 1♀.

Seasonal activity: June – July.

Geographical distribution: Europe, Turkey, Uzbekistan, Kazakhstan, North America.

***Trypoxylon kostylevi* Antropov, 1985**

Material examined: Erzurum: Oltu, Subatık, 1450 m, 11.VII.1999, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Turkey, Georgia.

***Trypoxylon latilobatum* Antropov, 1991**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 9.VII.2004, 3♀♀.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, north Iran.

***Trypoxylon medium* de Beaumont, 1945**

Material examined: Erzurum: Aziziye, Ağzıaçık, 2100 m, 8.VII.2004, 1♂, Oltu, 1275 m, 18.VI.2011, 3♂♂, Şenkaya, Turnalı, 1750 m, 25.VII.1996, 1♂; Isparta: 1150 m, 24.V.2004, 1♂.

Seasonal activity: May – July.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Trypoxylon minus* de Beaumont, 1945**

Material examined: Tunceli: Mazgirt, Kalaycı, 1200 m, 20.VIII.2011, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, Korea.

***Trypoxylon scutatum scutatum* Chevrier, 1867**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2003, 2♂♂, 8♀♀; Tunceli: Ovacık, Havuzlu, 1392m, 20.VII.2014, 1♀.

Seasonal activity: May – August.

Geographical distribution: Europe, Turkey, Syria, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, North Africa, Ethiopia.

***Trypoxylon syriacum* Mercet, 1906**

Material examined: Erzurum: Oltu, Subatık, 1450 m, 11.VII.1999, 1♀.

Seasonal activity: July.

Geographical distribution: South Europe, Turkey, Syria, north Iran.

***Oxybelus bipunctatus bipunctatus* Olivier, 1812**

Material examined: Kars: Sarıkamış, Karakurt, 1500 m, 19.VII.2003, 1♀.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Israel, Turkmenistan, Uzbekistan, southern Siberia, Russian Far East, Sakhalin Island, Iran, Korea, North Africa, North America.

***Oxybelus dissectus elegans* Mocsáry, 1879**

Material examined: Ankara: Şereflikoçhisar, 800 m, 23.VIII.2003, 1♀; Antalya: Arapsuyu, Azmak, 10 m, 24.IX.2004, 1♀; Artvin: Yusufeli, 850 m, 27.VII.2004, 1♂; Bitlis: Tatvan, Nemrut Mountain, 2000 m, 23.VII.2003, 1♀; Erzurum: Atatürk University field, 1850 m, 14.VII.1993, 1♂, 23.VII.1992, 1♀, 15.VIII.1993, 1♀, 20.VIII.2010, 1♂, Aşkale, 1600 m, 12.VIII.2009, 1♀, Horasan, Muratbağı, 1860 m, 24.VIII.2011, 1♀, Oltu, Çamlıbel, 1600 m, 26.VII.2000, 1♂, Şenkaya, Timurkişla, 1400 m, 14.VIII.1996, 1♀, Tekman, 8.VII.2004, 1♂, Tortum, Arılı, 1650 m, 30.VIII.2012, 1♀; Kars: Kağızman, 19.VII.1991, 1♀, Sarıkamış, Akkurt, 1650 m, 25.VIII.1997, 1♀, Karakurt, 1500 m, 14.VIII.2007, 1♀, 19.VIII.2003, 2♀♀; Konya: Çumra, Dinlendik, 1015 m, 18.VIII.2005, 1♀; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Israel, Tunisia.

***Oxybelus haemorrhoidalis* Olivier, 1812**

Material examined: Ağrı: 1650 m, 26.VII.2003, 1♀; Erzurum: Horasan, Muratbağı, 1860 m, 24.VIII.2011, 1♀, Oltu, Çamlıbel, 1750 m, 2.VII.1999, 1♂, Tortum, Aşağı Meydanlar, 7.VIII.1996, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 14.VIII.2003, 3♀♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Syria, Azerbaijan, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Iran, Afghanistan, Korea, Japan, North Africa.

***Oxybelus lamellatus lamellatus* Olivier, 1812**

Material examined: Mersin: Aydıncık, 27.VII.2005, 4♂♂.

Seasonal activity: July.

Geographical distribution: South Europe, Turkey, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Arabian Peninsula, Iran, North Africa, India, Sri Lanka, Mauritania, Sudan, Cameron.

***Oxybelus latro* Olivier, 1812**

Material examined: Erzurum: Horasan, Muratbağı, 1860 m, 24.VIII.2011, 1♂, Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♀, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 1♀; Iğdır: Bayraktutan, 900 m, 17.VIII.2005, 3♂♂; Kars: Sarıkamış, Karakurt, 1500 m, 19.VIII.2003, 3♂♂, 3♀♀; Tunceli: Kocalar, 1159 m, 14.VII.2014, 1♂, 1♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, north China, Iran, Afghanistan.

***Oxybelus lineatus* (Fabricius, 1787)**

Material examined: Artvin: Yusufeli, Sarıgöl, 700 m, 5.VIII.1994, 1♂; Bayburt: Kop Dağı, Şehitler Çeşmesi, 2400 m, 21.VIII.2008, 1♂; Erzurum: Atatürk University field, 1850 m, 3.VII.1992, 1♀, Köprüköy, Yağan, 1600 m, 28.VI.2005, 1♀, Oltu, Çamlıbel, 1750 m, 2.VII.1997, 1♂, Sütkans, 1500 m, 25.VI.1996, 5♂♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, western Siberia.

***Oxybelus maculipes* (F. Smith, 1856)**

Material examined: Bingöl: Karlıova, Soğukçeşme, 1415 m, 10.VIII.2004, 1♀; Erzurum: Güngörmez, 2000 m, 19.VIII.2009, 1♂, Narman, Mahmutçavuş, 8.VIII.1997, 1♂; Konya: Güneysınır, Güragaç, 1020 m, 6.VIII.2002, 2♀♀, 3.IX.2000, 1♀; Tunceli: Doluküp, 1226 m, 25.VIII.2014, 1♂, Kocalar, 1159 m, 14.VII.2014, 1♀, Pertek, Kartallıçeşme, 1393 m, 30.VIII.2012, 1♂, Tozkoparan, 1378 m, 30.VIII.2012, 2♂♂, Pülümü, Armağan, 1608 m, 12.VIII.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, north China, Iran.

***Oxybelus mucronatus mucronatus* (Fabricius, 1793)**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 70♂♂, 8♀♀; Erzurum: Horasan, Muratbağı, 1860 m, 24.VIII.2011, 2♂♂, Oltu, Çamlıbel, 1750 m, 2.VII.1999, 1♂, 28.VII.2003, 1♂, 9.VIII.2000, 1♂, 1♀, Sarısaz, 1421 m, 30.VIII.2012, 3♂♂, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 2♂♂, Tortum, Arılı, 1650 m, 30.VIII.2012, 4♂♂; Iğdır: Bayraktutan, 900 m, 17.VIII.2005, 10♂♂; Kars: Sarıkamış, Karakurt, 1500 m, 14.VII.2004, 16♂♂, 5♀♀; Tunceli: Ovacık, Havuzlu, 1392 m, 20.VII.2014, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Syria, Jordan, Iraq, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Iran, Afghanistan.

***Oxybelus quatuordecimnotatus* Jurine, 1807**

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 32♂♂, 4♀♀; Artvin: Yusufeli, 850 m, 22.VII.2004, 1♂; Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 3♂♂, Olur,

Ormanağzı, 935 m, 5.VIII.2012, 1♂; Tunceli: Doluküp, 1226 m, 25.VIII.2014, 1♂, Nazımiye, Doğantaş, 1635 m, 9.VIII.2012, 1♂, Ovacık, 1271 m, 28.VII.2011, 1♂, Pülümür, Armağan, 1689 m, 12.VIII.2011, 1♂, Kuzulca, 1351 m, 6.VIII.2011, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Syria, Israel, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, western Siberia, north China, Mongolia, Arabian Peninsula, Iran, Afghanistan, North Africa.

***Oxybelus trispinosus* (Fabricius, 1787)**

Material examined: Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 4♂♂, Olur, Ormanağzı, 935 m, 5.VIII.2012, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

***Oxybelus uniglumis* (Linnaeus, 1758)**

Material examined: Bayburt: Kop Dağı, Şehitler Çeşmesi, 2400 m, 21.VIII.2008, 1♀; Erzurum: İspir, Çapans, 2150 m, 20.VIII.2009, 1♀, Pasinler, 13.VI.1996, 1♀, 10.VIII.2007, 1♀, Pazaryolu, 1450 m, 26.VIII.1994, 1♀, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 2♂♂, Şenkaya, Soğanlı Mountain, 2450 m, 4.VIII.2005, 1♀; Kırıkkale: Akarcaköyü, 1075 m, 21.VIII.2003, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Tajikistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Russian Far East, Sakhalin Island, Kuril Islands, North America.

***Oxybelus variegatus* Wesmael, 1852**

Material examined: Adana: Karaisalı, Kızıldağ, Akpınar, 1650 m, 22.VII.2007, 2♀♀; Antalya: Arapsuyu, Azmak, 24.IX.2004, 4♂♂; Erzurum: 8.IX.1980, 1♂, Atatürk University field, 1850 m, 14.VII.1993, 1♂, Palandöken, 19.VIII.1993, 1♂, Aziziye, Kümbet, 1751 m, 9.VIII.2011, 1♂, Horasan, Aşağı Çamlıkale, 2242 m, 13.VIII.2012, 1♀, Pasinler, Büyükdere, 1759 m, 12.VIII.2012, 1♂, Tekman, 8.VII.2004, 1♂; Kars: Sarıkamış, Akkurt, 1650 m, 25.VIII.1997, 1♀; Tunceli: Doluküp, 1226 m, 25.VIII.2014, 1♂.

Seasonal activity: June – September.

Geographical distribution: Europe, Turkey, Syria, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Iran.

***Entomognathus (Entomognathus) brevis* (Vander Linden, 1829)**

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♂; Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 3♂♂, Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 2♂♂, 1♀, 2♂♂; Tunceli: Ovacık, Gözeler, 1352 m, 3.VIII.2012, 1♂, Pülümür, Sağlamtaş, 1701 m, 13.VIII.2011, 2♀♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Syria, Israel, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Iran, Japan, North Africa.

Entomognathus (Entomognathus) dentifer (Noskiewicz, 1929)

Material examined: Bingöl: Karlıova, Çobantaşı, 1455 m, 10.VIII.2004, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Turkey.

Crabro (Crabro) pugillator A. Costa, 1871

Material examined: Erzurum: Dadaşkøy, 1800 m, 4.VIII.2011, 1♂, Konaklı, 2400 m, 22.VII.2000, 2♂♂, Tortum, Akbaba, 2073 m, 31.VIII.2011, 1♂.

Seasonal activity: June- August.

Geographical distribution: South Europe, Turkey.

Crossocerus (Ablepharipus) assimilis assimilis (F. Smith, 1856)

Material examined: Artvin: Genya Mountain, 1860 m, 28.VII.2004, 1♂.

Seasonal activity: June - July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, Mongolia, Russian Far East, Kuril Islands.

Crossocerus (Ablepharipus) podagricus podagricus (Vander Linden, 1829)

Material examined: Tunceli: Pülümür, Sağlamtaş, 1701 m, 13.VIII.2011, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Morocco.

Crossocerus (Blepharipus) annulipes annulipes (Lepeletier de Saint Fargeau & Brullé, 1835)

Material examined: Giresun: Keşap, Güneyköy, 315 m, 18.IX.2012, 2♂♂.

Seasonal activity: July - September.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Kyrgyzstan, Kazakhstan, north China, Mongolia, Russian Far East, Sakhalin Island, North America.

Crossocerus (Blepharipus) cetratus (Shuckard, 1837)

Material examined: Erzurum: Şenkaya, Akşar, 1275 m, 5.VII.2011, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Russian Far East, Sakhalin Island, Kuril Islands, Korea, Japan.

Crossocerus (Blepharipus) leucostoma (Linnaeus, 1758)

Material examined: Erzurum: Şenkaya, Ormanlı, 1800 m, 20.V.1994, 1♂.

Seasonal activity: May.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Russian Far East, Sakhalin Island, Japan, North America.

Crossocerus (Blepharipus) megacephalus (Rossi, 1790)

Material examined: Erzurum: Şenkaya, Turnalı, 1750 m, 28.VII.1994, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Tajikistan, Kazakhstan, southern Siberia, north China, Iran, North Africa, India.

Crossocerus (Crossocerus) elongatulus elongatulus (Vander Linden, 1829)

Material examined: Erzurum: Palandöken, 2400 m, 7.VIII.2011, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Turkmenistan, Tajikistan, Kazakhstan, southern Siberia, Iran, Japan, North Africa, North America.

Crossocerus (Crossocerus) exiguus (Vander Linden, 1829)

Material examined: Artvin: Yusufeli, Altıparmak, 1300 m, 25.VII.2005, 1♀.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, north China, Mongolia, Iran, Russian Far East, Korea.

Remarks: New record for Turkish fauna.

Crossocerus (Crossocerus) ovalis Lepeletier de Saint Fargeau & Brullé, 1835

Material examined: Artvin: Yusufeli, İshan, 700 m, 26.X.2004, 1♂.

Seasonal activity: October.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia.

Remarks: New record for Turkish fauna.

Crossocerus (Crossocerus) tarsatus tarsatus (Shuckard, 1837)

Material examined: Erzurum: Pazaryolu, 26.VIII.1994, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, Iran, Korea, North Africa.

Crossocerus (Crossocerus) varus Lepeletier de Saint Fargeau & Brullé, 1835

Material examined: Erzurum: Şenkaya, Gaziler, Çakırbaba Pass, 2450 m, 22.VII.2004, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, southern Siberia, Mongolia, Russian Far East, Sakhalin Island, Kuril Islands, Korea, Japan.

Crossocerus (Crossocerus) wesmaeli wesmaeli (Vander Linden, 1829)

Material examined: Erzurum: Oltu, İriağaç, 1250 m, 8.VIII.2000, 1♀.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Tajikistan, Kazakhstan, southern Siberia, north China, Russian Far East, Sakhalin Island, Japan.

Crossocerus (Hoplocrabro) quadrimaculatus (Fabricius, 1793)

Material examined: Bayburt: Kopdağı, 2400 m, 5.IX.2012, 1♀; Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 15.IX.2005, 3♂♂, 13♀♀; Tunceli: Pülümür, Armağan, 1698 m, 12.VIII.2011, 1♂, Sağlamtaş, 1757 m, 8.VIII.2012, 1♀.

Seasonal activity: August - September.

Geographical distribution: Europe, Great Briatin, Turkey, Uzbekistan, Tajikistan, Kazakhstan, southern Siberia, north Iran, Morocco

Ectemnius (Clytochrysus) cavifrons cavifrons (Thomson, 1870)

Material examined: Artvin: Kafkasör, 1300 m, 27.VII.2004, 2♂♂.

Seasonal activity: July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, Mongolia, Russian Far East, Sakhalin Island, Kuril Islands, Korea, Algeria.

Remarks: New record for Turkish fauna.

Ectemnius (Clytochrysus) lapidarius (Panzer, 1803)

Material examined: Erzurum: Horasan Muratbağı, 1860 m, 24.VIII.2011, 3♂♂, Oltu, Çamlıbel, 1750 m, 2.VII.1997, 1♀, 1735 m, 21.VII.2010, 1♀, İriağaç, 8.VIII.2000, 1♀; Giresun: Görele, Çavuşlu, 10 m, 22.VI.2014, 1♂, 1♀; Rize: Çamlıhemşin, Halil Şişman Mahallesi, 360 m, 20.VI.2014, 1♂, 1♀, Samsun: Gürgendağ, 22.VIII.1992, 1♀; Tunceli: Ovacık, Gözeler, 1352 m, 3.VIII.2012, 1♀.

Seasonal activity: June - August.

Geographical distribution: Europe, Great Briatin, Turkey, Kyrghyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Russian Far East, Sakhalin Island, Kuril Islands, Iran, Korea, Japan, North America.

Ectemnius (Ectemnius) dives (Lepelletier de Saint Fargeau & Brullé, 1835)

Material examined: Erzurum: Şenkaya, Turnalı, 2000 m, 25.V.1994, 1♂, 25.VII.1996, 1♂, Tortum, Aşağı Sivri, 1650 m, 16.VII.2012, 1♀; Uzundere, Çağlayan, 970 m, 27.V.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Great Briatin, Turkey, Israel, Kazakhstan, southern Siberia, north China, Russian Far East, Sakhalin Island, Kuril Islands, Iran, Korea, Japan, North America.

Ectemnius (Hypocrabro) confinis (Walker, 1871)

Material examined: Antalya: Arapsuyu, Azmak, 24.IX.2004, 7♂♂, 1♀; Erzurum: Horasan, Muratbağı, 1860 m, 24.VII.2011, 1♂, 1♀, Köprüköy, Marifet, 1685 m, 16.VI.2012, 1♂, Pasinler, Büyükdere, 1758 m, 12.VIII.2012, 1♀; Tunceli: Nazımiye, Dereova, 1871 m, 9.VIII.2012, 1♀, Pertek, Kartallıçeşme, 1393 m, 30.VIII.2012, 1♀, Tozkoparan, 1378 m, 30.VIII.2012, 1♂.

Seasonal activity: June - September.

Geographical distribution: Europe, Turkey, Jordan, Turkmenistan, Uzbekistan, Kazakhstan, Iran, North Africa.

Ectemnius (Hypocrabro) continuus continuus (Fabricius, 1804)

Material examined: Bitlis: Tatvan, Nemrut Moutain, 2000 m, 23.VII.2003, 2♂♂, 1♀; Erzurum: Oltu, 1275 m, 20.VII.2011, 1♂; Pazaryolu, Kumaşkaya, 1825 m, 25.VI.2014, 1♂, 3♀♀, Uzundere, Kirazlı, 1100 m, 8.IX.2005, 1♂; Giresun: Keşap, Güneyköy, 315 m, 25.IX.2012, 1♀; Kars: Sarıkamış, Karakurt, 1500 m, 15.IX.2005, 4♀♀.

Seasonal activity: June – September.

Geographical distribution: Europe, Great Briatin, Turkey, Syria, Jordan, Azerbaijan, Tajikistan, Kyrghyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Russian Far East, Iran, Korea, Japan, North Africa, North America, Cuba.

***Ectemnius (Hypocrabro) meridionalis* (A. Costa, 1871)**

Material examined: Artvin: Ardanuc, Akarsu, 900 m, 7.VII.1994, 2♂♂, 1♀, Ferhatlı, 650 m, 7.VII.1994, 1♂, Yusufeli, 15.VIII.1991, 1♀; Bayburt: 1600 m, 12.VIII.2009, 1♂; Bilecik: 600 m, 15.VII.1995, 1♂; Bingöl: 1155 m, 30.V.2002, 1♂; Erzincan: 1250 m, 22.VI.1994, 1♂, 11.VII.1994, 1♂, 18.VII.1997, 1♂, Refahiye, 1500 m, 20.VI.2009, 3♂♂; Erzurum: Atatürk University field, 1850 m, 9.VI.1994, 1♂, 23.VII.1992, 1♂, 10.VIII.1992, 1♀, Dereboğazi, 2070 m, 11.VIII.1994, 1♂, Aşkale, Çomoğlu, 1700 m, 9.VIII.1994, 1♂, Çat, 2260 m, 11.VIII.1994, 1♂, Horasan, ArasVadisi, 1500 m, 4.VI.2000, 1♂, İspir, Çapans, 2150 m, 20.VIII.2009, 1♂, Madenköprübaşı, 1350 m, 7.VII.1996, 1♂, 1♀, Narman, Mahmutçavuş, 8.VIII.1997, 1♂, Olur, Ormanağzı, 935 m, 5.VIII.2012, 1♀, Süngübayır, 20.VII.1994, 1♂, Pasinler, Porsuk, 1800 m, 2.IX.1999, 1♀, Şenkaya, Akşar, 1300 m, 26.VII.1994, 1♂, Tortum, Derekapı, 1247 m, 13.VII.2011, 2♂♂, Uzundere, Şelale, 970 m, 7.VI.2012, 1♂; Iğdır: Tuzluca, 870 m, 16.VI.2009, 1♀; Kars: Digor, Karaköy, 1700 m, 22.VIII.1997, 1♀; Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 2♂♂, TCK Çeşmesi, 1500 m, 19.VIII.2003, 1♀; Konya: Çumra, Dinlendik, 1015 m, 18.VIII.2005, 1♂.

Seasonal activity: June – September.

Geographical distribution: South Europe, Turkey, Syria, Israel, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iran, Afghanistan, North Africa.

***Ectemnius (Hypocrabro) persicus* (Kohl, 1888)**

Material examined: Erzurum: İspir, Çapans, 2150 m, 20.VIII.2009, 1♀, Olur, Süngübayır, 1900 m, 2.VII.1998, 1♀; Kars: Sarıkamış, Karakurt, TCK Çeşmesi, 1500 m, 19.VIII.2003, 1♀.

Seasonal activity: June – August.

Geographical distribution: Turkey, Iran.

Remarks: *Ectemnius persicus* is known by females fo far. It is not associated with any of the subgenus *Hypocrabro* males, but is suspected to be conspecific with *E. walteri* (known by males fo far) based on punctation of the mesosoma and metasona and on range data match.

***Ectemnius (Hypocrabro) rubicola rubicola* (Dufour & Perris, 1840)**

Material examined: Erzurum: Aşkale, Kopdağı, 2200 m, 16.VI.2000, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Russian Far East, Sakhalin Island, Kuril Islands, Iran.

***Ectemnius (Hypocrabro) schlettereri schlettereri* (Kohl, 1888)**

Material examined: Kars: Kağızman, 19.VII.1991, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia, north China, Russian Far East, Sakhalin Island, Korea, Japan, India, Vietnam.

Remarks: New record for Turkish fauna.

Ectemnius (Metacrabro) cephalotes (Olivier, 1792)

Material examined: Erzincan: Üzümlü, 1150 m, 4.VIII.2003, 1♂; Erzurum: Oltu, Subatık, 1450 m, 9.VIII.2000, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 14.VII.2004, 1♂; Tunceli: Pülümür, Ünveren, 1778 m, 7.VIII.2012, 1♀.

Seasonal activity: July – August.

Geographical distribution: Europe, Great Briatin, Turkey, Kyrghyzstan, Kazakhstan, North America.

Ectemnius (Metacrabro) kriechbaumeri (Kohl, 1879)

Material examined: Artvin: Yusufeli, Altıparmak, 1300 m, 25.VII.2005, 1♂; Erzurum: Köprüköy, Örentaş, 1900 m, 4.VII.2007, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Turkey.

Ectemnius (Metacrabro) lituratus (Panzer, 1803)

Material examined: Tunceli: Pülümür, Dağyolu, 1783 m, 9.VIII.2012, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Iran.

Ectemnius (Thyreocerus) crassicornis (Spinola, 1808)

Material examined: Erzurum: Aziziye, Kümbet, 1751 m, 9.VIII.2011, 1♂, Köprüköy, 1685 m, 16.VI.2012, 1♀, Olur, Ormanağzı, 935 m, 5.VIII.2012, 1♀, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 1♀, Tortum, Aşağı Sivri, 1546 m, 16.VII.2012, 1♀, Derekapı, 1400 m, 13.VII.2011, 2♀♀, Uzundere, Şelale, 1012 m, 7.VI.2012, 1♀; Iğdır: Bayraktutan, 950 m, 17.VIII.2005, 1♂; Kars: Sarıkamış, Karakurt, 1500 m, 17.VIII.2005, 3♂♂, 1♀; Tunceli: Pülümür, Kırmızı Köprü, 1276 m, 19.VII.2014, 1♂.

Seasonal activity: June - August.

Geographical distribution: Europe, Turkey, Syria, Israel, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kyrghyzstan, Kazakhstan, Iran.

Ectemnius (Thyreocerus) massiliensis (Kohl, 1883)

Material examined: Erzurum: Oltu, Çamlıbel, 1750 m, 28.VII.2003, 3♀♀, Pazaryolu, Kumaşkaya, 1800 m, 23.VI.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: South Europe, Turkey.

Ectemnius (Thyreocerus) zonsteini Jacobs, 2006

Material examined: Erzurum: Oltu, Çamlıbel, 1661 m, 4.VII.1996, 1♀.

Seasonal activity: July.

Geographical distribution: Turkey, Kyrghyzstan.

Remarks: New record for Turkish fauna.

Lestica (Lestica) subterranea subterranea (Fabricius, 1775)

Material examined: Erzurum: Aziziye, Gelinkaya, 1796, 24.VI.2012, 1♀, Hatuncuk, 1869 m, 5.VII.2011, 1♂,

Horasan, ArasVadisi, 1500 m, 4.VI.2000, 1♂, Oltu, Çamlıbel, 1700 m, 22.VIII.2001, 1♀, Pazaryolu, Kumaşkaya, 1800 m, 20.VII.2011, 1♂.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Tajikistan, Kyrgyzstan, Kazakhstan, western Siberia, north western China.

Lestica (Solenius) clypeata (Schreber, 1759)

Material examined: Erzurum: Oltu, Sarısaz, 1421 m, 30.VIII.2012, 1♂, Tortum, Dikmen, 1304 m, 14.VIII.2012, 1♂, Uzundere, Gölbaşı, 1150 m, 14.VIII.2012, 1♂; Tunceli: Demirkapı, 1494 m, 23.VII.2014, 1♂, Doluküp, 1126 m, 6.VIII.2012, 1♂, Mazgirt, Meşelik, 1200 m, 2.VII.2012, 2♂♂, 1♀, Zahpan, 1196 m, 19.VIII.2012, 1♂, Nazımiye, Dereova, 1871 m, 9.VIII.2012, 1♂, Doğantaş, 1635 m, 9.VIII.2012, 1♂, Ovacık, Köşeler, 1350 m, 5.VIII.2012, 3♂♂, Ziyaret, 1318 m, 4.VIII.2012, 1♂, Pertek, Kartallıçeşme, 1393 m, 30.VIII.2012, 2♂♂, Mercimek, 1437 m, 30.VIII.2012, 1♂, Tozkoparan, 1378 m, 30.VIII.2012, 1♂, 1♀.

Seasonal activity: June – August.

Geographical distribution: Europe, Turkey, Syria, Lebanon, Israel, Iraq, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, Iran, North Africa.

Lindenius albilabris albilabris (Fabricius, 1793)

Material examined: Ardahan: Posof, Aşıkzülali, 1100 m, 25.VII.2005, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Great Briatin, Turkey, Syria, Israel, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, southern Siberia, north China, Mongolia, Russian Far East, Iran.

Lindenius ibex ibex Kohl, 1883

Material examined: Erzurum: Pasinler, 1650 m, 7.VII.2009, 1♂.

Seasonal activity: July.

Geographical distribution: East Europe, Turkey, southern Siberia.

Lindenius iranius Leclercq, 1975

Material examined: Erzincan: Refahiye, 1500 m, 20.VI.2009, 1♂.

Seasonal activity: June.

Geographical distribution: Turkey, Syria, north Iran.

Lindenius pygmaeus armatus (Vander Linden, 1829)

Material examined: Iğdır: Gaziler, 1040 m, 16.VIII.2005, 1♀.

Seasonal activity: August.

Geographical distribution: Europe, Turkey, Syria, Jordan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, Iran.

Lindenius subaeneus Lapeletier de Saint Fargeau and Brullé, 1835

Material examined: Erzurum: Pasinler, 1650 m, 7.VII.2009, 1♂.

Seasonal activity: July.

Geographical distribution: Europe, Turkey, Kazakhstan, southern Siberia.

Rhopalum (Corynopus) coarctatum coractatum (Scopoli, 1763)

Material examined: Erzurum: Atatürk University field, 1850 m, 21.VIII.1996, 1♂.

Seasonal activity: August.

Geographical distribution: Europe, Great Briatin, Turkey, Kazakhstan, southern Siberia, Russian Far East, north Iran, North America.

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References

- Aguiar A. P., Deans A. R., Engel M. S., Forshage M., Huber J. T., Jennings J. T., Johnson N. F., Lelej A. S., Longino J. T., Lohrman V., Mikó I., Ohl M., Ramussen C., Taeger A. & Yu D. S. K. 2013. Order Hymenoptera. In: Zhang, Z.-Q. (Editor). *Animal Biodiversity: An Outline of Higher-level Classification and Survey of Taxonomic Richness (Addenda 2013)*. *Zootaxa* 3703: 1–82.
- Atbaei M., Fallahzadeh M. & Ljubomirov T. 2015. A contribution to the fauna of Crabronidae (Hymenoptera, Apoidea) in south-western Iran. *Journal of Insect Biodiversity* 3 (11): 1–30.
- Bayındır A., Gürbüz M. F., Ljubomirov T. & Pohl D. 2013. Diversity of digger wasps in Kasnak Oak Forest Nature Reserve, Isparta, Turkey, with records of eight species new to Turkey (Hymenoptera: Sphecidae, Crabronidae and Ampulicidae). *Zoology in the Middle East* 59 (2): 144–147.
- Çubuk F. T. & Gülmez Y. 2013. New records of Crabronidae (Insecta, Hymenoptera) from Turkey. *Journal of the Entomological Research Society* 15(1): 33–36.
- de Beaumont J. 1967. Hymenoptera from Turkey. Sphecidae, I. With Appendix. *Sphex* Linné, Subgenus *Palmodes* Kohl par P. Roth. *Bulletion British Museum (Natural History)*. *Entomology* 19: 253–382.
- Dollfuss H. 2008a. The Crabronid wasps of the genera *Oxybelus* Latreille, 1796 and *Brimocelus* Arnold, 1927 of “Biologiezentrum Linz” Collection in Linz, Austria (Hymenoptera, Apoidea, Crabronidae). *Linzer Biologische Beiträge* 40(1): 463–505.
- Dollfuss H. 2008b. The Sphecini wasps of the genera *Chilosphex* Bohart and Menke, *Isodontia* Patton, *Palmodes* Kohl, *Prionyx* Vander Linden and *Sphex* Linnaeus of the “Biologiezentrum Linz”-Collection in Linz, Austria (Hymenoptera, Apoidea, Sphecidae). *Linzer Biologische Beiträge* 40(2): 1399–1434.
- Dollfuss H. 2013a. Revision of the wasp genus *Ammophila* Kirby, 1798 (Hymenoptera: Apoidea: Sphecidae) of the Palearctic Region and India. *Linzer Biologische Beiträge* 45(1): 383–564.
- Dollfuss H. 2013b. The Ammophilini wasps of the "Biologiezentrum Linz"-Collection in Linz, Austria (part 2) including the Genera *Ammophila* KIRBY and *Podalonia* Fernald (Hymenoptera, Apoidea, Sphecidae), and description of the hitherto unknown male of *Podalonia erythropus* (F. Smith 1856). *Linzer Biologische Beiträge* 45(1): 565–591.

- Dollfuss H. 2015.** The Ammophilini wasps of the "Biologiezentrum Linz"-Collection in Linz, Austria (part 3) including the genera *Ammophila* Kirby, *Eremnophila* Menke, *Eremochares* Gribodo, *Hoplammophila* de Beaumont and *Podalonia* Fernald (Hymenoptera, Apoidea, Sphecidae). *Linzer Biologische Beiträge* 47(1): 413–439.
- Gulmez Y. & Can I. 2015.** First record of *Sceliphron (Hensenia) curvatum* (Hymenoptera: Sphecidae) from Turkey with notes on its morphology and biology. *North-West Journal of Zoology* 11 (1): 174–177.
- Hepdurgun B., Kaplan C., Yildirim E. & Turanlı T. 2007.** Some Hymenoptera species at the olive orchards in Balıkesir and Çanakkale in Turkey. *Proceedings of the Second Plant Protection Congress of Turkey, 27-29 August 2007, Isparta*, 210.
- Japoshvili G. & Ljubomirov T. 2012.** New records of Chrysididae, Mutillidae, Crabronidae, and Sphecidae (Insecta: Hymenoptera) from Gölcük National Park, Isparta, Turkey. *Journal Entomological Society Iran* 31(1): 95–97.
- Ljubomirov T. & Yildirim E. 2008.** Annotated catalogue of the Ampulicidae, Sphecidae, and Crabronidae (Insecta: Hymenoptera) of Turkey. Pensoft, Sofia – Moscow 1–316.
- Passein d'Entrèves P. 1983.** «Faunae Ligusticae Fragmenta» e «Insectorum Liguria species novae» di Massimiliano Spinola: note bibliografiche. *Bolletion Museum Region Science Natural Torino* 1: 215–226.
- Pulawski W. & Prentice M. 2008.** A Revision of the Wasp Tribe Palarini Schrottky, 1909 (Hymenoptera: Apoidea: Crabronidae). *Proceedings of the California Academy of Sciences. Fourth Series* 59: 307–479.
- Pulawski W. 2015.** Catalog of Sphecidae sensu lato (=Apoidea excluding Apidae) http://research.calacademy.org/ent/catalog_sphecidae/
- Schmid-Egger C. 2002.** Key and records for the western Palaearctic species of *Gorytes* Latreille 1804 with descriptions of a new species (Hymenoptera, Sphecidae, Bembicinae). *Linzer biologische Beiträge* 34(1): 167–190.
- Schmidt K. 2000.** Bestimmungstabelle der Gattung *Cerceris* Latreille, 1802, in Europa, dem Kaukasus, Kleinasien, Palastina und Nordafrika. *Stapfia* 71: 1–251.
- Straka J. 2005.** A review of the genus *Tachysphex* (Hymenoptera: Apoidea) of Turkey, with description of four new species. *Acta Societatis Zoologicae Bohemoslovenicae* 69: 247–276.
- Tüzün A. & Yüksel S. 2010.** Hymenoptera of Niğde province: Studies on Sphecidae fauna. *African Journal Biotechnology* 9(28): 4466–4477.
- Yildirim E. 2012.** Contribution to the knowledge of the Sphecidae and Crabronidae (Hymenoptera: Aculeata) fauna of Turkey. *Faunistic Entomology* 64(3): 73–82.
- Yildirim E. 2014.** Overview of the distribution and biogeography of Sphecidae in Turkey (Hymenoptera: Aculeata). *Faunistic Entomology* 67: 27–36.
- Yildirim E. & Ljubomirov T. 2007.** Faunistic records on Sphecidae and Crabronidae (Insecta: Hymenoptera) from Turkey with Some Taxonomical Notes. *Acta Zoology Bulgarica* 59(2): 115–124.
- Yildirim E., Ljubomirov T. & Lelej A. S. 2014.** Overview of the distribution and biogeography of Crabronidae in Turkey (Hymenoptera: Aculeata). *Journal of Insect Biodiversity* 2(3): 1–27.

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