

# A preliminary checklist of terrestrial isopods (Isopoda; Oniscidea) from Iran

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(Received: 23 December 2017; Accepted: 10 October 2018)

In the present study, a species list of identified terrestrial isopods in the fauna of Iran is provided based on the literature records. The list contains 45 species belonging to 25 genera and 11 families, of which two genera and 21 species are endemic to the country. Distributional data is provided for each species. Embracing 19 species, the family Agnaridae Schmidt, 2003 contain the highest number of species in Iran. In the near future several undescribed species will presumably be added to the list.

**Key words:** *Oniscidea, terrestrial isopods, checklist, Iran.*

## INTRODUCTION

Terrestrial isopods are among the most familiar arthropods with a worldwide distribution in various terrestrial habitats (Oliver & Meehan, 1993). With more than 3700 species (Sfenthourakis & Taiti 2015), they are the most successful group of Crustacea truly conquered the terrestrial habitats (Hornung 2011; Broly *et al.* 2013).

The first Iranian terrestrial isopods were reported by Budde-Lund (1885). Afterward, several works were published on this taxon. Schmalzfuss (1986) was the most important contributor to the knowledge of terrestrial isopods from Iran, having described and/or reported 13 species from north and north-western parts of the country. Several works have been also published in recent years (Khalaji-Pirbalouti & Wägele, 2010; Kashani *et al.*, 2010, 2013, 2016, 2017, 2018; Kashani & Sari, 2012; Kashani 2014a, 2014b, 2015, 2016a, 2016b; Eshaghi *et al.* 2015; Kashani & Hamidnia 2016), however, the terrestrial isopods of Iran are still poorly known.

The species list presented here is definitely very far from the total number of terrestrial isopods presented in Iran, actually because so many collected species are waiting to be described, and that many parts of the country are not investigated yet. Up to now, 45 species (excluding *Porcellio rubidus* Budde-Lund, 1885 *nomen oblitom*) have been reported from Iran, belonging to 25 genera and 11 families. According to the current knowledge, two genera and 21 species are endemic to the country.

## MATERIAL AND METHODS

The present list is based on the revision of literatures published on the terrestrial isopods from Iran. The taxa known only from Iran are marked with an asterisk (\*). The distributional data outside Iran for each species were taken from Schmalzfuss (2003b). The classification and the valid names of species follow Schmidt (2008) and Schmalzfuss (2003b), respectively.

## List of Iranian Oniscidea

### LIGIIDAE

A. Ligiidae Leach, 1814

Genus *Ligia* Fabricius, 1798

*Ligia persica* Khalaji-Pirbalouty & Wägele, 2010,

**Distribution:** Persian Gulf: Iran; United Arab Emirates; Kuwait; Oman.

**References for Iran:** Khalaji-Pirbalouty & Wägele (2010); Taiti & Checcucci (2011).

Genus *Ligidium* Brandt, 1833

*Ligidium hypnorum* (Cuvier, 1792)

**Distribution:** Europe and western Asia; northern Iran

**References for Iran:** Schmalfuss (1986)

### TYLIDAE

A. Tylidae Dana, 1852

Genus *Tylos* Audouin, 1826

*Tylos maindroni* Giordani Soika, 1954

**Distribution:** Persian Gulf: Kuwait; Oman; Iran: Bushehr.

**References for Iran:** Taiti & Ferrara (1991), Taiti *et al.* (2000)

### SYNOCHETA

A. Trichoniscidae Sars, 1899

Genus *Psachonethes* Borutzky, 1969

\**Psachonethes elbursanus* Schmalfuss, 1986

**Distribution:** Northern Iran: Alborz Mountains.

**References for Iran:** Schmalfuss (1986)

### CRINOCHETA

A. Olibrinidae Budde-Lund, 1913

Genus *Olibrinus* Budde-Lund, 1913

*Olibrinus antennatus* (Budde-Lund, 1902)

**Distribution:** Somalia; Malay Peninsula; southern Iran

**References for Iran:** Kashani (2014a)

B. Philosciidae Kinahan, 1857

Genus *Chaetophiloscia* Verhoeff, 1908

*Chaetophiloscia hastata* Verhoeff, 1929

**Distribution:** Coastal regions of the northeastern Mediterranean from Italy to Cyprus and of the Black Sea; Azerbaijan; Iraq; Iran.

**References for Iran:** Kashani (2014a)

C. Eubelidae Budde-Lund, 1899

Genus *Koweitoniscus* Vandel, 1975

\**Koweitoniscus shafiei* Kashani, 2018

**Distribution:** southern Iran.

**References for Iran:** Kashani *et al.* (2018)

*Koweitoniscus tamei* (Omer-Cooper, 1923)

**Distribution:** Syria; Iraq; Kuwait; Iran.

**References for Iran:** Kashani (2014a); Kashani *et al.* (2018)

Genus *Periscyphis* Gerstaecker, 1873

*Periscyphis vittatus* Omer-Cooper, 1926

**Distribution:** Eritrea; Djibouti; Mozambique; Somalia; Arabian Peninsula; Socotra Island; Pakistan; Iran.

**References for Iran:** Kashani (2014a); Kashani *et al.* (2018)

Genus *Somalodillo* Taiti & Ferrara, 1982

*Somalodillo* sp.

**Distribution:** southern Iran.

**References for Iran:** Kashani *et al.* (2018)

D. Trachelipodidae Strouhal, 1953

Genus *Trachelipus* Budde-Lund, 1908

\**Trachelipus azerbaijani* Schmalfuss, 1986

**Distribution:** NW-Iran: eastern Azerbaijan.

**References for Iran:** Schmalfuss (1986)

*Trachelipus ensicolorum* Verhoeff, 1949

**Distribution:** Turkey; Armenia; NW-Iran.

**References for Iran:** Vandel (1980)

\**Trachelipus pieperi* Schmalfuss, 1986

**Distribution:** northern Iran.

**References for Iran:** Schmalfuss (1986)

Genus \**Pseudorthometopon* Schmalfuss, 1986

\**Pseudorthometopon martensi* Schmalfuss, 1986

**Distribution:** northern Iran.

**References for Iran:** Schmalfuss (1986)

E. Cylisticidae Verhoeff, 1949

Genus *Cylisticoides* Schmalfuss, 2003

*Cylisticoides angulatus* Schmalfuss, 2003

**Distribution:** southeastern Azerbaijan; northern Iran.

**References for Iran:** Schmalfuss (2003a), Kashani (2016a)

\**Cylisticoides rotundifrons* (Schmalfuss, 1986)

**Distribution:** Northern Iran.

**References for Iran:** Schmalfuss (1986, 2003a), Kashani (2016a)

Genus *Cylisticus* Schnitzler, 1853

\**Cylisticus masalicus* Kashani, 2016

**Distribution:** northern Iran.

**References for Iran:** Kashani (2016a)

F. Agnaridae Schmidt, 2003

Genus *Agnara* Budde-Lund, 1908

*Agnara baselii* Kashani, 2016

**Distribution:** northern Iran.

**References for Iran:** Kashani (2016b)

*Agnara tarabomii* Kashani, 2016

**Distribution:** northern Iran.

**References for Iran:** Kashani (2016b)

Genus *Hemilepistoides* Borutzky, 1945

*Hemilepistoides messerianus* Borutzky, 1945

**Distribution:** southern Turkmenia; northern Iran.

**References for Iran:** Kashani (2015)

Genus *Hemilepistus* Budde-Lund, 1879

*Hemilepistus afghanicus* Borutzky, 1958

**Distribution:** Afghanistan; Pakistan; Turkmenia; eastern Iran.

**References for Iran:** Kashani *et al.* (2010)

*Hemilepistus cristatus* Budde-Lund, 1885

**Distribution:** southern Turkmenia; northeastern Iran.

**References for Iran:** Budde-Lund (1885), Lincoln (1970), Kashani *et al.* (2010)

*Hemilepistus elongatus* Budde-Lund, 1885

**Distribution:** Transcaucasus"; easternmost Turkey: Ararat; Turkmenia, Iran.

**References for Iran:** Kashani & Sari (2012), Eshaghi *et al.* (2015)

*Hemilepistus klugii* (Brandt, 1833)

**Distribution:** Azerbaidjan; Iran.

**References for Iran:** Budde-Lund (1885), Lincoln (1970), Kashani *et al.* (2010), Eshaghi *et al.* (2015)

\**Hemilepistus schirasi* Lincoln, 1970

**Distribution:** southern Iran.

**References for Iran:** Lincoln (1970), Borutzky (1978), Kashani *et al.* (2010)

\**Hemilepistus taftanicus* Kashani, Sari & Hosseinie, 2010

**Distribution:** southeastern Iran.

**References for Iran:** Kashani *et al.* (2010)

Genus *Mongoloniscus* Verhoeff, 1930

\**Mongoloniscus persicus* Kashani, 2014

**Distribution:** Iran.

**References for Iran:** Kashani (2014b), Eshaghi *et al.* (2015)

Genus *Protracheoniscus* Verhoeff, 1917

*Protracheoniscus darevskii* Borutzky, 1975

**Distribution:** southern Armenia; western Iran.

**References for Iran:** Kashani (2014b)

\**Protracheoniscus ehsani* Kashani, 2014

**Distribution:** Iran.

**References for Iran:** Kashani (2014b), Eshaghi *et al.* (2015), Kashani & Hamidnia (2016)

\**Protracheoniscus faramarzi* Kashani, Dashan & Sadeghi, 2016

**Distribution:** southern Iran

**References for Iran:** Kashani *et al.* (2016)

\**Protracheoniscus gakalicus* Kashani, Malekhosseinie & Sadeghi, 2013

**Distribution:** southern Iran

**References for Iran:** Kashani *et al.* (2013)

\**Protracheoniscus golestanicus* Kashani & Hamidnia, 2016

**Distribution:** northern Iran

**References for Iran:** Kashani & Hamidnia (2016)

\**Protracheoniscus kiabii* Kashani, 2016

**Distribution:** northern Iran

**References for Iran:** Kashani & Hamidnia (2016)

*Protracheoniscus major* (Dollfus, 1903)

**Distribution:** from SE-Germany to central Asia; Iran.

**References for Iran:** Kashani (2014a), Eshaghi *et al.* (2015), Kashani & Hamidnia (2016)

\**Protracheoniscus sarii* Eshaghi, Kiabi & Kashani (2015)

**Distribution:** Central Iran.

**References for Iran:** Eshaghi *et al.* (2015)

*Protracheoniscus* sp.

**Distribution:** Northern Iran

**References for Iran:** Schmalfuss (1986)

G. Porcellionidae Brandt & Ratzeburg, 1831

Genus *Agabiformius* Verhoeff, 1908

*Agabiformius lentus* (Budde-Lund, 1885)

**Distribution:** Inhabitant of the Mediterranean coasts, by human activities introduced to many other parts of the world.

**References for Iran:** Kashani *et al.* (2013)

Genus \**Brevurus* Schmalfuss, 1986

\**Brevurus masandaranus* Schmalfuss, 1986

**Distribution:** northern Iran.

**References for Iran:** Schmalfuss (1986)

Genus *Porcellio* Latreille, 1804

*Porcellio evansi* Omer-Cooper, 1923

**Distribution:** SE-Turkey; northern Syria; Iraq; central and eastern Arabian Peninsula; Iran.

**References for Iran:** Schmalfuss (1992), Taiti *et al.* (2000); Kashani *et al.* (2017)

\**Porcellio mehrdadi* Kashani, Abedini & Hatami, 2017

**Distribution:** southwestern Iran.

**References for Iran:** Kashani *et al.* (2017)

*Porcellio obsoletus* Budde-Lund, 1885

**Distribution:** central Italy; Yugoslavia; Greece; SW-Turkey; Cyprus; Lebanon; northern Syria; Crimea; northern Iran.

**References for Iran:** Schmalfuss (1992); Kashani *et al.* (2017)

*Porcellio rubidus* Budde-Lund, 1885 *nomen oblitom* (= *P. evansi*)

**Distribution:** Iran: Shiraz.

**References for Iran:** Budde-Lund (1885), Kashani *et al.* (2017).

Genus *Porcellionides* Miers, 1877

*Porcellionides pruinosus* (Brandt, 1833)

**Distribution:** Originally Mediterranean, synanthropically cosmopolitan.

**References for Iran:** Kashani *et al.* (2013)

Genus *Proporcellio* Verhoeff, 1907

*Proporcellio* sp.

**Distribution:** Southern Iran

**References for Iran:** Kashani *et al.* (2013)

H. Armadillidiidae Brandt, 1833

Genus *Armadillidium* Brandt, 1833

*Armadillidium vulgare* (Latreille, 1804)

**Distribution:** autochthonous in the Mediterranean region, by human activities introduced to all parts of the world.

**References for Iran:** Kashani (2014a)

Genus *Schizidium* Verhoeff, 1901

\**Schizidium persicum* Schmalfuss, 1986

**Distribution:** northern Iran.

**References for Iran:** Schmalfuss (1986)

#### ACKNOWLEDGMENTS

I cordially thank Dr. Helmut Schmalfuss (Stuttgart) and Dr. Stefano Taiti (Florence) for their advice and confirming the identification of some species.

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