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PJBS

ISSN 1028-8880

**Pakistan
Journal of Biological Sciences**

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

An Investigation of Spider Fauna of Olive Orchards in Northern Part of Iran

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Abstract: The current study investigates spider fauna of olive orchards in Guilan, Ghazvin, Mazandaran, Zanzan and Golestan provinces during 2002-2003. Spiders were collected from branches, leaves, trunks, on the ground and under the stones and grasses by Steiner and Baggiolini method, bottle, aspirator, pitfall trap, pans and insect net and transferred to laboratory and classified in 45 species and 46 genera belonged to 18 families. Twenty five species, 9 genera and 2 families are reported for the first time of olive orchards.

Key words: Spider, fauna, predator, Iran

INTRODUCTION

Thirty five thousand species of spiders have been identified in the world. Two hundred and forty four species of spiders have been reported from Iran (Ghavami, 2006d). They are one of the most abundant predatory groups in terrestrial ecosystems. They feed on insects and small Arthropods. Therefore, they are one of the biological agent in pests control.

The northern part of Iran is situated in the south of the Caspian Sea. Forty four new species have been identified from this region. They were collected on rice fields, Cotton fields, citrus orchards and other crops (Ghavami, 2006c, d).

Twenty seven species of spiders were reported of rice fields (Mozaffarian *et al.*, 2000). Spiders were one of the most abundant predators in these fields (Ghavami, 2004). Forty four species and 59 genera belonged to 21 families were recorded on cotton fields. Twenty one species, 15 genera and 2 families of spiders were reported as the first record of Iran. Most populations of identified species belonged to Araneidae, Clubionidae and Theridiidae families, respectively (Ghavami, 2005). Thirty four species of spiders were reported from citrus orchards. Six species of spiders were recorded for the first time from Iran (Ghavami and Gahanad amooz, 2006). The most abundant of spider species belonged to Linyphiidae and Araneidae families in these orchards, respectively (Ghavami, 2006a). Also, Many studies have been done on spider fauna, abundance and their role in pest control in

many countries. In a study, spiders were one of the most frequent predators in the European and American olive orchards. Most of the spider population in European and American olive orchards belonged to Linyphiidae family (Nieuwenhuys, 1999). The role of spiders was investigated in olive orchards in Granada, Spain. Spiders were the second most abundant predators. The most abundant spider families were Salticidae and Philodromidae and most frequently caught species were followed by *Salticus* sp., *Icius hamatus* and *Philodromus* sp. They were the main predators of *Prays oleae* in these orchards. They fed on egg and larvae of *P. oleae* (Morris *et al.*, 1999). Olive spiders were collected by using pitfall traps in olive groves near Viterbo, central Italy. About 70 species were found belonging to 18 families with the predominant families being Linyphiidae, Lycosidae, Dysderidae, Gnaphosidae and Theridiidae. There was only one abundant species *Lepthyphantes tenuis* together with 4 scarcer species, including *Erigone dentipalpis*, *Meioneta rurestris* and *Pachygnatha degeeri*. Other species also occurred in mid-Europe mainly in urban environments (*Dysdera crocata* and *Scytodes thoracica*) and at xerothermic sites (various species of Theridiidae, Gnaphosidae, Clubionidae, Thomisidae and Salticidae) (Thaler and Zapparoli, 1993). Over 900 predators collected during 1998 and 1999 from a Portuguese organic olive orchard were subjected to a serological bioassay for *Prays oleae* predation. The highest number of predators were tested positive during the phyllophagous and antophagous generations of

P. oleae, ants (Formicidae) were the most common predators, followed by species belonged to Coleoptera, Hemiptera and Araneae orders (Lozano *et al.*, 2000). Spiders were one of the most abundant predators and they had the largest population in olive orchards in Panama. *Eriophora fuliginosa* was one of the most important spider species in these orchards (Graf and Nentwig, 2001). Spiders, ants and redbugs had the highest population in olive orchards in Greene County, Mississippi. Spiders were the most important predators in these orchards (Byron and Green, 2000). They were one of the most abundant predators and they had an important role in olive pest control in Italy (Viggiani, 1977). Also, they were natural enemies of *Palpita unionalis* (Triggiani and Naples, 1971) and one of the important predators of *P. oleae* in olive orchards in Italy. They decreased 60-80% of *P. oleae* population in these orchards (Sacchetti, 1990).

In this study, olive spider fauna were studied in Guilan, Ghazvin, Golestan, Mazandaran and Zanjan provinces during 2002-2003. The study area lies mainly in the olive orchards, dominated by orchards situated in the plain. In addition, orchards in the plain located on higher places and forests were also, included in the investigation locations. Spiders abundance of olive orchards studied in Guilan, Ghazvin and Zanjan provinces. Most of the populations of spiders belonged to Linyphiidae, Salticidae and Thomisidae families, respectively (Ghavami, 2006b).

MATERIALS AND METHODS

Study area: The study sites were: 1) **Guilan:** Roodbar, Ali Abad and Rostam Abad. 2) **Ghazvin:** Tarome Sofla, Manjil and Loushan. 3) **Zanjan:** Tarome Olia, Mamalan, Soomeabar, Hendezamin, Vanesar, Jouzargh, Guilangasheh, Alzain, Gooacan and Guilvan 4) **Mazandaran:** Chaloos and Salman Shahr, Khoshkehdaran, Amol 5) **Golestan:** Noudijeh, Charehdeh, Raamian, Tooskaostan, Alazeman, Tushan, Hashem Abad, Fazel Abad, Beraftan, Nazar Abad, Gharan Abad, Kordkooy, Bandar Gaz, Azad Shahr, Zarringol, Zanghian.

Spiders sampling: Spiders were collected from branches, leaves, trunks, on the ground and under the stones and grasses by Steiner and Baggiolini method, bottle, aspirator, pitfall trap, insect net and pans throughout spring, summer and autumn during 2002-2003. Valid spider identification keys (Anonymous, 2002, Barrion and Litsinger, 1995, Borrer *et al.*, 1989, Kaston, 1970; Roberts, 1985) used for species classification.

RESULTS AND DISCUSSION

In this study, 45 species and 46 genera of spiders were identified. Most species belonged to Araneidae family and the fewest species belonged to Linyphiidae, Oxyopidae, Dictynidae and Scytodidae families. The number of identified spider species in Guilan, Ghazvin, Golestan, Mazandaran and Zanjan provinces were 24, 20, 40, 5 and 22, respectively. Most species were collected from Golestan (40) and the fewest were collected from Mazandaran (5) provinces. Characters of identified species, materials examined and their distribution were as follows:

Family Agelenidae: 1 species was collected of this family
Genus Agelena Walckenaer, 1805

1 species was collected of this genera
Agelena labyrinthica (Clerck, 1757)*

Material examined: Mazandaran: Salman Shahr, 17. 7. 2002, Chaloos, 15. 5. 2002, leg. Javadi, **Golestan:** Noudijeh, 21. 6. 2003, 7. 7. 2002, Chardeh, 21. 4. 2002, Raamian 12. 6. 2003, Kordkooy, 21. 3. 2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Belgium, China, England, France, Poland, Russia and Iran.

Araneidae Family:

Genus Agalenatea Archer, 1951

Agalenatea redii (Scopoli 1763) *

Material examined: Golestan: Raamian 12. 6. 2003, Leg. and Det. Ghavami.

Distribution: England, France, sued, Cornwall, Asia.

Genus Araniella Chamberlin and Ivie, 1942

Araniella inconspicua (Simon, 1874)*

Material examined: Golestan: Raamian, 12. 6. 2003, 14. 5. 2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Araniella alpica (L. Koch, 1869)*

Material examined: Golestan: Noudijeh, 10. 6. 2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Araniella cucurbitina (Clerck 1757)

Material examined: Golestan: Noudijeh, 7. 7. 2002, 21. 6. 2002, Tooskaostan, 7. 7. 2002, 29. 5. 2002, 10. 6. 2002, 19. 5. 2002, 3. 6. 2002, Zarringol, 27. 6. 2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Genus *Araneus* Clerck, 1757

Araneus diadematus* Clerck, 1757

Material examined: Golestan: 21.6.2002, 30.5.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Genus *Argiope* Savigny, 1827

***Argiope bruennichi* (Scopoli, 1772)**

Material examined: Zanjan: 4.6.2002, leg. Soody, Golestan: Tooskaostan, 2.7.2003, leg. Ahmadi Damghan, Guilan: Roodbar, 16.6.2002, 3.7.2003, Ghazvin: Loushan, 11.7.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland, Asia.

***Argiope lobata* (Pallas, 1772)**

Material examined: Zanjan: 12.5.2002, leg. Ghavami, Golestan: Tooskaostan, 2.7.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Asia, Mediterranean region, Egypt, Europe.

Genus *Cercidia* Thorell, 1869*

Material examined: Guilan: 16.6.2002, Roodbar, 14.6.2002, 10.8.2002, Ghazvin: Loushan, 11.7.2003, leg. Ghavami, Zanjan: Soomeahbar, 28.6.2002, 26.5.2003, Vaneaser, 13.6.2002, Alazain, 1.8.2002, Jouzargh, 4.9.2003, Hendezamin, 29.6.2003, leg. Soody, Golestan: Tooskaostan, 30.5.2002, 10.6.2002, 10.6.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Cyclosa* Thorell, 1869

Cyclosa conica* (Pallas, 1772)

Material examined: Golestan: 1.9.2003, 11.7.2002, Kordkooy, 6.9.2003, Tooskaostan, 11.7.2002, leg. Ahmadi Damghan, Zanjan: Hendezamin, 29.9.2003, leg. Soody, Ghazvin: 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia.

Genus *Hypsosinga* Ausserer, 1871

***Hypsosinga pygmaea* (Sundevall, 1831)**

Material examined: Guilan: Roodbar, 16.6.2002, leg. Ghavami, Zanjan: Hendezamin, 29.9.2003, leg. Soody, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Hypsosinga sanguinea* (C.L.Koch, 1845)

Material examined: Golestan: 7.4.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland.

Genus *Neoscona* Simon, 1864

***Neoscona adianta* (Walckenaer, 1802)**

Material examined: Golestan: Tooskaostan, 12.6.2003, 10.6.2002, Alazeman, 13.8.2003, Noudijeh, 20.6.2003, Zanghian, 9.10.2003, Toushan, 13.10.2003, Hashem Abad, 26.11.2003, Fazel Abad, 18.10.2003, leg. Ahmadi Damghan, Beraftan, 26.10.2003, leg. Ghavami, Guilan: Roodbar, 16.6.2002, Ghazvin: 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia.

Genus *Mangora* O.P. Cambridge, 1889

***Mangora acalypha* (Walckenaer, 1802)**

Material examined: Golestan: Tooskaostan, 28.11.2003, 10.4.2003, Beraftan, 28.11.2002, Nazar Abad, 3.6.2002, leg. Ahmadi Damghan, Guilan: Roodbar, Ali Abad, 4.4.2002, leg. Ghanad amooz, Ghazvin: 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Belgium, Poland, Asia.

Genus *Singa* C.L.Koch, 1836

Material examined: Golestan: Alazeman, 13.8.2003, Beraftan, 26.10.2002, leg. Ahmadi Damghan, Zanjan: Tarome Olia, 2.9.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Family Amaurobiidae*: Material examined: Golestan: Raamian, 11.5.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Russia, Poland.

Family Dictynidae: 1 species was collected of this family.

Genus *Dictyna* Sundevall, 1833

Dictyna latens* (Fabricius, 1775)

Material examined: Golestan: 28.5.2002, leg. Ahmadi Damghan, Guilan: Roodbar, 16.6.2002, 20.7.2003 leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Belgium, Russia, Poland, Asia.

Family Eresidae: 2 genera were collected of this family.

Genus *Eresus* Walckenaer, 1805*

Material examined: Guilan: Roodbar, 18.6.2002, Rostam Abad, 16.6.2002, Ghazvin: Manjil, 11.7.2003, leg. and Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Dresserus* Simon, 1876 *

Material examined: Ghazvin: Tarome Sofla, 16.6.2002, Guilan: Roodbar, 16.6.2002, leg. and Det. Ghavami, 2003.

Distribution: Asia, Europe.

Family Filistatidse: Material examined: Guilan: Roodbar, 10.5.2003, leg. Ghavami, Zanjan: Guilvan, 1.4.2003, leg.

Soody, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Family Gnaphosidae: 3 genera were collected of this Family.

Genus *Aphantaulax* Simon, 1878*

Material examined: **Guilan:** Roodbar 11.2.2003, **Ghazvin:** 11.5.2002, leg. Ghavami, **Golestan:** Chardeh, 3.5.2002, 25.10.2003, leg. Ahmadi Damghan, **Zanjan:** Hendezamin, 29.7.2003, leg. Soody, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Scotophaus* Simon, 1893

Material examined: **Zanjan:** Tarome Olia, 23.9.2002, **Mazandaran:** Salman Shahr 10, 7, 2002, leg. Ghavami, Amol, 15.5.2003, 21.4.2002, leg. Javadi, Det. Ghavami, 2003.

Distribution: Europe, Asia.

Genus *Zelotes* Gistel, 1848

Material examined: **Golestan:** 13.8.2002, leg. Ahmadi Damghan, **Mazandaran:** Salman Shahr 10, 7, 2002, leg. Ghavami, Amol, 15.5.2003, 21.4.2002, leg. Javadi, Det. Ghavami, 2003.

Distribution: Europe, Asia.

Family Linyphiidae: 1 species and 2 genera were collected of this family.

Genus *Linyphia* Latreille, 1804

Material examined: **Zanjan:** Tarome Olia, 11.7.2002, 20.8.2003, leg. Soody, **Ghazvin:** Tarome Sofla, 20.8.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Europe, Asia.

Genus *Microlinyphia* Gerhardt, 1928*

Material examined: **Golestan:** Tooskaostan, 2.7.2002, leg. Ahmadi Damghan, **Zanjan:** Vaneser, 13.6.2003, leg. Soody, Guilangasheh, 29.7.2003, 16.6.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Europe, Asia.

Genus *Frontinella* Van Helsdingen, 1969

***Frontinella frutetorum* (C.L.Koch, 1981)**

Material examined: **Guilan:** Roodbar, 6.6.2003, 16.6.2002, 1.6.2002, **Ghazvin:** Tarome Sofla, 10.7.2002, leg. Ghavami, **Golestan:** Noudijeh, 10.7.2002, 20.6.2002, Raamian, 15.6.2002, 15.6.2003, leg. Ahmadi Damghan, **Zanjan:** Tarome Olia, 21.6.2003, 29.7.2003, Mamalan, 21.6.2003, Soomeaehbar, 26.11.2003, Hendezamin, 29.7.2003, Vaneser, 14.6.2003, Tarome Olia, 1.8.2003, leg. Soody, Det. Ghavami, 2003.

Distribution: Europe, Asia.

Family Lycosidae: 3 species were collected of this family.

Genus *Pardosa* C.L.Koch, 1848

Pardosa amentata* group (Clerck, 1757)

Material examined: **Golestan:** 3.10.2002, 15.11.2003, 13.8.2003, Tooskaostan, 10.6.2003, 10.6.2002, 15.10.2003, 27.8.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Russia, Poland.

Pardosa agrestis* (Westring, 1861)

Material examined: **Golestan:** 3.10.2002, 21.9.2003, Fazel Abad, 26.1.2002, Gharan Abad, 3.6.2002, Tooskaostan, 10.6.2003, 10.6.2002, 27.8.2003, 5.10.2003, leg. Ahmadi Damghan, **Guilan:** Ali Abad, 2.9.2003, **Ghazvin:** Tarome sofla, 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: England, Russia, Poland.

Pardosa monticola* (Clerck, 1757)

Material examined: **Golestan:** Fazel Abad, 26.12.2002, Hashem Abad, 27.6.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Russia, Poland.

Family Metidae*: 1 species was collected of this family.

Genus *Zygiella* F.O.P. Cambridge, 1902

Zygiella x-notata* (Clerck, 1757)

Material examined: **Golestan:** 26.10.2003, leg. and Det. Ghavami.

Distribution: Asia, Europe.

Family Oxyopidae: 1 species was collected of this family.

Genus *Oxyopes* Latreille, 1804

***Oxyopes lineatus* (Latreille, 1806)**

Material examined: **Golestan:** Beraftan, 28.11.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Belgium, Asia.

Family Philodromidae: 2 species were collected of this family.

Genus *Philodromus* Walckenaer, 1825

Philodromus rufus* (Walckenaer, 1825)

Material examined: **Golestan:** Tooskaostan, 9.7.2003, 18.6.2003, Zarringol, 29.12.2003, Kordkooy, 7.6.2003, Beraftan, 16.6.2003, leg. Ahmadi Damghan

Zanjan: Tarome Olia, 16.6.2002, **Guilan:** 12.6.2002, leg. Ghanad amooz, **Ghazvin:** Tarome Sofla, 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium.

Genus *Tibellus* Simon, 1875

***Tibellus oblongus* (Walckenaer, 1802)**

Material examined: **Golestan:** Nazar Abad, 3.2.2002, Zarringol, 4.9.2003, Hashem Abad, 27.6.2003, leg. Ahmadi Damghan, **Mazandaran:** Amol, 10, 7, 2002, leg. Ghavami,

15.5.2003, 21.4.2002, leg. Javadi, Det. Ghavami, 2003.
Distribution: Asia, Russia, Poland, Belgium, England.

Family Pholcidae: 2 species were collected of this family.

Genus *Psilochorus* Simon, 1893

Psilochorus simoni (Berland, 1911) *

Material examined: Golestan: Tooskaostan, 16.8.2003, Kordkooy, 16.7.2003, Chardeh, 10.8.2003, Bandar Gaz, 10.7.2003, leg. Ahmadi Damghan, **Ghazvin:** Tarome Sofla 2.4.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

Genus *Pholcus* Walckenaer, 1805

Pholcus phalangioides (Fuesslin, 1775) *

Material examined: Golestan: Chardeh, 1.8.2003, Bandar Gaz, 12.8.2003, leg. Ahmadi Damghan, **Guilan:** Roodbar, 7.8.2003, 20.9.2003, 12.9.2003, 10.5.2003, 12.9.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

Family Salticidae: 6 species and 4 genera were collected of this family.

Genus *Bianor* G. and E. Peckham, 1885

Bianor albimaculatus (Lucas, 1846)

Material examined: Zanzan: Tarome Olia, 9.7.2002, **Ghazvin:** Tarome Sofla, 10.7.2002, leg. Ghavami.

Distribution: Asia, Europe.

Genus *Evarcha* Simon, 1902

Material examined: Golestan: 13.8.2002, leg. Ahmadi Damghan, **Ghazvin:** Tarome Sofla, 10.7.2002, **Guilan:** Roodbar, 7.8.2003, leg. Ghavami.

Distribution: Asia, Europe.

Genus *Heliophanus* C.L.Koch, 1833

Heliophanus cupreus (Walckenaer, 1802)

Material examined: Zanzan: Tarome Olia, 10.7.2002, leg. Soody, **Ghazvin:** Tarome Sofla, 11.7.2002, **Guilan:** 16.6.2002, Roodbar, 14.6.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Belgium, England, Asia.

***Heliophanus flavipes* C.L.Koch, S.str., 1848**

Material examined: Golestan: Kordkooy, 6.9.2003, leg. Ahmadi Damghan, **Ghazvin:** Loushan, 10.8.2003, **Guilan:** 16.6.2002, Roodbar, 14.6.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Asia, Poland, Belgium, England.

Heliophanus ledeufilus* (S.str. Hahn, 1831)

Material examined: Golestan: Tooskaostan, 13.8.2002, 5.7.2002, leg. Ahmadi Damghan, **Ghazvin:** Tarome solfla, 7.5.2003, **Guilan:** Roodbar, 7.8.2003, 20.9.2003, leg.

Ghavami, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Hyllus* C.L.Koch, 1846

Material examined: **Guilan:** Roodbar, 12.5.2002, leg. Ghavami, **Zanzan:** 10.7.2002, leg. Soody, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Myrmarachne* Macleay, 1839

Material examined: Golestan: Garan Abad, 28.1.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: England, Asia.

Genus *Salticus* Latreille, 1804

Salticus scenicus (Clerck, 1757)*

Material examined: Golestan: Garan Abad, 28.1.2003, leg. Ahmadi Damghan, **Zanzan:** 13.7.2002, 11.9.2003, 10.8.2002, leg. Soody, **Ghazvin:** Tarome Sofla, 10.8.2003, **Guilan:** Roodbar, 7.8.2003, 20.9.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Poland, Belgium, England, Asia.

Genus *Thyene* Simon, 1885

Thyene imperialis (Rossi, 1846)

Material examined: Zanzan: Tashvir, 30.6.2003, Jozargh, 4.9.2003, leg. Soody, Tarome Olia, 1.9.2002, leg. Ghavami, **Golestan:** Chardeh, 25.10.2003, Zarringol, 4.9.2003, Azad Shahr, 20.8.2003, leg. Ahmadi Damghan, **Guilan:** 27.9.2003, **Ghazvin:** Tarome Sofla, 10.7.2002, 5. 2.9. 2003, leg. Ghavami, **Mazandaran:** Amol, 10. 7. 2002, leg. Ghavami, 15.5.2003, 21.4.2002, leg. Javadi, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Family Secytodidae: 1 species was collected of this family

Genus *Scytodes* Latreille, 1804

Scytodes thoracica, Latreille, 1804

Material examined: Zanzan: Tarome Olia, 23.6.2002, leg. Soody, **Golestan:** 6.3.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

Family Tetragnathidae: 3 species were collected of this family.

Genus *Tetragnatha* Latreille, 1804

Tetragnatha extensa (Linnaeus, 1785)

Material examined: **Guilan:** Roodbar, 12.9.2003, 16.5.2003, **Ghazvin:** Manjil, 9.3.2003, leg. Ghavami, **Golestan:** Raamian, 15.6.2003, Fazel Abad, 18.10.2003, Bandar Gaz, 16.7.2003, Zanghian, 13.10.2003, 30.6.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Russia, Poland, Swede, Belgium, England.

Tetragnatha montana*, Simon, 1874

Material examined: Golestan: Toushan, 13.10.2003 leg. Ahmadi Damghan, Hashem Abad, 25.11.2003, Raamian, 24.8.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

***Tetragnatha javana* (Thorell, 1890) ***

Material examined: Guilan: Roodbar, 21.9.2003, leg. Ghavami, **Golestan:** Toushan, 13.10.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Family Theridiidae: 5 species and 1 genera were collected of this family

Genus *Dipoena* Thorell, 1869

Dipoena prona* (Menge, 1868)

Material examined: Zanjan: Tarome Olia, 27.6.2002, 10.7.2003, **Guilan:** Roodbar, 10.9.2003, 10.8.2003, leg. Ghavami, **Golestan:** Azad Shahr, 27.6.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium.

Genus *Enoplognatha* Pavesi, 1880 :

Material examined: Zanjan: Tarome Olia, 5.7.2003, 10.7.2003, **Guilan:** Roodbar, 10.9.2003, leg. Ghavami, **Golestan:** Azad Shahr, 27.6.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Asia, Europe.

Genus *Latrodectus* Walckenaer, 1805

***Latrodectus tredecimguttatus* (Rossi, 1790)**

Material examined: Golestan: Hashem Abad, 28.6.2002, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Asia, Africa, Mediterranean region, Central Asia, Ethiopian and Saudian Arabia.

Genus *Steatoda* Sandevall, 1833

Steatoda albimaculata* (Degeer, 1778)

Material examined: Zanjan: Tarome Olia, 1.9.2002, Gooan, 10.7.2003, Tashvir, 30.6.2003, Hendezamin, 29.7.2003, Alzain, 1.8.2003, leg. Soody, Guilvan, 26.9.2003, leg. Ghavami, **Guilan:** Roodbar, 10.9.2003, 10.8.2003, **Ghazvin:** Tarome Sofla, 12.9.2003, leg. Ghavami, **Golestan:** Hashem Abad, 28.6.2002, leg. Ahmadi Damghan, **Mazandaran:** Salman Shahr 10, 7, 2002, leg. Ghavami, Amol, 15.5.2003, 21.4.2002, leg. Javadi, Det. Ghavami, 2003.

Distribution: Russia, Europe.

Genus *Theridion* Walckenaer, 1805

***Theridion melanurum*, Hahn, 1831**

Material examined: Zanjan, 22.4.2003 leg & Det Ghavmi

Distribution: Africa, Asia, England.

***Theridion similie* (C.L. Koch, 1836)**

Material examined: Golestan: Kordkooi, 22.4.2003, leg. Ahmadi Damghan,

Guilan: 27.9.2003, leg. Ghavami.

Distribution: Belgium, England, Asia

Family Thomisidae: 5 species were collected of this family.

Genus *Misumena* Latreille, 1804

Misumena vatia* (Clerck, 1757)

Material examined: Guilan: Roodbar, 10.6.2002, **Golestan:** 6.6.2003, Soomeahbar, 28.6.2003, Raamian, 12.6.2003, 15.6.2003, Fazel Abad, 18.10.2003, Bandar Gaz, 28.8.2002, leg. Ahmadi Damghan, **Zanjan:** Tarome Olia, 25.7.2003, **Ghazvin:** Tarome Sofla, 10.6.2002, **Mazandaran:** 26.7.2002, 4.5.2003, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Belgium, England, Asia.

Genus *Synaema* Simon, 1864

***Synaema globosum* (Fabricius, 1775)**

Material examined: Golestan: Beraftan, 16.6.2003, Tooskaostan, 16.8.2003, 11.6.2003, 10.6.2002, 10.5.2003, Toushan, 3.10.2003, Kordkooy, 16.7.2003, 29.5.2003, Zarringol, 4.9.2003, Moodestan, 15.6.2003, leg. Ahmadi Damghan, Raamian, 11.7.2002, leg. Ghavami, **Guilan:** Roodbar, Ali Abad, 10.9.2003, **Ghazvin:** Tarome Sofla, 10.7.2002, leg. Ghavami, **Zanjan:** Tarome Olia, 29.7.2003, leg. Soody, Det. Ghavami, 2003.

Distribution: Belgium, Russia, Mediterranean region.

Genus *Thomisus* Walckenaer, 1805

***Thomisus onustus*, Walckenaer, 1806**

Material examined: Zanjan: Jouzargh, 4.9.2003, leg. Soody, **Golestan:** Soomeaehbar, 26.11.2003, Toushan, 13.10.2003, leg. Ahmadi Damghan, **Guilan:** Roodbar, 10.6.2002, **Ghazvin:** Tarome Sofla, 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

Genus *Xysticus* C.L.Koch, 1835

Xysticus cristatus* (Clerck, 1757)

Material examined: Golestan: Raamian, 15.6.2003, Noudijeh, 6.11.2003, Kordkooy, 26.10.2003, Toushan, 17.9.2003, leg. Ahmadi Damghan, **Zanjan:** Guilangasheh, 9.5.2003, leg. Soody, **Guilan:** Roodbar, 12.6.2002, 3.4.2003, Ali Abad, 10.9.2003, **Ghazvin:** Tarome Olia, 10.7.2002, leg. Ghavami, Det. Ghavami, 2003.

Distribution: Russia, Poland, Belgium, England.

***Xysticus kochi*, Thorell, 1872**

Material examined: Guilan: Roodbar, 12.6.2002 and leg. Ghanad amooz, 3.4.2003, **Golestan:** Hashem Abad,

27.6.2003, Tooskaostan, 5.10.2003, 9.10.2003, leg. Ahmadi Damghan, Det. Ghavami, 2003.

Distribution: Russia, Europe.

*Asterisks have shown new species, genera and families in olive orchards.

ACKNOWLEDGMENT

I wish to thank to Mr. Bahramishad for his field assistance.

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