

**STUDIES ON SPECIES COMPOSITION OF CARABID BEETLES
IN NORTH EASTERN PROVINCES OF IRAN
(COLEOPTERA: CARABIDAE)**

Hussein Sadeghi Namaghi*

* Department of Plant Protection, Ferdowsi University of Mashhad, IRAN. E-mail: sadeghin@ferdowsi.um.ac.ir

[Namaghi, H. S. 2011. Studies on species composition of carabid beetles in North Eastern provinces of Iran (Coleoptera: Carabidae). Munis Entomology & Zoology, 6 (1): 268-275]

ABSTRACT: A preliminary list of 27 carabid species belonging to 6 subfamilies are reported from provinces of Razavi, North and South Khorasan provinces. The list includes 24 records made by the author and those reported in the literature subsequent to 2010.

KEY WORDS: Ground beetles, Fauna, Insecta, Khorasan, Iran.

The family Carabidae including ground and tiger beetles, are an incredibly diverse group of insects that can play a major role in agroecosystems. By consuming a variety of insect pests and weed seeds, they can help protect crops from pest damage and associated losses, and decrease costs associated with pest controls. However, in spite of their importance, the knowledge about the fauna of Iranian carabids was limited until recent years. Modarres Awal (1997) reviewing the literature reports only 41 carabid species throughout Iran. Most of them have been reported by foreigner researchers and were collected from a few parts of the country (Hejkal, 2000; Jaeger, 1990; Jaeger, 1992; Lassalle, 2001; Jaskuła, 2007; Magrini & Pavesi, 2003). Recently some faunistic studies (Khajehzadeh, 1998; Alichy & Minaei, 2002a, b; Fallahzadeh et al., 2005; Mohammadzadeh Fard, 2008; Muilwijk & Felix, 2008; Ghahari et al. 2009a, b & Ghahari et al. 2010; Namaghi et al. 2010 and Sadeghi et al. 2011) have added more carabid species to the fauna of Iran. However, many parts of Iran still remained unworked in terms of species composition of this important family of insects. There is no any preliminary checklist of this family in Iran. This study was aimed to determine the species diversity and distribution of ground and tiger beetles in North eastern part of Iran including North, South and Razavi Khorasan provinces, also to present a preliminary list of this insect group for the study area.

MATERIALS AND METHODS

This study was conducted between years 2007 and 2010. Ground beetle specimens were collected from various habitats in Razavi, North and South Khorasan provinces. The collections were made using pitfall traps or collected directly by hand. Addition to these, several other collected specimens by the students have been included. Data, such as the number of specimens, locations and dates were recorded. For identification, part of specimens were sent to Dr. S. Avgin (Osmaniye Korkut Ata University, Turkey) and some were sent to Dr. R. Felix (Berkel Enschoot, The Netherlands). The taxonomic status of the species was checked according to the recent update of Fauna Europaea 1.1 (www.faunaeur.org) and Löbl & Smetana (2003).

The voucher specimens are deposited in the department of Plant Protection, College of Agriculture, Ferdowsi University of Mashhad, Iran.

RESULTS

A list of 27carabid species belonging to 6 sub families are reported from provinces of Razavi, North and South Khorasan provinces. The following list includes records made by the author and those reported in the literature subsequent to 2010.

I-Subfamily Callistinae Laporte, 1834

***Chlaenius festivus* (Panzer, 1796)**

Previous provincial records for Iran: Kohkeyloye and Boyer Ahmad, Khuzestan, Golestan, Razavi Khorasan (Mohammadzadeh Fard& Hodjat, 2008; Shafiei et al., 2004; Ghahari et al. 2009).

General distribution: Middle Asia, Central and South Europe, Turkey, Caucasia, Transcaucasia, Iran (Löbl & Smetana, 2003).

II-Subfamily Carabinae Latreille, 1802

Tribe Carabini Latreille, 1802

***Calosoma (Campalita) maderae tectum* Motschulsky, 1844**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 27 June 2008, Wheat field; 1 specimen, South Khorasan (Nehbandan), 12 May 2007, Wheat field.

Previous provincial records for Iran: This species was previously reported only from Fars, Kohkeyloyeh & Boyer Ahmad, Mazandaran (Mohammad Zadeh Fard & Hodjat, 2008 & Ghahhari et al.2009b).

General distribution: Azerbaijan, Armenia, Georgia, Russia: South European Territory, Asia: Iran, Turkey (Löbl & Smetana 2003).

***Calosoma (Campalita) olivieri* Dejean, 1831**

Materials: 2 specimens, Razavi Khorasan (Torbat-e-Jam), 23 July 2007, Alfalfa field; 1 specimen, Mashhad, 17 August 2008, Apple orchard.

Previous provincial records for Iran: Khorasan, Mazandaran, Golestan (Ghahari et al. 2009a).

General distribution: Azores, Malta, North Africa: Algeria, Canary Islands, Egypt, Libya, Morocco (incl. Western Sahara), Tunisia, Asia: Iran, Iraq, Jordan, Pakistan, Saudi Arabia, Syria, Turkmenistan, Uzbekistan (Löbl & Smetana 2003). The range of this species exemplifies a Saharo-Sindian chorotype.

***Calosoma (Caminara) olivieri* Dejean, 1831**

Previous provincial records for Iran: Razavi Khorasan, Mazandaran, Golestan , Khuzestan (Ghahari et al. 2009a; Shafiei et al., 2004).

General distribution: Russia, Tajikistan, Turkey, Turkmenistan and Uzbekistan (Löbl & Smetana, 2003).

III-Subfamily Cicindelinae Latreille, 1802

Tribe CICINDELINI Sloane, 1906

***Cicindela asiatica* Audouin & Brullé, 1839**

Materials: 3 specimens, North Khorasan (Bojnord), 4May 2006, Grasslands.

Previous provincial records for Iran: Khorasan (Kashmar), (Ghahari et al., 2009a).

General distribution: Russia, Caucasia (Löbl & Smetana, 2003).

***Cicindela clypeata* Fischer von Waldheim, 1821**

Materials: 3 specimens, Razavi Khorasan(Mashhad), 1 Sept. 2009.

Previous provincial records for Iran: this species has been recorded for Iranian fauna, but the locality is unknown.

General distribution: Iran, Afghanistan, Kazakhstan, Uzbekistan, Tajikistan, Turkemmania (Löbl & Smetana, 2003) and Russia South (www.faunaeur.org).

***Cicindela germanica* (Linnaeus, 1758)**

Materials: 2 specimens, Razavi Khorasan (Chenaran), 6 May 2009.

Previous provincial records for Iran: Northern and Northwestern provinces of Iran (Afshar, 1944).

General distribution: Austria, Albania, Andorra, Yugoslavia Incl. Serbia, Kosovo, Voivodina, Montenegro, Ukraine, The Netherlands, Switzerland, Slovenia, Spanish mainland, Slovakia, Sicily Incl. adjacent Italian islands (Lipari Is., Ustica, Egadi Is., Pantelleria I., Pelagie Is.), Russia South, Russia North, Poland, Romania, Moldova, Republic of, Estonia, Macedonia, Luxembourg, Lithuania, Liechtenstein, Latvia, Italian mainland, Ireland, Hungary, Greek main land Incl. Andikithira I., Evvia I., Ionian Is., Samothraki I., Northern Sporades Is., French mainland, Germany, Finland, European Turkey, Czech Republic, Croatia, Bulgaria, Britain Incl. Shetlands, Orkneys, Hebrides and Man Is., Bosnia and Herzegovina, Belgium, East Palaearctic (www.faunaeur.org).

***Cicindela cf. turkestanicoidea* Horn, 1938**

Materials: 2 specimens, North Khorasan (near Golestan forest), 23 June 2007.

Previous provincial records for Iran: this species has been recorded from west of Iran, but the locality. According to Dr. Felix (personal communication) record of this species in North eastern parts of Iran is doubtful.

General distribution: Asia, Iran (Löbl & Smetana, 2003).

IV-Subfamily Harpalinae Bonelli, 1810**Tribe Harpalini Bonelli, 1810*****Acinopus (Acinopus) laevigatus laevigatus* Ménétriés, 1832**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 7 June 2007, Sugar beet field; 2 specimens, South Khorasan (Ferdows), 24 June 2008, Wheat Field surroundings.

Previous provincial records for Iran: Fars, Kohkeyloveh and Boyer Ahmad, Razavi Khorasan, Golestan and Tehran (Mohammad Zadeh Fard & Hodjat, 2008; Ghahhari et al. 2009a; Ghahhari et al. 2009b).

General distribution: Azarbaijan, Armenia, Bulgaria, Croatia, Georgia, Greece (incl. Crete), Moldavia, Romania, Russia: South European Territory, Asia: Afghanistan, Gansu (Kansu), Iran, Iraq, Israel, Kyrgyzstan, Kazakhstan, Egypt: Sinai, Tadjhikistan, Turkmenistan, Turkey, Uzbekistan, Xinjiang (Sinkiang) (Löbl & Smetana 2003).

***Acinopus (Acinopus) picipes* Olivier, 1795**

Materials: 3 specimens, Razavi Khorasan (Kashmar), 9 June 2008, Cotton field surroundings.

Previous provincial records for Iran: Fars, Razavi Khorasan, Mazandaran (Alich & Minaie 2002; Namaghi et al. 2010).

General distribution: Azarbaijan, Albania, Armenia, Bosnia Herzegovina, Bulgaria, Croatia, France (incl. Corsica, Monaco), Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Malta, Macedonia, Moldavia, Portugal, Romania, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Turkey, Ukraine, Serbia and Montenegro, Cyprus, Iran, Iraq, Israel, Syria, Turkey (Löbl & Smetana, 2003).

***Dixus clypeatus* P. Rossi, 1790**

Materials: 3 specimens, Razavi Khorasan (Kashmar), 17 July 2008, grape orchard surroundings.

Previous provincial records for Iran: there is no record of this species in Iran.

General distribution: Albania, Bosnia Herzegovina, Bulgaria, Croatia, France (incl. Corsica, Monaco), Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Malta, Macedonia, Moldavia, Portugal, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Ukraine, Yugoslavia (Serbia, Montenegro), North Africa: Algeria, Morocco (incl. Western Sahara), Tunisia, Asia: Turkey (Löbl & Smetana 2003).

***Harpalus (Harpalus) distinguendus distinguendus* Duftschmid, 1812**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 15 April 2007, Wheat field; Neyshabor, 1 specimen, 25 April 2007, Sugar beet field; Torbat-e- Heydariye, 2 specimens,

10 July 2008, Alfalfa field; Torbat-e- Jam, 1 specimen, 3 August 2008, Alfalfa field; Kashmar, 3 specimens, 22 July 2008, Cotton field; 1 specimen, South Khorasan (Ghaenat), 7 June 2007, Sugar beet field.

Previous provincial records for Iran: This species has already been reported from Iran, but the locality is unknown (Löbl & Smetana 2003).

General distribution: Azarbaijan, Albania, Armenia, Austria, Azores, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Croatia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, Finland, France (incl. Corsica, Monaco), Germany, Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Lithuania, Luxembourg, Macedonia, Moldavia, The Netherlands, Norway, Russia: North European Territory, Poland, Portugal, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), North Africa: Algeria, Canary Islands, Morocco (incl. Western Sahara), Madeira Archipelago, Asia: Afghanistan, Cyprus, Russia: East Siberia, Iran, Israel, Kyrgyzstan, Kazakhstan, Mongolia, Syria, Tadjhikistan, Turkmenistan, Turkey, Uzbekistan, Russia: west Siberia, Xinjiang (Sinkiang) (Löbl & Smetana, 2003).

***Harpalus (Harpalus) honestus honestus* Duftschmid, 1812**

Materials: 3 specimens, Razavi Khorasan (Chenaran), 18 June 2008, sugarbeet field.

Previous provincial records for Iran: Golestan & Razavi Khorasan (Ghahhari et al., 2009a).

General distribution: Azarbaijan, Albania, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, France (incl. Corsica, Monaco), Great Britain (incl. Channel Islands), Germany, Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Liechtenstein, Luxembourg, Macedonia, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), Asia: Iran, Syria, Turkey. (Löbl & Smetana, 2003).

***Harpalus (Harpalus) oblitus oblitus* Dejean, 1829**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 5 May 2008, Wheat field; 1 specimen, Sabzevar, 5 May 2008, Wheat field; 2 specimens, South Khorasan (Birjand), 6 May 2007, Alfalfa field.

Previous provincial records for Iran: This species was already reported from Iran (Löbl & Smetana, 2003), but locality is not given.

General distribution: Albania, Bosnia Herzegovina, Bulgaria, Croatia, France (incl. Corsica, Monaco), Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Moldavia, Romania, Slovenia, Russia: South European Territory, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), Asia: Iran, Iraq, Kazakhstan, Syria, Tadjhikistan, Turkey, Russia: west Siberia (Löbl & Smetana, 2003).

***Harpalus (Harpalus) smaragdinus* Duftschmid, 1812**

Materials: 3 specimens, South Khorasan (Ferdows), 29 April 2008, Wheat Field.

Previous provincial records for Iran: This species was already reported from Iran (Löbl & Smetana 2003), but locality is not given.

General distribution: Azarbaijan, Albania, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Croatia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, Finland, France (incl. Corsica, Monaco), Great Britain (incl. Channel Islands), Germany, Georgia, Hungary, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Lithuania, Luxembourg, Macedonia, Moldavia, The Netherlands, Norway, Russia: North European Territory, Poland, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), Asia: Cyprus, Russia: East Siberia, Iran, Kyrgyzstan, Kazakhstan, Tadjhikistan, Turkmenistan, Turkey, Uzbekistan, Russia: west Siberia, (Xinjiang) Sinkiang (Löbl & Smetana, 2003).

***Harpalus (Pseudoophonus) griseus* Panzer, 1796**

Materials: 2 specimens, Razavi Khorasan (Bardaksan), 19 August 2008, Alfalfa field; 3 specimens, Mashhad, 9 June 2007, Sugar beet field; 2 specimens, Dargaz, 17 July 2007, Wheat Field Surroundings; 2 specimens, Serakhs, 28 April 2008, wheat field; 1 specimen,

South Khorasan (Ghaenat), 9 July 2007, Alfalfa field; 2 specimens, Ferdows, 22 June 2008, Wheat field.

Previous provincial records for Iran: Razavi Khorasan & Mazandaran (Ghahhari et al., 2009a; Ghahhari et al., 2009b).

General distribution: Azarbaijan, Armenia, Austria, Azores, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Croatia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, Finland, France (incl. Corsica, Monaco), Great Britain (incl. Channel Islands), Germany, Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Macedonia, Moldavia, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Sweden, Switzerland, Ukraine, Yugoslavia (Serbia, Montenegro), North Africa: Algeria, Egypt, Morocco (incl. Western Sahara), Tunisia, Asia: Afghanistan, Cyprus, Russia: East Siberia, Russia: Far East, Gansu (Kansu), Heilongjiang (Heilungkiang), Iran, Iraq, Israel, Japan, Jiangsu (Kiangsu), Jilin (Kirin), Kyrgyzstan, Kazakhstan, Liaoning, North Korea, South Korea, Shaanxi (Shensi), Shanghai, Shandong (Shantung), Shanxi (Shansi), Tadjikistan, Turkmenistan, Turkey, Uzbekistan, Russia: west Siberia, Xinjiang (Sinkiang), Yunnan, Zhejiang (Chekiang), Oriental Region (Löbl & Smetana, 2003).

***Harpalus (Pseudoophonus) rufipes* DeGeer, 1774**

Materials: 1 specimen, Razavi Khorasan (Mashhad), 28 August 2007, Alfalfa field; 2 specimens, Neyshabor, 12 May 2008, Wheat field surroundings.

Previous provincial records for Iran: Fars, Kohkeyloveh and Boyer Ahmad, Tehran, Ardabil, Mazandaran, Semnan & Razavi Khorasan (Mohammad Zadeh Fard & Hodjat, 2008; Ghahhari et al., 2009a).

General distribution: Azarbaijan, Albania, Armenia, Austria, Azores, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Croatia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, Finland, France (incl. Corsica, Monaco), Great Britain (incl. Channel Islands), Germany, Georgia, Greece (incl. Crete), Hungary, Ireland, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Macedonia, Moldavia, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), North Africa: Algeria, Morocco (incl. Western Sahara), Tunisia, Asia: Afghanistan, Cyprus, Russia: East Siberia, Iran, Iraq, Kyrgyzstan, Kazakhstan, Tadjikistan, Turkmenistan, Turkey, Uzbekistan, Russia: west Siberia, Xinjiang (Sinkiang), Nearctic Region (Löbl & Smetana, 2003).

Tribe Lebiini Bonelli, 1810

***Cymindis (Cymindis) andreae* Ménériés, 1832**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 12 May 2007, Alfalfa field.

Previous provincial records for Iran: Fars, Mazandaran, Kohkihkeyloveh and Boyer Ahmad and Khuzestan (Mohammadzadeh Fard & Hodjat, 2008; Shafiei et al., 2004; Ghahhari et al., 2009b).

General distribution: Armenia, Azarbaijan, Georgia, Russia: South European Territory, North Africa: Egypt, Asia: Afghanistan, Cyprus, Iran, Iraq, Kyrgyzstan, Kazakhstan, Lebanon, Pakistan, Saudi Arabia, Tadjikistan, Turkmenistan, Turkey, Yemen (incl. Socotra) (Löbl & Smetana, 2003).

Tribe Pterostichini Bonelli, 1810

***Pterostichus (Melanius) elongatus* Duftschmid, 1812**

Materials: 2 specimens, South Khorasan (Ghaenat), 27 June 2007, wheat field.

Previous provincial records for Iran: there is no previous record of this species in Iran.

Geographical distribution: it is distributed in Europe: Albania, Austria, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, France (incl. Corsica, Monaco), Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Moldavia, Romania, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Ukraine, Yugoslavia (Serbia,

Montenegro), North Africa: Morocco (incl. Western Sahara), Asia: Afghanistan, Kazakhstan, Turkey (Löbl & Smetana, 2003).

***Poecilus (Poecilus) cupreus cupreus* Linné, 1758**

Materials: 2 specimens, Razavi Khorasan (Chenaran), 28 April 2008, Apple orchard surroundings.

Previous provincial records for Iran: Razavi Khorasan, Mazandaran, Fars, Ardabil, Tehran, Semnan (Ghahhari et al., 2009a,b).

General distribution: Azarbaijan, Albania, Armenia, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Byelorussia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, Finland, France (incl. Corsica, Monaco), Great Britain (incl. Channel Islands), Germany, Georgia, Greece (incl. Crete), Hungary, Ireland, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Liechtenstein, Lithuania, Moldavia, The Netherlands, Norway, Russia: North European Territory, Poland, Romania, Slovakia, Spain (incl. Gibraltar), Russia: South European Territory, Sweden, Switzerland, Turkey, Ukraine, Yugoslavia (Serbia, Montenegro), Asia: Russia: East Siberia, Kyrgyzstan, Kazakhstan, Syria, Tadjikistan, Turkmenistan, Turkey, Uzbekistan, Russia: west Siberia (Löbl & Smetana, 2003).

***Poecilus (Poecilus) punctulatus* Schaller, 1783**

Materials: 2 specimens, Razavi Khorasan (Chenaran), 24 July 2008, Wheat field.

Previous provincial records for Iran: there is no previous record of this species in Iran.

General distribution: Austria, Belgium, Bulgaria, Byelorussia, Russia: Central European Territory, Czech Republic, Denmark, Estonia, France (incl. Corsica, Monaco), Germany, Hungary, Italy (incl. Sardinia, Sicily, San Marino), Kazakhstan, Latvia, Lithuania, Moldavia, The Netherlands, Russia: North European Territory, Poland, Slovakia, Russia: South European Territory, Sweden, Switzerland, Ukraine, Asia: Kazakhstan, Uzbekistan, Russia: west Siberia (Löbl & Smetana, 2003).

***Poecilus (Poecilus) subcoeruleus* Quensel, 1806**

Materials: 3 specimens, Razavi Khorasan (Mashhad), 18 May 2007, Alfalfa field.

Previous provincial records for Iran: This species was already reported from Iran (Löbl & Smetana 2003), but locality is not given.

General distribution: Bulgaria, Byelorussia, Moldavia, Portugal, Russia: South European Territory, Ukraine, Asia: Iran (Löbl & Smetana, 2003).

Tribe Zabrini Bonelli, 1810

***Amara (Amara) proxima* Putzeys, 1866**

Materials: 2 specimens, Razavi Khorasan (Mashhad), 16 August 2007, Sugar beet field.

Previous provincial records for Iran: The occurrence of this species in Iran has already been reported (Löbl & Smetana, 2003), but collection sites are not given.

General distribution: Azarbaijan, Albania, Armenia, Austria, Bosnia Herzegovina, Bulgaria, Croatia, France (incl. Corsica, Monaco), Germany, Georgia, Greece (incl. Crete), Hungary, Italy (incl. Sardinia, Sicily, San Marino), Macedonia, Romania, Switzerland, Slovakia, Slovenia, Spain (incl. Gibraltar), Russia: South European Territory, Ukraine, Yugoslavia (Serbia, Montenegro), Asia: Iran, Turkmenistan, Turkey (Löbl & Smetana 2003).

***Amara aenae* De Geer, 1774**

Previous provincial records for Iran: Fars, Kohkeyloye Boyer Ahmad, Golestan, Khorasan (Mohammadzadeh & Hodjat, 2008; Ghahhari et al., 2009a).

General distribution: General distribution: Palearctic Region, North America, Caucasia (Löbl & Smetana, 2003).

***Anthia (Anthia) mannerheimii* Chaudoir, 1842**

Materials: 3 specimens, Razavi Khorasan (Mashhad), 10 August 2008.

Previous provincial records for Iran: Khorasan (Afshar, 1944).

General distribution: Iran, Turkmenistan (Löbl & Smetana, 2003).

V-Subfamily Nebriinae Laporte, 1834
Tribe Nebriini Laporte, 1834

Nebria (Nebria) hemprichi Klug, 1832

Materials: 2 specimens, Razavi Khorasan(Fariman), 11 July 2007, Sugarbeet field.

Previous provincial records for Iran: Razavi Khorasan, Golestan, Mazandaran (Ghahhari et al., 2009a,b).

General distribution: Asia: Israel, Syria, Turkey (Löbl & Smetana, 2003).

VI-Subfamily Scaritinae Bonelli, 1810
Tribe Scaritini Bonelli, 1810

Distichus (Distichus) planus Bonelli, 1813

Materials: 2 specimens, Razavi Khorasan(Mah-Velat), 15 May 2007, Alfalfa field.

Previous provincial records for Iran T: Tehran and Khorasan (Ghahhari et al., 2009a).

General distribution: Azerbaijan, France (incl. Corsica, Monaco), Georgia, Greece (incl. Crete), Italy (incl. Sardinia, Sicily, San Marino), Malta, Portugal, Spain (incl. Gibraltar), Turkey, North Africa: Egypt, Morocco (incl. Western Sahara), Tunisia, Asia: Iran, Iraq, Jordan, Kazakhstan, Pakistan, Saudi Arabia, Syria, Tadjhikistan, Turkmenistan, Turkey, Uzbekistan, Yemen (incl. Socotra) (Löbl & Smetana, 2003).

ACKNOWLEDGEMENTS

The author is grateful to Drs R. Felix (The Netherlands) and S.S. Avgin for their kind help with confirmation or identification of some specimens. The study (project no. p-308) financially supported by Ferdowsi University of Mashhad who is acknowledged.

LITERATURE CITED

Anonymous. Data base www.faunaeur.org. Version 1.1, visited on: 15. IV. 2010.

Afshar, J. 1944. Les nomes scientifique de quelques coleopteres de l'Iran et leurs importance en agriculture. Min. Agri. Tehran. 22 pp.

Alichi, M. & Minaei, K. 2002a. New records on the fauna of the Carabidae in Fars province, 175-176. Proceedings of the 15th Iranian Plant Protection Congress, Razi University, Kermanshah.

Alichi, M. & Minaei, K. 2002b. Study on distribution of the beetles belonging the family Carabidae in Shiraz region, 175. Proceedings of the 15th Iranian Plant Protection Congress, Razi University, Kermanshah.

Fallahzadeh, M., Shojace, M. & Ostovan, H. 2005. Report of *Broscus punctatus* (Col.: Carabidae) from Iran. Journal of Entomological Society of Iran, 24 (2): 140.

Ghahhari, H., Kesdek, M., Samin, N., Ostovan, H., Havaskary, M. & Imani, S. 2009a. Ground beetles (Coleoptera:Carabidae) of Iranian cotton fields and surrounding grasslands. Munis Entomology & Zoology, 4 (2): 436-450.

Ghahhari, H., Wojciech, B., Czkowski, J., Kesdek, M., Otovan, H. & Tabari, M. 2009b. Ground beetles (Coleoptera: Carabidae) from rice fields and surrounding grasslands of Northern Iran. Journal of Biological Control, 23 (2): 105-109.

Ghahhari, H., Avgin, S. S. & Ostovan, H. 2010. Carabid beetles (Coleoptera: Carabidae) collected from different ecosystems in Iran with new records. Türk. entomol. derg., 34 (2): 179-195.

Hejkal, J. 2000. *Amara (Amara) elborzensis* sp. n. (Coleoptera: Carabidae) from Iran. Klapalekiana, 36 pp.

- Jaeger, B.** 1990. Zur Verbreitung von *Bradycellus csikii* Laczo, 1912 und *B. distinctus* Dejean, 1829 sowie Beschreibung von *Bradycellus heinzei* n.sp. aus dem Nord-Iran (Col., Carabidae). Entomologische Nachrichten und Berichte, 34: 9-13.
- Jaeger, B.** 1992. Beitrag zur Erforschung der *Acupalpus*-Fauna des Iran und der Türkei nebst Beschreibung von *Acupalpus turcicus* n. sp. (Col., Carabidae). Entomologische Nachrichten und Berichte, 36: 223-230.
- Jaskuła, R.** 2007. First record of *Lebia trimaculata* from Iran (Coleoptera: Carabidae). Entomological Problems, 37 (1-2): 48.
- Khajehzadeh, Y.** 1998. Investigation on the most important injurious beetles of cereal fields of Khuzestan, the Proceedings of 13th Iranian Plant Protection Congress.
- Lassalle, B.** 2001. Les *Sphodristocarabus* d'Iran (Coleoptera, Carabidae). Le Coléoptériste, 43: 169-170.
- Löbl, I. & Smetana, A.** 2003. Catalogue of Palaearctic Coleoptera. Volume I. Archostemata-Myxophaga-Adephaga. ApolloBooks. Stenstrup, Denmark, 819 pp.
- Magrini, P. & Pavesi, M.** 2003. A new Iranian species of *Neoblemus* (Coleoptera: Carabidae). Bollettino della Societa Entomologica Italiana, 135 (2): 71-78.
- Modarres Awal, M.** 1997. List of agricultural pests and their natural enemies in Iran. Revised ed. Ferdowsi University of Mashhad, Iran, no. 429 pp.
- Mohammadzadeh Fard, S.** 2008. Description of female *Axonya farsica* (Coleoptera: arabidae: Broscinae). Journal of Entomological Society of Iran, 27 (2), Supplement, 3-4.
- Mohammadzadeh Fard, S. & Hodjat, S. H.** 2005. New records of Carabid beetles in Iran. Journal of Entomological Society of Iran, 24 (2).
- Mohammadzadeh Fard, S., Hodjat, S. H.** 2008. A comparison survey on fauna of Family Carabidae (Insecta: Coleoptera) in natural and agricultural areas. 18th Iranian Plant Protection Congress, Bu-Ali Sina University, Hamadan. p. 89.
- Muilwijk, J. & Felix, R.** 2008. Description of three new species of the tribe Trechini (Col.: Carabidae) from south Iran. J. Entomo. Soc. Iran, 28 (1): 79-85.
- Namaghi, S. H., Avgin, S. S. & Farahi, S.** 2010. New Data ToThe Knowledge Of Ground Beetles (Coleoptera: Carabidae) Fauna of Iran. Journal of Turkish Entomology, 34 (2): 197-210.
- Sadeghi, H., Hasani Saadi, S. & Felix, R.** 2011. Ground and tiger beetles (Coleoptera: Carabidae) from Kerman and Khorasan provinces of Iran. Munis Entomology & Zoology (In Press).