

Faunistic study of spiders in Khorasan Province, Iran (Arachnida: Araneae)

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The spiders of Iran are still very incompletely known. As a result of the study of spider fauna in different localities of Khorasan Province and other studies which have been done by other workers a total of 26 families, 63 genera and 95 species are recorded from these areas. Distribution in Khorasan Province and in the world, field and some taxonomic notes are given for each species. Available biological or ecological data are provided.

Key Words: Araneae, spider fauna, Khorasan, Iran

INTRODUCTION

The order Araneae ranks seventh in global diversity after the five insect orders (Coleoptera, Hymenoptera, Lepidoptera, Diptera, and Hemiptera) and Acarina among the Arachnids in terms of species described (Coddington and Levi, 1991). Because spiders are not studied thoroughly estimation of total diversity is very difficult. On the basis of records, the faunas of Western Europe, especially England, and Japan are completely known, and areas such as South America, Africa, the Pacific region and the Middle East are very poorly known (Coddington and Levi, 1991). Platnick in his World Spider Catalog (2005) has estimated that there are about 38000 species worldwide, arranged in 110 families. Despite this diversity among spiders, limited studies could be found in literature on spider fauna of Iran. Indeed, taxonomic and faunistic studies on spiders of Iran have begun during the last 10 years. Before that our knowledge of Iranian spiders was limited to the studies of some foreign authors such as Roewer (1955); Levi (1959); Kraus & Kraus (1989); Brignoli (1970, 72, 80, 81); Senglet (1974); Wunderlich (1995); Levy & Amitai (1982); Logunov (1999,2001,2004); Logunov et al (1999, 2002); Saaristo et al(1996) . This fact alone indicates that the taxonomy and faunistics of spiders in Iran are far from being satisfactory known.

The materials listed here are preserved in the Museum of Zoology, Ferdowsi University of Mashhad, have been collected by the author from different localities of Khorasan Province, during the last 10 years. Also, I have tried to provide some additional information about the other spiders which have been reported from Iran by other authors. This paper is the first step towards a checklist of the spider fauna of Iran, it also summarizes the results of my recent field works, which have brought together most of the data available in the literature. In this preliminary paper, some new distributional data on spiders of Khorasan Province are presented. The aim of this paper is to enhance our knowledge of distribution and diversity of spider fauna of Iran.

MATERIAL AND METHODS

The sampling was carried out in different localities in Khorasan province between 1994 and 2004. Sampling methods comprised individual collecting, sweeping and pitfall trapping. Collected specimens were fixed in 70% ethanol . Identifications were made using the dichotomic keys of Kaston (1976); Davies (1989); Levy and Amitai (1982, 1983, 1985); Levi

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(1959); Levi and Levi (1966). All of the collected specimens were labeled and deposited in the Zoological Museum of Ferdowsi University of Mashhad.

RESULTS

I. Family Atypidae

Genus *Atypus* Latreille, 1804

Atypus sp.

Records: Only one female specimen was collected from Neishabour.

II. Family Uloboridae O.P.-Cambridge

Genus *Uloborus* Latreille, 1806

Uloborus walckenaerius Latreille, 1806

Distribution: Palearctic.

Records: GONABAD: Kakhk, Marghesh.

III. Family Eresidae C.L.Koch, 1850

Genus *Stegodyphus* Simon, 1873

Stegodyphus pacificus Pocock, 1900

Distribution: Jordan, Iran, Pakistan, India

Records: MASHHAD, GONABAD: Kakhk, Zibad, Bidokht, QAEN: Gerimenj. Also, it is recorded from Mafiabad near Varamin and Sabzavaran [=Jiroft] (Kraus & Kraus, 1989).

Genus *Eresus* Walckenaer, 1805

Eresus cinnaberinus (Olivier, 1789)

Remarks: This species could hardly be mistaken for any other species occurring in Iran. Males are strikingly handsome but females have an almost uniform black appearance. This species is recorded for the first time from Iran.

Distribution: Palearctic.

Records: Only one female was captured from Mashhad (Zoshk) in March.

IV. Family Scytodidae Blackwall, 1852

Genus *Scytodes* Latreille, 1804

Scytodes thoracica Latreille, 1804

Remarks: This is a common spider which occurs inside houses. Females are similar to males but has larger abdomen. The appearance of this six-eyed species is so characteristic that confusion with any other species is impossible. Females without epigyne; male palps simple and inconspicuous. This so-called 'spitting spider' catches prey by spitting a gummy substance from the chelicerae.

Records: This species was collected indoors and near human environments in Mashhad.

V. Family Dysderidae C.L.Koch, 1837

Genus *Dysdera* Latreille, 1804

Dysdera sp.

These spiders were collected near human environments in Mashhad.

Records: MASHHAD.

VI. Family Pholcidae C.L.Koch, 1850

Genus *Pholcus* Walckenaer, 1805

Pholcus sp.

Records: GONABAD: Kakhk.

Genus *Physocyclus* Simon, 1893

Physocyclus globosus (Taczanowski, 1874)

Distribution: Cosmopolitan.

Records: MASHHAD, GONABAD. This species is a common synanthropic species which is found inside houses in Khorasan province.

VII. Family Oecobiidae Blackwall, 1862**Genus *Oecobius* Lucas, 1846**

Oecobius sp.

Records: These spiders are widely distributed in human environments of Khorasan province.

VIII. Family Salticidae Blackwall, 1841**Genus *Evarcha***

Evarcha sp.

Records: GONABAD

IX. Family Sparassidae Berktau, 1872**Genus *Olios* Walckenaer, 1872**

Olios xerxes (Pocock, 1901)

Distribution: Iran to India (Platnick, 2005).

(Sethi & Tikader, 1988)

Records: MASHHAD; GONABAD: Kakhk.

X. Family Thomisidae Sundevall, 1833**Genus *Thomisus* Walckenaer, 1805**

Thomisus onostus Walckenaer, 1805

Remarks: The adult specimens of *T. onostus* were collected on *Carthamus* sp. and *Cichorium intybus* L. between July and September.

Distribution: Throughout most of the Palearctic region and Eurasia.

Records: MASHHAD, GONABAD, QAEN

Genus *Xysticus* C.L.Koch, 1835

Xysticus rectilineus (O.P.-Cambridge, 1872)

Distribution: Syria, Lebanon, Israel

Records: MASHHAD, GONABAD

Xysticus cristatus (Clerck, 1757)

Distribution: Almost throughout the Palearctic region.

Records: This species has been collected from cotton- fields of northern parts of Khorasan.

Xysticus kochi Thorell, 1872

Distribution: Europe, Mediterranean to Central Asia.

Records: Cotton fields of northern parts of Khorasan [=Mashhad]; GONABAD: Kakhk.

Genus *Synaema* Simon, 1864

Synaema sp.

Records: Immature specimens of these spiders have been collected from Gonabad and Qaen.

Genus *Oxyptila* Simon, 1864

The genus *Oxyptila* comprises more than 100 species distributed worldwide.

Oxyptila sp.

Records: Immature specimens of these spiders have been collected from Gonabad: Kalat e Molla.

Genus *Heriaeus* Simon, 1875

Heriaeus sp.

Records: Immature specimens of these spiders have been collected from Mashhad.

XI. Family Philidromidae Thorell, 1870

Genus *Thanatus* C. L. Koch, 1837

Thanatus sp.

Records: GONABAD.

XIII. Family Miturgidae

Genus *Chieracanthium* C.L.Koch, 1839

Chieracanthium virescens (Sundevall, 1833)

Distribution: Palearctic

Records: Only one adult female was collected from QAEN: Gerimenj.

C.pennyi O.P.-Cambridge, 1837

Distribution: Palearctic

Records: Cotton fields of northern parts of Khorasan province.

XIV. Family Gnaphosidae Pocock, 1884

Genus *Haplodrassus* Chamberlin, 1922

Haplodrassus sp.

Records: Only one adult male was collected from GONABAD: Marghesh.

Genus *Drassodes* Westring, 1851

Drassodes lapidosus (Walckenaer, 1802)

Distribution: Palearctic

Records: MASHHAD; GONABAD: Kakhk, Marghesh.

Genus *Drassyllus* Chamberlin, 1922

Drassyllus sp.

Records: GONABAD: Kakhk, Marghesh, Kalat e Molla.

XV. Family Oxyopidae Thorell, 1870

Genus *Oxyopes* Latreille, 1804

Oxyopes sp.

Records: GONABAD: Kakhk; QAEN: Gerimenj.

XVI. Family Lycosidae

Genus *Lycosa*

Lycosa sp.

Records: MASHHAD: Zoshk.

Genus *Pardosa* C. L. Koch, 1847

Pardosa sp.

Records: MASHHAD

XVII. Family Theridiidae Sundevall, 1833**Genus *Latrodectus* Walckenaer, 1805***Latrodectus tredecimguttatus* (Rossi, 1790)

Distribution: Ethiopia, Libya and Morocco in Africa; this species also has been reported from Mediterranean countries of Europe, The Middle East, Central Asia and China.

Records: MASSHAD: Soron, Noor Abad, Derakht Bid, Zoshk.; SHIRVAN: Topkanlu; CHENARAN: Golmakan. This species also has been recorded in Kashmar, Torbat-e-Jam and Fariman (Rafinejad et al., 2000).

Latrodectus pallidus O. P.-Cambridge, 1872

Distribution: Cape Verde Is., Libya to Russia, Iran

Records: GONABAD: Bidokht, Kakhk; QAEN: Beskabad, Gerimenj, Khezri; TABAS and BIRJAND.

Latrodectus dabli Levi, 1959

Distribution: Middle East to Central Asia

Records: GONABAD: Kakhk, Zibad; BIRJAND. Also, it was reported from north of Gonabad.

Genus *Steatoda* Sundevall, 1833*Steatoda paykulliana* (Walckenaer, 1806)

Distribution: Europe, mainly in southern countries, in the Balkan and Russia, but recorded also from the heights of Switzerland; Africa, throughout northern countries to Ethiopia; Middle East to Yemen.

Records: MASHHAD; GONABAD. This species is a new record for spider fauna of Iran.

Steatoda dabli (Nosek, 1905)

Distribution: Turkey (Asia Minor), Israel, It is expected to be present in Lebanon and Syria and Central Asia.

Records: GONABAD: vicinity of Kakhk.

Steatoda albomaculata (DeGeer, 1778)

Distribution: America, northern Africa, Eurasia

Records: GONABAD: vicinity of Kakhk.

Steatoda maura (Simon, 1909)

Distribution: **Mediterranean.**

Records: GONABAD: Bidokht, Kakhk, Kalate e Molla.

Genus *Enoplognatha**Enoplognatha* sp.

Records: MASHHAD; GONABAD.

Genus *Theridion**Theridion melanurum* Hahn, 1831

Distribution: Western parts of North America; throughout Western Europe to Siberia; North Africa; Middle East.

Records: Vicinity of Mashhad

Remarks: This species is reported for the first time from Iran. *Theridion melanurum* is frequently found in small web on the outside of buildings. It is also found on plants in the field. Only female specimens were found.

XVIII. Family Araneidae Simon, 1895**Genus *Argiope* Audouin, 1826***Argiope lobata* (Pallas, 1772)

Distribution: This species is found from the Mediterranean to China, Burma to New Caledonia and northern Australia (Levi, 1983; Bjorn, 1997). In Africa it is found in the NW part from Morocco and Algeria to Senegal, and in South Africa (Bjorn, 1997).

Records: MASHHAD: Golmakan; Zoshk, GONABAD: Bidokht, Kakhk.

Remarks: This species is new record for spider fauna of Iran.

Argiope bruennichi (Scopoli, 1772)

Distribution: Found from Eurasia to Japan and China and perhaps in Australia (Levi, 1983; Bjorn, 1997), and widely distributed in Europe, its range extending northwards. In Africa it is found in the northwestern part: Algeria and Morocco (Bjorn, 1997).

Remarks: This species is a new record for spider fauna of Iran.

Records: MASHHAD: Golmakan; Mazandaran province: SARI.

XIX. FAMILY Linyphiidae Blackwall, 1859**Genus *Lepthyphantes* Menge, 1866***Lepthyphantes* sp.

Records: MASHHAD: Zoshk.

XXV. Family Prodidomidae Simon, 1884

Only one immature specimen was collected from Gonabad. This family comprises 26 genera and 160 species and some species have been recorded from Afghanistan, Syria, Israel, Yemen, India, China, Kazakhstan and Turkmenistan.

XXVI. Family Palpimanidae Thorell, 1870

Several specimens of these spiders were captured from Mashhad and Gonabad. On the basis of literatures some species belong to this family have been recorded from different parts of Asian countries such as Syria, Turkey, Israel, Uzbekistan, India and China. But, there is not any record for the presence of these spiders in Iran.

ACKNOWLEDGEMENTS

This study has been supported by the grant from the faunistic study of deserts and semi-desert areas of Khorasan Province no. 46498.

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