

## ARTIGO / ARTÍCULO / ARTICLE

A survey of the rove beetle fauna (Coleoptera, Staphylinidae)  
from Southern Iran.Azadeh Karimifam<sup>1, 2</sup>, Hadi Ostovan<sup>3</sup> & Majid Fallahzadeh<sup>4</sup><sup>1</sup> Department of Entomology, Science and Research Branch, Islamic Azad University, Fars (IRAN).<sup>2</sup> Department of Entomology, Marvdasht Branch, Islamic Azad University, Marvdasht (IRAN). e-mail: azadehkarimifam@yahoo.com<sup>3</sup> Department of Entomology, Shiraz Branch, Islamic Azad University, Shiraz (IRAN). e-mail: ostovan2001@yahoo.com<sup>4</sup> Department of Entomology, Jahrom Branch, Islamic Azad University, Jahrom (IRAN). e-mail: mfalahm@yahoo.com

**Abstract:** A list of species of the rove beetles (Coleoptera, Staphylinidae) collected in the province of Fars in the south of Iran is given. It includes 21 species belonging to 15 genera within 5 subfamilies (Aleocharinae, Oxytelinae, Paederinae, Staphylininae, and Tachyporinae). Fifteen species are recorded for the first time from the studied area. Available data on distribution of each species in Iran are also included.

**Key words:** Coleoptera, Staphylinidae, rove beetles, pitfall trap, distribution, faunistics, Iran.

**Resumen:** Un estudio de la fauna de estafilínidos (Coleoptera, Staphylinidae) del sur de Irán. Se presenta una lista de especies de los estafilínidos (Coleoptera, Staphylinidae) capturados en la provincia de Fars en el sur de Irán. Incluye 21 especies pertenecientes a 15 géneros de 5 subfamilias (Aleocharinae, Oxytelinae, Paederinae, Staphylininae y Tachyporinae). Quince especies son citadas por primera vez del área estudiada. Se incluyen también los datos disponibles sobre la distribución en Irán de cada especie.

**Palabras clave:** Coleoptera, Staphylinidae, estafilínidos, trampa de caída, distribución, faunística, Irán.

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## Introduction

The family Staphylinidae, commonly known as rove beetles, is one of the largest and most abundant families within the order Coleoptera, including over 60,000 described species known throughout the world after adding the former families Scydmaenidae, Pselaphidae, and Scaphidiidae as subfamilies according to recent changes in classification (Thayer 2005; Grebennikov & Newton 2009). Rove beetles are found in a wide variety of terrestrial and semi-aquatic habitats. Most widely known staphylinid species are found in association with decaying materials. However, some are predators of other invertebrates or parasites of birds and mammals. Some species are inquilines of social insects such as ants and termites. Rove beetles generally occur in fungi, leaf litter, caves, and various other habitats (Anlaş 2009; Japoshvili & Anlaş 2011). Until now, regarding the Iranian insect fauna, over 685 valid staphylinid species and subspecies have been recorded (Anlaş & Newton 2010; Assing 2011; Schülke 2012; Tabadkani et al. 2015).

The aim of the current work is to provide detailed information on the distribution of rove beetle species in the province of Fars and to make an additional contribution to the knowledge of the Iranian rove beetle fauna.

## Material and methods

A part of the specimens were collected using pitfall traps. Some specimens were also collected through direct monitoring of plant leaf litter, decaying materials and dungs in different locations of the province of Fars in southern Iran. The voucher specimens are deposited in the Department of Entomology, College of Agriculture, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran. The taxonomic arrangement used in this paper was adapted from Newton & Thayer (1992, 1995), Herman (2001), and Smetana (2004).

## Results

A total of 21 species and subspecies belonging to 15 genera within 5 subfamilies were collected and identified. The subfamilies, genera and species are listed in alphabetic order.

### Family Staphylinidae Latreille, 1802

#### Subfamily Aleocharinae Fleming, 1821

##### Tribe Aleocharini Fleming, 1821

##### Genus *Aleochara* Gravenhorst, 1802

##### *Aleochara bipustulata* (Linnaeus, 1761)

**Material examined:** Province of Fars: Akbar Abad (29°41'04"N, 52°33'14"E), 2 exs., 31.06.2013, A. Karimifam leg.; Shiraz: Bagh e Jannat (29°36'42"N, 52°28'10"E), 5 exs., 12.04.2013, leg. A. Karimifam leg.; Zarqan (29°43'30"N, 52°52'10"E), 2 exs., 04.05.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of East Azarbaijan, Lorestan, Tehran, Mazandaran, and Fars (Jarrige 1971; Likovský 1981; Maus 1998; Smetana 2004; Anlaş & Newton 2010).

##### Tribe Athetini Casey, 1910

##### Genus *Aloconota* C.G. Thomson, 1858

##### *Aloconota gregaria* (Erichson, 1839)

**Material examined:** Province of Fars: Kaftarak (29°35'03"N, 52°40'21"E), 2 exs., 10.05.2013, A. Karimifam leg.; Zarqan (29°47'33"N, 52°43'56"E), 3 exs., 16.05.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of West Azarbaijan, Golestan, Khorasan, Kordestan, Isfahan, and Fars (Scheerpeltz 1961b; Jarrige 1971; Anlaş & Newton 2010; Assing 2011).

##### Genus *Nehemitropia* Lohse, 1971

##### *Nehemitropia lividipennis* (Mannerheim, 1830)

**Material examined:** Province of Fars: Akbar Abad (29°41'04"N, 52°33'14"E), 4 exs., 27.05.2013, A. Karimifam leg.; Shiraz (29°43'53"N, 52°35'33"E), 2 exs., 29.08.2012, A. Karimifam leg.

**Distribution in Iran:** Province of Tehran (Boháč 1981; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

Tribe Falagriini Mulsant & Rey, 1873

Genus *Falagria* Leach, 1819

*Falagria splendens* Kraatz, 1858

**Material examined:** Province of Fars: Akbar Abad (29°41'04"N, 52°33'14"E), 3 exs., 04.05.2013, A. Karimifam leg.

**Distribution in Iran:** No locality cited (Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

Subfamily Oxytelinae Fleming, 1821

Tribe Blediini Ádám, 2001

Genus *Bledius* Leach, 1819

*Bledius spectabilis* Kraatz, 1857

**Material examined:** Province of Fars: Shiraz: Bagh e Eram (29°38'03"N, 52°31'32"E), 4 exs., 26.03.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of Khuzestan and Hormozgan (Scheerpeltz 1961a; Horion 1963; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

Tribe Coprophilini Heer, 1839

Genus *Coprophilus* Latreille, 1829

*Coprophilus pennifer* (Motschulsky, 1845)

**Material examined:** Province of Fars: Daryan (29°33'53"N, 52°54'44"E), 8 exs., 08.08.2012, A. Karimifam leg.

**Distribution in Iran:** No locality cited (Scheerpeltz 1960, 1963a; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

Tribe Oxytelini Fleming, 1821

Genus *Anotylus* C.G. Thomson, 1859

*Anotylus inustus* (Gravenhorst, 1806)

**Material examined:** Province of Fars: Zarqan (29°41'48"N, 52°33'26"E), 3 exs., 04.05.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of West Azarbaijan and East Azarbaijan (Fauvel 1872; Horion 1963; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

*Anotylus schatzmayri* (Koch, 1937)

**Material examined:** Province of Fars: Shiraz: Tang e Shorkh (29°42'N, 52°14'E), 18 exs., 13.05.2013, A. Karimifam leg.

**Distribution in Iran:** Province of Mazandaran (Schülke 2012). New record for the fauna of the province of Fars.

**Genus *Platystethus* Mannerheim, 1830**

***Platystethus cornutus* (Gravenhorst, 1802)**

**Material examined:** Province of Fars: Shiraz (29°36'26"N, 52°31'09"E), 7 exs., 30.05.2013, A. Karimifam leg.

**Distribution in Iran:** Province of Kordestan and North Iran (Kolenati 1846; Fauvel 1872; Scheerpeltz 1960, 1963a; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

***Platystethus degener* Mulsant & Rey, 1878**

**Material examined:** Province of Fars: Zarqan (29°40'57"N, 52°52'32"E), 4 exs., 06.05.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of Fars and East Azarbaijan (Atamehr et al. 2004; Schülke 2009; Anlaş & Newton 2010.)

***Platystethus nitens* (C.R. Sahlberg, 1832)**

**Material examined:** Province of Fars: Zarqan (29°38'45"N, 52°57'48"E), 6 exs., 15.04.2013, A. Karimifam leg.

**Distribution in Iran:** No locality cited (Fauvel 1872; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

**Subfamily Paederinae Fleming, 1821**

**Tribe Paederini Fleming, 1821**

**Genus *Paederus* Fabricius, 1775**

***Paederus littoralis ilsae* Bernhauer, 1932**

**Material examined:** Province of Fars: Daryan (29°33'53"N, 52°54'44"E), 4 exs., 18.08.2012, A. Karimifam leg.

**Distribution in Iran:** Provinces of Ardabil, Fars, Guilan, Kerman, Kordestan, and Mazandaran (Scheerpeltz 1957, 1961a, 1963a; Jarrige 1971; Coiffait 1982; Nikbakhtzadeh & Sadeghiani 1999; Tirgari & Nikbakhtzadeh 2002; Zargari et al. 2003; Smetana 2004; Abbasipour & Taghavi 2005; Nikbakhtzadeh & Tirgari 1999, 2008; Anlaş & Newton 2010).

**Subfamily Staphylininae Latreille, 1802**

**Tribe Staphylinini Latreille, 1802**

**Genus *Gabronthus* Tottenham, 1955**

***Gabronthus maritimus* (Motschulsky, 1858)**

**Material examined:** Province of Fars: Zarqan (29°41'48"N, 52°33'26"E), 3 exs., 04.05.2013, A. Karimifam leg.

**Distribution in Iran:** Province of Mazandaran and South Iran (Scheerpeltz 1963b; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

**Genus *Ocypus* Leach, 1819*****Ocypus curtippennis* Motschulsky, 1849****Material examined: Province of Fars:**

Akbar Abad (29°41'04"N, 52°33'14"E), 18 exs., 07.10.2012, A. Karimifam leg.; Bajgah (29°43'19"N, 52°35'16"E), 3 exs., 07.05.2013, A. Karimifam leg.; Qalat (29°49'32"N, 52°20'47"E), 2 exs., 26.08.2012, A. Karimifam leg.

**Distribution in Iran:** No locality cited (Coiffait 1964, 1971, 1974; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

***Ocypus mus* (Brullé, 1832)**

**Material examined: Province of Fars:** Akbar Abad (29°41'04"N, 52°33'14"E), 32 exs., 27.11.2012, A. Karimifam leg.

**Distribution in Iran:** Provinces of Mazandaran, Guilan, and North Iran (Herman 2001; Smetana 1971, 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

***Ocypus helleni* (G. Müller, 1926)**

**Material examined: Province of Fars:** Kohmareh Sorkhi (29°31'41"N, 52°11'42"E), 6 exs., 05.08.2012, A. Karimifam leg.

**Distribution in Iran:** Provinces of East Azarbaijan and Khorasan (Müller 1943; Scheerpeltz 1963a; Smetana 1971, 2004; Herman 2001; Anlaş & Newton 2010.). New record for the fauna of the province of Fars.

**Genus *Philonthus* Stephens, 1829*****Philonthus concinnus* (Gravenhorst, 1802)**

**Material examined: Province of Fars:** Shiraz: Bagh e Jannat (29°36'42"N, 52°28'10"E), 7 exs., 31.06.2013, A. Karimifam leg.

**Distribution in Iran:** Province of Mazandaran, North and South Iran (Gridelli 1922; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

**Genus *Quedius* Stephens, 1829*****Quedius scintillans* (Gravenhorst, 1806)**

**Material examined: Province of Fars:** Zarqan (29°40'04"N, 52°55'54"E), 5 exs., 04.04.2013, A. Karimifam leg.

**Distribution in Iran:** No locality cited (Fauvel 1874; Gridelli 1925; Horion 1965; Coiffait 1978; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

**Tribe Xantholinini Erichson, 1839****Genus *Gauropterus* C.G. Thomson, 1860*****Gauropterus fulgidus* (Fabricius, 1787)**

**Material examined: Province of Fars:** Shiraz (29°36'26"N, 52°31'09"E), 26 exs., 16.04.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of Golestan, Khorasan, Isfahan, Kerman, Yazd, and Fars (Herman 2001; Smetana 2004; Assing 2007; Anlaş & Newton 2010; Assing 2011).

## Subfamily Tachyporinae MacLeay, 1825

### Genus *Tachyporus* Gravenhorst, 1802

#### *Tachyporus hypnorum* (Fabricius, 1775)

**Material examined:** Province of Fars: Zarqan (29°50'43"N, 52°46'18"E), 4 exs., 09.04.2013, A. Karimifam leg.

**Distribution in Iran:** Provinces of Golestan, Tehran, and Sistan & Baluchestan (Fauvel 1875; Scheerpeltz 1961a; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010). New record for the fauna of the province of Fars.

#### *Tachyporus nitidulus* (Fabricius, 1781)

**Material examined:** Province of Fars: Shiraz (29°43'53"N, 52°35'33"E), 5 exs., 29.08.2012, A. Karimifam leg.; 24 exs., same data, 30.05.2013, A. Karimifam leg.

**Distribution in Iran:** Province of Fars (Fauvel 1875; Jarrige 1971; Herman 2001; Smetana 2004; Anlaş & Newton 2010).

## Discussion

In total, 21 species and subspecies belonging to 15 genera were listed resulting reported for the first time from the province of Fars 15 species of rove beetles. Before our study, a total of 60 species and subspecies of Staphylinidae had been recorded from the province of Fars (see Anlaş & Newton 2010), so this number of species is now increased to 75 species and subspecies. In the current study, however, a large number of female specimens of other genera and subfamilies of rove beetles were collected but not yet identified to species level. So far, only 685 valid staphylinid species and subspecies have been reported from Iran (Anlaş & Newton 2010; Assing 2011; Schülke 2012; Tabadkani et al. 2015) while in an adjacent country such as Turkey over 1600 species are recorded (Anlaş, 2009; Japoshvili & Anlaş, 2011). Although in recent years the known number of rove beetle species from Iran has been relatively increased (Anlaş & Newton 2010; Assing 2011), this fauna is still poorly known. Moreover, not all regions of the country have been well investigated, so we do believe that a large number of species are still to be discovered. In addition to faunistic surveys, further studies on the biology and behaviour of rove beetles in Iran are needed.

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