

ARTYKUŁ / ARTICLE

## A faunistic study of Coleoptera of Iran with nine new country records

Studium faunistyczne chrząszczy Iranu, z danymi o dziewięciu gatunkach nowych dla tego kraju

Marek BUNALSKI<sup>1</sup>, Majid NAVAIIAN<sup>2</sup>, Seyed Afshin Hosseini BOLDAJI<sup>2</sup>, Jirí HÁVA<sup>3</sup>,  
Fernando ANGELINI<sup>4</sup>, Hamid SAKENIN<sup>5</sup>, Najmeh SAMIN<sup>6</sup>

<sup>1</sup> Department of Entomology and Environmental Protection, University of Life Sciences, Dąbrowskiego 159, 60-594 Poznań, Poland,  
email: marek.bunalski@up.poznan.pl, ORCID: 0000-0001-6969-7625;

<sup>2</sup> Department of Biology, Yadegar-e-Imam Khomeini (RAH) Shahre Rey Branch, Islamic Azad University, Tehran, Iran;

<sup>3</sup> Private Entomological Laboratory & Collection, Rýznerova 37/37, CZ- 252 62 Únetice u Prahy, Prague-west, Czech Republic

<sup>4</sup> Via De Reggio, 142-72021 Francavilla Fontana (Brindisi), Italy;

<sup>5</sup> Department of Plant Protection, Qaemshahr Branch, Islamic Azad University, Mazandaran, Iran;

<sup>6</sup> Young Researchers and Elites Club, Science and Research Branch, Islamic Azad University, Tehran, Iran

**ABSTRACT.** The following paper presents the faunistic study on the Coleoptera of Iran. In total, 41 species in 13 families were collected and identified: Aderidae (1 species), Carabidae (3 spp.), Drilidae (1 sp.), Eucnemidae (5 spp.), Geotrupidae (3 spp.), Glaresidae (1 sp.), Melandryidae (3 spp.), Mycetophagidae (4 spp.), Scarabaeidae (9 spp.), Scraptiidae (1 sp.), Throscidae (4 spp.), Trogidae (4 spp.), and Tetratomidae (2 spp.). Nine species are newly recorded from Iran.

**KEY WORDS:** beetles, systematic, species diversity, distribution, new records, Iran.

### Introduction

The Coleoptera is the largest order in the animal kingdom which includes 40% of all insects and nearly 30% of all animal species (KAZMI & RAMAMURTHY 2004; PARVEZ & SRIVASTAVA 2010). This order includes 166 families and more than 360,000 valid species worldwide (BOUCHARD & al. 2009; LAWRENCE & al. 2011). They are functionally important, being the dominant above-ground invertebrate in pastures and natural grassland when judged by biomass (NICHOLSA 2008; BHARAMAL & al. 2014).

Faunistic surveys on Iranian Coleoptera, which is very diverse, have resulted in several new findings in recent years. Some families were studied rather well and catalogued (e.g., LEGALOV & al. 2010: Curculionoidea; LASÓN & GHAHARI 2013: Kateretidae and Nitidulidae; BUNALSKI & al. 2014: Scarabaeoidea; BARTOLOZZI & al. 2014: Lucanidae; AZADBAKHSH & NOZARI, 2015: Carabidae; GHAHARI & al. 2015: Buprestidae; NOVÁK & GHAHARI 2015: Alleculinae; GHAHARI & Háva 2015: Silphidae; BEAVER & al. 2016: Platypodinae and Scolytinae; JÄCH & al. 2016: Byrrhoidea; PLATIA & GHAHARI 2016: Elateridae; LIU & al. 2016: Bostrichidae; ZAPPI & GHAHARI 2016: Cleridae; MASCAGNI & al. 2016:

Dryopidae and Heteroceridae; THOMAS & GHAHARI 2016: Cucujidae, Laemophloeidae and Silvanidae; MIRUTENKO & GHAHARI 2016: Malachiidae; OTERO & al. 2017: Cryptophagidae; GHAHARI & BOROWIEC 2017: Bruchinae; PERREAU & al. 2017: Leiodidae; RUZZIER & al. 2017: Mordellidae; OTERO & GHAHARI 2017: Latridiidae; ASLAN & GHAHARI 2017: Alticini; GHAHARI & al. 2017: Histeridae; GHAHARI & HÁVA 2017: Dermestidae; VIÑOLAS & GHAHARI 2017: Ptinidae; DARILMAZ & al. 2018: Hydraenidae; Mirutenko & al. 2018: Melyridae, Prionoceridae and Trogossitidae; GENTILI & al. 2018: Hydrophilidae; PLONSKI & GHAHARI 2018: Dasytidae and Rhadialidae; Telnov & GHAHARI 2018: Anthicidae; DARILMAZ & al. 2018: Aquatic Polyphaga; GHAHARI & BARREDA 2019: Ripiphoridae; GHAHARI & NIKODÝM 2018: Glaphyridae; GHAHARI & Campos-Soldini 2019: MELOIDAE; GHAHARI & COLONNELLI 2019a: Atelabidae; GHAHARI & COLONNELLI 2019b: Anthribidae and Nemomychidae; KLAUSNITZER & GHAHARI 2019: Scirtoidea; ASLAN & GHAHARI, 2019: Criocerinae; GHAHARI & BEENEN, 2020: Galerucinae; GHAHARI & COLONNELLI 2020: Brentidae; LYUBARSKY & GHAHARI 2020: Erotylidae; DARILMAZ et al. 2020: Dytiscidae; OTERO & GHAHARI, 2020: Zopheridae; GHAHARI & al. 2020:

Dascilloidea; BOROWIEC & GHAHARI 2021: Cassidinae; DROGVALENKO & GHAHARI 2021: Ciidae).

The purpose of the present study is to enhance the knowledge on the species diversity and distribution of the Coleoptera fauna of Iran, as well as to introduce the new country records.

### Material and methods

The specimens herein presented were collected using, among others, sweep nets and light traps from different regions in Iran during various field surveys. All the collected specimens were put in alcohol (ethanol 80%) and identified by the authors and other authorized coleopterists. Additionally, several specimens from the insect collections preserved in the Islamic Azad University (Qaemshahr, Science & Research, and Garmsar Branches) and Tehran Jurassic Park were reexamined, which data have also been included in this paper. Most of the specimens are preserved in the collections of the fifth and sixth author, and a few others in the collections of the determiners. The classification, nomenclature, and distributional data suggested by LÖBL & SMETANA (2007, 2008), and LÖBL & LÖBL (2016, 2017) have been followed. The chorotypes used in this paper, are described as below:

- "Caucasus" is a region between the Black Sea and the Caspian Sea, mainly comprising Armenia, Azerbaijan, Georgia, and parts of Southern Russia;
- "Transcaspia" is an old name for the region lying to the east of the Caspian Sea in Central Asia;
- "Turkestan" also spelled Turkistan, is a historical region in Central Asia, corresponding to the regions of Transoxiana (eastern Uzbekistan, Western Tajikistan, parts of Southern Kazakhstan, parts of Turkmenistan and Southern Kyrgyzstan) and Xinjiang (an autonomous region of the People's Republic of China (PRC), located in the northwest of the country at the crossroads of Central Asia and East Asia).

### Results

In the following paper, 41 species from 13 families were collected and identified from different regions of Iran. Nine species (marked with an asterisk \*) are newly recorded from Iran: *Anaspis (Anaspis) pulicaria* A. COSTA, 1854, *Berginus tamarisci* WOLLASTON, 1854, *Drilus fulvitarsis* BAUDI di SELVE, 1872, *Eulagius irregularis* REITTER, 1888, *Eustrophus dermestoides* FABRICIUS, 1792, *Mycetophagus (Ulolendus) ciscaucasicus* SEMENOV, 1899, *Orchesia (Orchesia) micans* PANZER, 1793, *Orchesia (Clinocara) undulata* KRAATZ, 1853 and *Phloiotrya (Phloiotrya) teraw* HAMPE, 1850.

### Aderidae WINKLER, 1927

*Otolelus semiobscurus* PIC, 1893

Distribution: Georgia, Russia (South European Territory), Iran, "Caucasus", "Turkestan".

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 2 exx.

### Carabidae LATREILLE, 1802

*Harpalus (Harpalus) hospes hospes* STURM, 1818

Distribution: Albania, Austria, Bulgaria, Czech Republic, Greece, Hungary, Iran, Kazakhstan, Macedonia, Moldova, Romania, Russia (South European Territory), Serbia, Slovakia, Slovenia, Turkey, Ukraine.

Material examined: Golestan prov., Golestan National Park, VI 2015, 2 exx.

*Ophonus (Metophonus) cordatus*  
(DUFTSCHMID, 1812)

Distribution: Albania, Algeria, Armenia, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, France, Great Britain, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Macedonia, Moldova, Montenegro, Morocco, Netherlands, Poland, Romania, Russia (South European Territory, West Siberia), Serbia, Slovakia, Slovenia, Spain, Switzerland, Turkmenistan, Turkey, Ukraine.

Material examined: Mazandaran prov., Galogah (Khoshroodpey Forest), V 2016, 3 exx.

*Scybalicus oblongiusculus* (DEJEAN, 1829)

Distribution: Algeria, Bosnia-Herzegovina, Bulgaria, Croatia, France, Greece, Iran, Italy, Malta, Morocco, Portugal, Slovenia, Spain, Tunisia, Turkey.

Material examined: Mazandaran prov., Amol (Chelav), V 2013, 2 exx.

### Drilidae BLANCHARD, 1845

\**Drilus fulvitarsis* BAUDI di SELVE, 1872

Distribution: "Caucasus".

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 1 ex. New record for Iran.

### Eucnemidae ESCHSCHOLTZ, 1829

*Eucnemis capucina* AHRENS, 1812

Distribution: Algeria, Austria, Belgium, Bosnia-Herzegovina, Belarus, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Iran, Italy, Latvia, Liechtenstein, Lithuania,

Luxembourg, Netherlands, Poland, Romania, Russia (Central European Territory, West Siberia), Slovakia, Spain, Sweden, Switzerland.

Material examined: Guilan prov., Siahkal, IX 2014, 2 exx.

*Farsus dubius* PILLER & MITTERPACHER, 1783

Distribution: Austria, Czech Republic, France, Hungary, Iran, Italy, Romania, Russia (South European Territory), Serbia and Montenegro, Spain, Syria.

Material examined: West Azarbaijan prov., Naqadeh (Hassanloo), VII 2010, 3 exx.

*Microrhagus pygmaeus* FABRICIUS, 1792

Distribution: Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Iran, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia (Central and North European Territory), Slovakia, Sweden, Switzerland.

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 2 exx.

*Phyllocerus elateroides* MÉNÉTRIÉS, 1832

Distribution: Greece, Iran, "Caucasus".

Material examined: Ardabil prov., Aslanduz (Qeshlagh Ghahramanloo), VIII 2011, 1 ex.

*Rhacopus sahlbergi* MANNERHEIM, 1823

Distribution: Austria, Bosnia-Herzegovina, Belarus, Croatia, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Italy, Latvia, Mongolia, Poland, Romania, Russia (Central and North European Territory, West Siberia), Slovakia, Sweden.

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 1 ex.

**Geotrupidae LATREILLE, 1802**

*Anoplotrupes stercorosus* SCRIBA, 1791

Distribution: Albania, Andorra, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Georgia, Greece, Hungary, Iran, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia (Central, North and South European Territory, East and West Siberia), Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Material examined: Mazandaran prov., Behshahr (Koohestan), IX 2014, 2 exx.

*Odonteus armiger* SCOPOLI, 1772

Distribution: Armenia, Austria, Azerbaijan, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, France, Great Britain, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, Macedonia, Moldova, Netherlands, Poland, Romania, Russia (Central and South European Territory), Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Material examined: Mazandaran prov., Ramsar (Dalkhani Forest), VIII 2017, 3 exx.

*Trypocopris vernalis vernalis* LINNAEUS, 1758

Distribution: Albania, Andorra, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Iran, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldova, Montenegro, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory), Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Material examined: Qazvin prov., Moalem Kelayeh, VI 2018, 2 exx.

**Glaresidae KOLBE, 1905**

*Glaresis rufa* ERICHSON, 1848

Distribution: Azerbaijan, Austria, Bulgaria, Greece, Hungary, Iran, Kazakhstan, Poland, Romania, Russia (South European Territory), Serbia, Slovakia, Ukraine.

Material examined: West Azarbaijan prov., Myandoab (Qarehghozlu), VIII 2010, 1 ex.

**Melandryidae LEACH, 1815**

\**Phloiotrya (Phloiotrya) teraw* HAMPE, 1850

Distribution: Armenia, Austria, Azerbaijan, Belgium, Croatia, Czech Republic, France, Georgia, Germany, Great Britain, Greece, Hungary, Italy, Netherlands, Romania, Russia (South European Territory), Slovakia, Spain, Switzerland, Ukraine.

Material examined: West Azarbaijan prov., Myandoab (Qarehghozlu), VIII 2010, 2 exx. New record for Iran.

**\**Orchesia (Clinocara) undulata* KRAATZ, 1853**

Distribution: Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Finland, France, Georgia, Germany, Great Britain, Hungary, Ireland, Italy, Latvia, Moldova, Netherlands, Norway, Poland, Romania, Russia (Central and South European Territory, East Siberia), Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine.

Material examined: Chaharmahal & Bakhtiari prov., Brojen (Seif-Abd), VI 2014, 2 exx. New record for Iran.

**\**Orchesia (Orchesia) micans* PANZER, 1793**

Distribution: Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Moldova, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory, West Siberia), Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine.

Material examined: Hamadan prov., Nahavand, VIII 2016, 3 exx. New record for Iran.

**Mycetophagidae LEACH, 1815**

**\**Berginus tamarisci* WOLLASTON, 1854**

Distribution: Albania, Algeria, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Egypt, England, France, Germany, Georgia, Greece, Hungary, Indonesia: Java, Israel, Italy, Madeira Is., Malta, Morocco, Nigeria, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine (Crimea).

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 2 exx. New record for Iran.

**\**Eulagius irregularis* REITTER, 1888**

Distribution: Armenia, Azerbaijan, Georgia, Russia (South European Territory).

Material examined: West Azarbaijan province, Oshnavieh (Khaled-Abad), VI 2014, 2 exx. New record for Iran.

***Mycetophagus (Mycetoxides) fulvicollis*  
FABRICIUS, 1792**

Distribution: Albania, Armenia, Austria, Azerbaijan, Belgium, Belarus, Bosnia-Herzegovina, Bulgaria,

Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Montenegro, Norway, Poland, Portugal, Romania, Russia (Central, North and South European Territory, East and West Siberia, Far East), Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Material examined: Qazvin prov., Moalem Kelayeh, VI 2012, 3 exx.

**\**Mycetophagus (Ulolendus) ciscaucasicus*  
SEMENOV, 1899**

Distribution: Armenia, Azerbaijan, Georgia, Russia (South European Territory), Turkey, Ukraine.

Material examined: Ardabil prov., Aslanduz (Qeshlagh Ghahramanloo), VIII 2011, 1 ex. New record for Iran.

**Scarabaeidae LATREILLE, 1802**

***Amphimallon leuthneri* REITTER, 1902**

Distribution: Iran, Syria, Turkey.

Material examined: Kermanshah prov., Pavéh (Khanghah), V 2016, 1 ex.

***Aplidia tarsensis* KRAATZ, 1882**

Distribution: Iran, Lebanon, Syria, Turkey.

Material examined: West Azarbaijan prov., Myandoab (Qarehghozlu), VIII 2010, 1 ex.

***Chaetopteroplia syriaca* BURMEISTER, 1844**

Distribution: Iran, Israel, Syria, Turkey.

Material examined: Kermanshah prov., Pavéh (Khanghah), V 2016, 1 ex.

***Onthophagus (Palaeonthophagus) fissicornis*  
(STEVEN, 1809)**

Distribution: Albania, Armenia, Azerbaijan, Bulgaria, Croatia, Georgia, Greece, Iran, Iraq, Israel, Macedonia, Moldova, Montenegro, Romania, Russia (South European Territory), Serbia, Syria, Turkey, Turkmenistan, Ukraine.

Material examined: Qazvin prov., Moalem Kelayeh, VI 2012, 2 exx.

***Onthophagus (Palaeonthophagus) sacharovskii*  
OLSOUIEFF, 1918**

Distribution: Armenia, Georgia, Iran, Turkey.

Material examined: East Azarbaijan prov., Jolfa, IX 2016, 2 exx.

*Paroniticellus festivus* (STEVEN, 1809)

Distribution: Armenia, Azerbaijan, Georgia, Iran, Russia (South European Territory), Turkey, Turkmenistan.

Material examined: Guilan prov., Siahkal, VII 2010, 3 exx.

*Pleurophorus apicipennis* REITTER, 1892

Distribution: Afghanistan, China, Iran, Kyrgyzstan, Kazakhstan, Pakistan, Tajikistan, Turkey, Turkmenistan, Uzbekistan.

Material examined: Razavi Khorasan prov., Quchan (Emam-Gholi), VIII 2017, 1 ex.

*Protaetia (Netocia) asiatica* (FALDERMANN, 1835)

Distribution: Armenia, Azerbaijan, Georgia, Iran.

Material examined: East Azarbaijan prov., Azarshahr (20 km E Nadilu), VIII 2004, 2 exx.

*Tanyproctus (Tanyproctus) persicus*  
(MENETRIES, 1832)

Distribution: Azerbaijan, Georgia, Iran.

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 1 ex.

**Scaptiidae MULSANT, 1856***\*Anaspis (Anaspis) pulicaria* A. COSTA, 1854

Distribution: Albania, Algeria, Austria, Azerbaijan, Bosnia-Herzegovina, Bulgaria, Croatia, France, Georgia, Germany, Great Britain, Georgia, Hungary, Israel, Italy, Macedonia, Morocco, Netherlands, Poland, Portugal, Russia (North European Territory), Spain, Switzerland, Tunisia, Ukraine.

Material examined: Hamadan prov., Malayer (Qalaeh Babakhan), VIII 2018, 2 exx. New record for Iran.

**Throscidae LAPORTE, 1840***Trixagus duvalii* BONVOULOIR, 1859

Distribution: Austria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iran, Italy, Poland, Romania, Russia (South European Territory), Slovakia, Slovenia, Spain, Sweden.

Material examined: Mazandaran prov., Kelardasht, VII 2013, 2 exx.

*Trixagus gracilis* WOLLASTON, 1854

Distribution: Algeria, Armenia, Austria, Azores, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, France, Germany, Great Britain, Greece, Hungary,

Iran, Italy, Madeira, Moldova, Morocco, Portugal, Switzerland, Turkey.

Material examined: East Azarbaijan prov., Kaleibar, VII 2002, 5 exx.

*Trixagus perversus* COBOS, 1958

Distribution: Afghanistan, Iran, Turkmenistan.

Material examined: Northern Khorasan prov., Raz, IV 2013, 1 ex.

*Trixagus turkestanus* REITTER, 1921

Distribution: Azerbaijan, Iran, "Turkestan", "Transcasplia".

Material examined: West Azarbaijan prov., Oshnavieh (Khaled-Abad), VI 2014, 1 ex.

**Trogidae MACLEAY, 1819***Trox litoralis* PITTINO, 1991

Distribution: Albania, Algeria, Austria, Bosnia-Herzegovina, Croatia, Greece, Iran, Italy, Malta, Montenegro, Turkey.

Material examined: East Azarbaijan prov., Arasbaran Forest, VIII 2012, 1 ex.

*Trox morticinii* PALLAS, 1781

Distribution: China, Iran, Kazakhstan, Kyrgyzstan, Russia (South European Territory, East and West Siberia), Turkmenistan.

Material examined: Northern Khorasan prov., Shirvan (Eslam-Abad Karkhaneh Ghand), VIII 2015, 2 exx.,

*Trox perrisi* FAIRMAIRE, 1868

Distribution: Algeria, Austria, Belgium, Belarus, Croatia, Czech Republic, France, Germany, Hungary, Iran, Italy, Morocco, Poland, Portugal, Russia (Central and South European Territory), Slovakia, Slovenia, Spain, Switzerland, Turkey, Ukraine.

Material examined: East Azarbaijan prov., Khomarloo, VII 2009, 2 exx.

*Trox sordidatus* BALTHASAR, 1936

Distribution: Bulgaria, Croatia, Greece, Iran, Syria, Turkey.

Material examined: Kordestan prov., Bijar (Khosrow-Abad), VII 2014, 1 ex.

## Tetratomidae BILLBERG, 1820

\**Eustrophus dermestoides* FABRICIUS, 1792

Distribution: Austria, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Macedonia, Poland, Romania, Slovakia, Slovenia, Spain, Switzerland, Turkey, Ukraine.

Material examined: Zanjan prov., Abhar (Sonbol-Abad), VI 2015, 2 exx. New record for Iran.

*Tetratoma fungorum* Fabricius, 1790

Distribution: Armenia, Austria, Azerbaijan, Belgium, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Hungary, Iran, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Macedonia, Moldova, Netherlands, Norway, Poland, Romania, Russia (South European Territory), Serbia and Montenegro, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine.

Material examined: Guilan prov., Masal (km 4 Masal-Khalkhal Road), VIII 2004, 3 exx.

### Discussion

In the present faunistic study, 41 species from 32 genera and 13 families (Aderidae, Carabidae, Drilidae, Eucnemidae, Geotrupidae, Glaresidae, Melandryidae, Mycetophagidae, Scarabaeidae, Scraptiidae, Throscidae, Trogidae, and Tetratomidae) were collected from different regions of Iran. The finding of nine new country records in this research, together with several catalogues of the Iranian Coleoptera (see references), indicate that the fauna of Coleoptera is very diverse in Iran, and thus it still requires further examination. Iran is the 18<sup>th</sup> largest country in the world and comprises various geographical areas and ecosystems (ZEHZAD & al. 2002; HAKIMZADEH KHOEI & al. 2011); therefore, new data (new country records, new species, and new distributional data) are expected to be found during systematic faunistic researches.

### Acknowledgements

The authors are grateful to J.C. OTERO (Spain), W.B. JĘDRYCKOWSKI (Poland), and the late A. VIGNA TAGLIANTI (Italy) for the identification of some specimens and insightful comments on this research. This research has been supported by Islamic Azad University (Iran), and Poznań University of Life Sciences (Poland).

## STRESZCZENIE

Na podstawie analizy materiału badawczego pochodzącego z badań faunistycznych prowadzonych w różnych prowincjach Iranu podano nowe informacje dotyczące rozmieszczenia 41 gatunków chrząszczy (Coleoptera). Reprezentują one 32 rodzaje należące do 13 rodzin: Aderidae, Carabidae, Drilidae, Eucnemidae, Geotrupidae, Glaresidae, Melandryidae, Mycetophagidae, Scarabaeidae, Scraptiidae, Throscidae, Trogidae i Tetratomidae.

Dziewięć z wykazanych gatunków jest nowych dla Iranu. Są to: *Anaspis (Anaspis) pulicaria* COSTA, 1854, *Berginus tamarisci* WOLLASTON, 1854, *Drilus fulvitarsis* BAUDI, 1872, *Eulagius irregularis* REITTER, 1888, *Eustrophus dermestoides* FABRICIUS, 1792, *Mycetophagus (Ulolendus) ciscaucasicus* SEMENOV, 1899, *Orchesia (Orchesia) micans* PANZER, 1793, *Orchesia (Clinocara) undulata* KRAATZ, 1853 i *Phloiotrya (Phloiotrya) teraw* HAMPE, 1850.

## REFERENCES

- ASLAN E.G., GHAHARI H. 2017. An annotated synopsis of the flea beetles of Iran with new records (Coleoptera: Chrysomelidae: Galerucinae: Alticinae). Transaction American Entomological Society, **143**: 633-667.
- ASLAN E.G., GHAHARI H. 2019. An annotated checklist of Criocerinae (Coleoptera: Chrysomelidae) of Iran. Acta Entomologica Serbica, **24** (2): 1-10.
- AZADBAKHSH S., NOZARI J. 2015. Checklist of the Iranian ground beetles (Coleoptera; Carabidae). Zootaxa, **4024** (1): 1-108.
- BARTOLOZZI L., GHAHARI H., SPRECHER-UEBERSAX E., ZILIOLO M. 2014. A checklist of stag beetles (Coleoptera: Scarabaeoidea: Lucanidae) from Iran. Zootaxa, **3887** (3): 422-436.
- BEAVER R.A., GHAHARI H., SANGUANSUB S. 2016. An annotated checklist of Platypodinae and Scolytinae (Coleoptera: Curculionidae) from Iran. Zootaxa, **4098** (3): 401-441.
- BHARAMAL D.L., KOLI Y.J., BHAWANE G.P. 2014. An inventory of the Coleopteran fauna of Sindhudurg district, Maharashtra, India. International Journal of Current Microbiology and Applied Sciences, **3** (12): 189-193.
- BOROWIEC L., GHAHARI H. 2021. An annotated checklist of the Iranian Cassidinae (Coleoptera: Chrysomelidae). Redia, **104**: 9-19.
- BOUCHARD P., GREBENNICKOV V.V., SMITH A.B.T., DOUGLAS H. 2009. Biodiversity of Coleoptera. (pp. 265-301) [In:] FOOTTIT R.G., ADLER P.H. (eds.) Insect Biodiversity: Science and Society. Wiley-Blackwell, Chichester, XXI + 632 pp.
- BUNALSKI M., SAMIN N., GHAHARI H., HAWKESWOOD T.J. 2014. Contributions to the knowledge the scarab beetles of Golestan province, Northern Iran with checklist of Iranian Scarabaeoidea (Coleoptera). Polish Journal of Entomology, **83**: 141-170.
- DARILMAZ M.C., OSTOVAN H., GHAHARI H. 2017. Annotated checklist of the Hydraenidae (Coleoptera: Staphylinoidea) recorded from Iran. Aquatic Insects, **38** (4): 239-253.
- DARILMAZ M.C., OSTOVAN H., GHAHARI H., ANGUS R.B. 2018. An annotated checklist of Iranian aquatic Polyphaga: Georissidae, Helophoridae, Hydrochidae, Spercheidae, Curculionidae and Erihinidae (Insecta: Coleoptera). Aquatic Insects, **39** (4): 389-406.

- DARILMAZ M.C., OSTOVAN H., GHAHARI H. 2020. An annotated checklist of Iranian Dytiscidae (Insecta: Adephaga: Coleoptera). Transactions of the American Entomological Society, **146** (1): 165-196.
- DROGVALENKO A.N., GHAHARI H. 2021. An annotated checklist of Ciidae (Coleoptera: Tenebrionoidea) of Iran. Zootaxa, **4981** (2): 317-330.
- GENTILI E., OSTOVAN H., GHAHARI H., KOMAREK A. 2018. Annotated checklist of Iranian Hydrophilidae (Coleoptera: Polyphaga: Hydrophiloidea). Aquatic Insects, **39**: 55-88.
- GHAHARI H., BARREDA J.M. 2019. An annotated checklist of Iranian Ripiphoridae (Coleoptera, Tenebrionoidea). Boletín de la Sociedad Andaluza de Entomología, **29**: 1-8.
- GHAHARI H., BEENEN R. 2020. An annotated catalogue of the Iranian Galerucinae sensu stricto (Coleoptera: Chrysomelidae) with taxonomic remarks. Oriental Insects, **55** (1): 10-45.
- GHAHARI H., BOROWIEC L. 2017. A checklist of seed-beetles (Coleoptera: Chrysomelidae: Bruchinae) from Iran. Zootaxa, **4268** (2): 215-237.
- GHAHARI H., CAMPOS-SOLDINI M.P. 2019. An annotated catalogue of blister-beetles (Coleoptera: Tenebrionoidea: Meloidae) of Iran. Entomofauna, **40** (1): 59-138.
- GHAHARI H., CECCOLINI F., CIANFERONI F. 2020. Annotated catalogue of the superfamily Dascilloidea (Coleoptera: Elateriformia) of Iran. Entomological News, **129** (4): 335-347.
- GHAHARI H., COLONNELLI E. 2019a. An Annotated Catalogue of the Iranian Attelabidae (Coleoptera: Curculionoidea). Journal Entomological Research Society, **21** (2): 225-241.
- GHAHARI H., COLONNELLI E. 2019b. An annotated checklist of the Iranian Anthribidae and Nemonychidae (Coleoptera: Curculionoidea). Zootaxa, **4706** (4): 561-568.
- GHAHARI H., COLONNELLI E. 2020. An annotated checklist of the Iranian Brentidae (Coleoptera: Curculionoidea). Zootaxa, **4759** (2): 151-178.
- GHAHARI H., HÁVA J. 2015. An annotated checklist of the Iranian carrion beetles (Coleoptera: Staphylinidae: Silphidae). Linzer Biologische Beiträge, **47** (2): 1501-1511.
- GHAHARI H., HÁVA J. 2017. A checklist of the Dermestidae (Coleoptera: Bostrichoidea) of Iran. The Coleopterists Bulletin, **71** (3): 612-626.
- GHAHARI H., MAZUR S., OSTOVAN H. 2017. A checklist of the Histeridae (Coleoptera: Histeroidea) of Iran. The Coleopterists Bulletin, **71** (3): 595-611.
- GHAHARI H., NIKODYM M. 2018. An annotated checklist of Glaphyridae (Coleoptera: Scarabaeidae) of Iran. Linzer Biologische Beiträge, **50** (2): 1171-1193.
- GHAHARI H., VOLKOVITSH M., BELLAMY C.L. 2015. An annotated catalogue of the Buprestidae of Iran (Coleoptera: Buprestoidea). Zootaxa, **3984** (1): 1-141.
- HAKIMZADEH KHOEI M., KAYA M., ALTINDAG A. 2011. New records of Rotifers from Iran with biogeographic considerations. Turkish Journal of Zoology, **35**: 395-402.
- JÄCH M.A., OSTOVAN H., GHAHARI H., PÜTZ A. 2016. Annotated checklist of Byrrhoidea (Coleoptera: Byrrhidae, Elmidae, Limnichidae, Psephenidae) from Iran. Elytron, **28**: 65-78.
- KAZMI S.I., RAMAMURTY V.V. 2004. Coleopteran fauna from the Thar Desert of Rajasthan. Zoos' Print, **19** (4): 1447-1448.
- KLAUSNITZER B., GHAHARI H. 2019. An annotated checklist of Scirtoidea (Coleoptera) of Iran. Redia, **102**: 61-67.
- LASÓN A., GHAHARI H. 2013. A checklist of the Kateretidae and Nitidulidae of Iran (Coleoptera: Cucujoidea). Zootaxa, **3746** (1): 101-122.
- LAWRENCE J.F., ŚLIPIŃSKI A., SEAGO A.E., THAYER M.K., NEWTON A.F., MARVALDI A.E. 2011. Phylogeny of the Coleoptera based on morphological characters of adults and larvae. Annales Zoologici, **61** (1): 1-217.
- LEGALOV A.A., GHAHARI H., ARZANOV Y.G. 2010. Annotated catalogue of curculionid-beetles (Coleoptera: Anthribidae, Rhynchitidae, Attelabidae, Brentidae, Brachyceridae, Dryophthoridae and Curculionidae) of Iran. Amurian Zoological Journal, **2** (3): 191-244.
- LIU L.Y., GHAHARI H., BEAVER R.A. 2016. An annotated synopsis of the powder post beetles of Iran (Coleoptera: Bostrichoidea: Bostrichidae). Journal of Insect Biodiversity, **4** (14): 1-22.
- LÖBL I., LÖBL D. (eds.) 2016. Catalogue of Palaearctic Coleoptera. Volume 3, Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea, Byrrhoidea. Revised and updated edition. Leiden, Boston: Brill, 961 pp.
- LÖBL I., LÖBL D. (eds.) 2017. Catalogue of Palaearctic Coleoptera. Vol. 1. Archostemata – Myxophaga – Adephaga. Brill, 1443 pp.
- LÖBL I., SMETANA A. (eds.) 2007. Catalogue of Palaearctic Coleoptera. Vol. 4, Elateroidea, Derodontoidea, Bostrichoidea, Lymexyloidea, Cleroidea, Cucujoidea. Apollo Books, Stenstrup, 935 pp.
- LÖBL I., SMETANA A. (eds.) 2008. Catalogue of Palaearctic Coleoptera, Vol. 5. Tenebrionoidea. Stenstrup: Apollo Books, 670 pp.
- LYUBARSKY G.Y., GHAHARI H. 2020. An annotated checklist for the Iranian Erotylidae (Coleoptera: Cucujoidea). Entomological News, **129** (4): 244-256.
- MASCAGNI A., JÄCH, M.A., OSTOVAN H., GHAHARI H. 2016. Annotated checklist of Dryopidae and Heteroceridae (Coleoptera: Byrrhoidea) of Iran. Zootaxa, **4144** (3): 354-364.
- MIRUTENKO V., GHAHARI H. 2016. An annotated checklist of Malachiidae (Coleoptera: Cleroidea) from Iran. Zootaxa, **4162** (2): 331-346.
- MIRUTENKO V., GHAHARI H. 2018. Contribution to study of the superfamily Cleroidea (Coleoptera) from Iran and adjacent countries: a checklist of Melyridae, Prionoceridae and Trogossitidae. Zootaxa, **4378** (1): 040-048.
- NICHOLSA E., SPECTOR S., LOUZADA J., LARSEN T., AMEZQUITA S., FAVILA M.E. 2008. Ecological functions and ecosystem services provided by Scarabaeinae dung beetles. Biological Conservation, **141**: 1461-1474.
- NOVÁK V., GHAHARI H. 2015. A checklist of comb-clawed beetles (Coleoptera: Tenebrionidae: Alleculinae) from Iran. Zootaxa, **4027** (1): 101-116.
- OTERO J.C., GHAHARI H., ANGELINI F. 2017. Contribution to the knowledge of cryptophagids (Coleoptera: Cryptophagidae) from Iran. Redia, **100**: 45-51.
- OTERO J.C., GHAHARI H. 2017. A checklist of Latridiidae (Coleoptera: Cucujoidea) of Iran. Redia, **100**: 119-124.
- OTERO J.C., GHAHARI H. 2020. An updated catalogue of the Iranian Zopheridae (Coleoptera: Tenebrionoidea). Redia, **103**: 41-45.
- PARVEZ A., SRIVASTAVA M. 2010. A short-term surveillance of coleopteran fauna in an agro-ecosystem near Bikaner (Western Rajasthan), India. Biological Forum – An International Journal, **2** (1): 23-29.

PERREAU M., GHAFARI H., ANGELINI F. 2017. A checklist of Leiodidae (Coleoptera: Staphylinoidea) of Iran. *Zootaxa*, **4286** (1): 70-92.

PLATIA G., GHAFARI H. 2016. An annotated checklist of click-beetles (Coleoptera, Elateridae) from Iran. *Zootaxa*, **4137** (2): 239-275.

PLONSKI I.S., GHAFARI H. 2018. An annotated checklist of the Iranian Dasytidae and Rhadalidae (Coleoptera: Cleroidea). *Zootaxa*, **4472** (3): 452-470.

RUZZIER E., GHAFARI H., HORÁK J. 2017. A checklist of the Iranian Mordellidae (Coleoptera: Tenebrionoidea). *Zootaxa*, **4320** (1): 146-158.

TELNOV D., GHAFARI H. 2018. An annotated checklist of the Anthicidae and pediline Pyrochroidae (Insecta: Coleoptera) of Iran, with thirteen new country records. *Zootaxa*, **4497** (4): 451-491.

VIÑOLAS A., GHAFARI H. 2017. A checklist of Ptinidae (Coleoptera, Bostrichoidea) of Iran. *Redia*, **100**: 139-147.

ZAPPI I., GHAFARI H. 2016. A checklist of the Cleridae of Iran with new data (Coleoptera: Cleroidea). *Zootaxa*, **4147** (4): 403-420.

ZEHZAD B., KIABI B.H., MADJNOONIAN H. 2002. The natural areas and landscape of Iran: an overview. *Zoology in the Middle East*, **26**: 7-10.

*Wpłynęło: 17 października 2023  
Zaakceptowano: 15 listopada 2023*