

## A Preliminary Checklist of the Spider Fauna of Sargodha (Punjab), Pakistan

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**Abstract.-** The survey for spider fauna was carried out from September 2008 through April 2009 from eight collecting sites of district Sargodha (Punjab), Pakistan. A total of 810 specimens were collected. A total of 56 species belonging to 16 families and 34 genera were recorded in the present study. All the species were already recorded from Pakistan but 54 species were first time recorded from District Sargodha. A preliminary checklist of spiders along with their material examined and collecting sites is presented in the paper.

**Keywords:** Spider fauna, Sargodha (Punjab).

### INTRODUCTION

Spiders belong to one of the largest and most diverse groups of animals. There are 110 families, 3859 genera and 42751 species of spiders described in the world (Platnick, 2012). Pakistan has diverse habitats and is rich in spider fauna but no consolidated account on spiders of Pakistan still exists. The pioneer works on the systematics of spider fauna of Pakistan were done by Pocock (1900) and Dyal (1935). Some information about taxonomy of spider fauna of Pakistan was provided by Qureshi (1982), Arshad *et al.* (1984), Khatoon (1986), Mushtaq *et al.* (1995a,b), Khan *et al.* (1995), Mushtaq and Qadar (1999), Mushtaq *et al.* (2000), Butt and Beg (1996, 2000, 2001), Mukhtar (2004), Mukhtar and Mushtaq (2005a,b), Ovtchinnikov and Inayatullah (2005), Butt *et al.* (2006), Butt and Siraj (2006), Ovtchinnikov (2006), Parveen *et al.* (2007), Ghafor and Alvi (2007), Ovtchinnikov *et al.* (2008), Parveen *et al.* (2008), Ursani and Soomro (2010), Marusik and Ballarin (2011), Perveen and Jamal (2012) and Perveen *et al.* (2012). Sargodha is an important agricultural area of Pakistan that is famous for its Citrus orchards in the world but no organized work has been done to know about the diversity of spider fauna of this area and to use them

against insect pests. Previously, only Mukhtar (2004) recorded some species of spiders from Sargodha. Thus, the present study is an initial attempt to survey the spider fauna of Sargodha. This paper presents a preliminary checklist of the spider fauna of Sargodha (Punjab), Pakistan.

### MATERIALS AND METHODS

#### *Study area*

District Sargodha is located in the northwest of Pakistan and in the central Punjab; 31°-34' to 32°-36' North (Latitude) and 72°-70' to 73°-18' East (Longitude). The district consists mainly of plain area with few small hills. It is situated 150 to 200 meters above the sea level. It has an area of 5,864 km<sup>2</sup>. The climate of the study area is semi arid with an annual average rainfall of 180-200 mm. The summer season is long, whereas winter season is very short. The maximum temperature reaches 50°C (122°F) in the summer while the minimum temperature recorded is as low as freezing point in the winter. Sargodha is an agricultural district being largest citrus growing area in the world. Wheat, rice and sugarcane are its main crops.

#### *Collection and preservation*

The survey for spider fauna was carried out from September 2008 through April 2009. Eight collecting sites from five "tehsils" (*viz.*, Sargodha, Sahiwal, Silanwali, Shahpur and Kotmomin) of the

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district Sargodha were randomly selected for the present study. Spiders were collected from crops, orchards, ornamental and wild plants from some of the habitats. Most of the collection was done by shaking the plants on a white cloth sheet (2m x 2m), from which the specimens were put in a bottle including 70% ethyl alcohol. Some spiders were also collected from plants and from ground by hand. All the collection was done by Ms Sidra Jabeen, so to avoid the repetition it is not mentioned as collector name each time. The detail of the material examined is also given for each species. Each specimen was preserved separately in alcohol with little amount of glycerin.

#### *Identification*

Identification was done on the basis of morphometric characters and genitalia, using the keys and catalogues of Tikader (1980, 1982), Tikader and Malhotra (1980), Tikader and Biswas (1981), Majumder and Tikader (1991), Barrion and Litsinger (1995), Yin *et al.* (1997), Song and Zhu (1997), Proszynski (2006), Zhu *et al.* (2003), Nentwig *et al.* (2010), Sebastian and Peter (2009), and other relevant literature. All the specimens were labeled with family, scientific name, host plant, date of collecting, locality and collector's name. The specimens were housed in the Museum, Department of Biological Sciences, University of Sargodha.

### **RESULTS AND DISCUSSION**

The present effort resulted in the collection of a total of 810 specimens; some immature and juvenile specimens could not be identified up to species level. A total of 56 species belonging to 16 families and 34 genera were recognized. All species have already been recorded from Pakistan but 54 of them are recorded for the first time from District Sargodha. As the collection was done mostly by shaking method, family Araneidae was the largest with 10 genera and 14 species followed by Lycosidae (three genera and eight species). Family Tetragnathidae was represented by five species. The families Salticidae, Sparssidae, and Thomisidae were all represented by four species each; three species each in families Gnaphosidae and Clubionidae whereas two species were recorded

each in families Oxyopidae, Scytodidae and Philodromidae. The families Miturgidae, Pholcidae, Oecobiidae, Corinnidae and Uloboridae were the smallest in the collection with a single species each.

Before this study, only Mukhtar (2004) sampled small area of district Sargodha and reported eight species under seven genera and six families. Of these, only two species are reported in this study again *viz.*, *Neoscona bengalensis* and *Neoscona mukerjei*. The remaining six species were not found in this study which could be because this collection was done from different localities or different habitats. Of the 56 species recorded in the present study, 54 are reported for the first time from Sargodha. All the species have already been reported from Punjab, Pakistan by various workers already mentioned in the introduction. Some of the species have also been recorded from other provinces/areas (*viz.*, Sindh, Islamabad, Khyber Pakhtunkhwa, FATA and Kashmir) of the country as well. This is very interesting because this area has diverse habitats including crops, orchards, undisturbed sand dunes and small hills as well. Other possibility of occurrence of these species in hilly or other areas may be their wide range of tolerance, altitude and habitat.

The spider fauna recorded in the present study is somewhat different from Sindh (Ursani and Soomro, 2010) and Peshawar and FATA (Perveen and Jamal, 2012; Perveen *et al.*, 2012). These results are not unexpected as the climate and habitat of the areas mentioned are different from the study area. This is a preliminary survey and more extensive study of this rich in biodiversity area is needed. It is expected that further studies will explore many more and some interesting species from this ecological and agricultural important area of the Punjab. The details of the spider species collected in the present study along with material examined and their collecting sites are given below.

Family Araneidae Clerck, 1757

Genus *ARANEUS* Clerck, 1757

1. *Araneus mitificus* (Simon, 1886)

#### *Material examined*

1 ♂, *Acacia nilotica*, 9.11.2008, Raitri,

Sahiwal, Sargodha; 1 immature, *Dalbergia sisso*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, 1 ♂, *Citrus limon*, 19.04.2008, Raitri, Sahiwal, Sargodha; 2 ♀, *Rosa* sp., 19.04.2008, Sahiwal, Sargodha; 2 ♂, *Syngium cumuni*, 19.04.2008, Sahiwal, Sargodha; 1 ♀, house, 1.04.2008, Sargodha; 4 immatures, *Gardenia florida*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Zizyphus jujuba*, 23.02.2009, Sahiwal, Sargodha; 1 immature, *Zizyphus jujuba*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 immature, 24.09.2009, University of Sargodha, Sargodha; 1 immature, *Citrus sinensis*, 9.11.2008 Raitri, Sahiwal, Sargodha.

Genus *ARGIOPE* Savigny, 1825

2. *Argiope trifasciata* (Forsskål, 1775)

*Material examined*

1 ♀, 25.11.2008, Silanwali, Sargodha; 1 ♂, *Syngium cumuni*, 19.04.2008, Sahiwal, Sargodha.

Genus *CYCLOSA* Menge, 1866

3. *Cyclosa confraga* (Thorell, 1892)

*Material examined*

1 ♀, *Punica granatum*, 23.02.2009, Sahiwal, Sargodha.

4. *Cyclosa hexatuberculata* Tikader, 1982

*Material examined*

1 ♀, *Zea mays*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha.

Genus *CYRTOPHORA* Simon, 1864

5. *Cyrtophora citricola* (Forsskål, 1775)

*Material examined*

4 immatures, *Acacia nilotica*, 9.11.2008, Raitri, Sahiwal, Sargodha; 8 ♀, 4 immatures, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha; 17 ♀ 6 immatures, *Tamarindus indica*, 19.02.2009, Sahiwal, Sargodha; 1 immature, *Citrus sinensis*, 7.11.2008, Sahiwal, Sargodha; 1 ♀, *Citrus sinensis*, 25.11.2008, Sahiwal, Sargodha; 1 ♀, *Punica granatum*, 1.11.2008, Kotmomin, Sargodha; 1 ♀,

*Punica granatum*, 23.02.2009, Sahiwal, Sargodha; 1 immature, 12 ♀, *Tamarindus indica*, 24.02.2009, Sargodha; 1 ♀, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 1 ♀, 24.09.2008, University of Sargodha, Sargodha; 1 immature, 23.02.2009, Sahiwal, Sargodha.

Genus *ERIOVIXIA* Archer, 1951

6. *Eriovixia excelsa* (Simon, 1889)

*Material examined*

1 ♀, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 1 ♀, *Pyrus communis*, 10.11.08, Sahiwal, Sargodha.

Genus *GEA* C. L. Koch, 1843

7. *Gea zaragosa* Barrion & Litsinger, 1995

*Material examined*

1 immature, *Oryza sativa*, 1.11.2008, Kotmomin, Sargodha.

Genus *LARINIA* Simon, 1874

8. *Larinia phthisica* (L. Koch, 1871)

*Material examined*

2 immatures, *Melia azaderch*, 3.10.2008, Sahiwal, Sargodha; 1 ♂, 1 immature, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha.

Genus *LIPOCREA* Thorell, 1878

9. *Lipocrea fusiformis* (Thorell, 1877)

*Material examined*

1 ♂, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha.

Genus *NEOSCONA* Simon, 1864

10. *Neoscona bengalensis* Tikader & Bal, 1981

*Material examined*

1 ♀, 20.10.2008, Sargodha.

11. *Neoscona mukerjei* Tikader, 1980

*Material examined*

2 immatures, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♀, 1 ♂, 24.09.2008,

University of Sargodha, Sargodha; 1 immature, *Pennisetum typhoides*, 7.11.2008, Sargodha; 1 immature, 10.11.2008, Sahiwal, Sargodha; 1 ♀, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 2 immatures, *Citrus sinensis*, 7.11.2008, Sargodha; 1 immature, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Morus nigra*, 25.11.2008, Sahiwal, Sargodha; 1 immature, house, 7.01.2009, Sargodha; 1 immature, *Citrus sinensis*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Tamarindus indica*, 1.04.2009, Sargodha; 2 immatures, *Pyrus communis*, 23.02.2009, Sahiwal, Sargodha; 1 immature, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha; 2 immatures, *Acacia nilotica*, 9.11.2008, Raitri, Sahiwal, Sargodha.

12. *Neoscona theisi* (Walckenaer, 1841)

*Material examined*

1 ♀, University of Sargodha, 24.09.2008.

13. *Neoscona vigilans* (Blackwall, 1865)

*Material examined*

1 ♀, *Morus nigra*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 ♂, *Syzgium cumuni*, 19.04.2008, Sahiwal, Sargodha.

Genus *PARAWIXIA* F. O. P.-Cambridge, 1904

14. *Paravixia dehaani* (Doleschall, 1859)

*Material examined*

2 ♀, *Punica granatum*, 23.02.2009, Sahiwal, Sargodha.

Family Clubionidae Wagner, 1887

Genus *CLUBIONA* Latreille, 1804

15. *Clubiona drassodes* O. P.-Cambridge, 1874

*Material examined*

1 ♀, 1 immature, *Oryza sativa*, 30.10.2008, Shahpur, Sargodha; 1 ♂, *Pyrus communis*, 10.8.11.2008, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 10.8.11.2008, Shahpur, Sargodha; 1 ♀, 1 ♂, 1 immature, *Oryza sativa*, 1.11.2008, Kotmomin, Sargodha; 1 immature, *Morus alba*, 10.11.2008,

Sahiwal, Sargodha; 1 ♂, 1 immature, *Zea mays*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha.

16. *Clubiona filicata* O. P.-Cambridge, 1874

*Material examined*

1 ♀, *Dalbergia sisso*, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Ficus religiosa*, 10.11.2008, Sahiwal, Sargodha; 2 immatures, *Pongamia glabra*, 3.10.2008, Sahiwal, Sargodha.

17. *Clubiona pashabharii* Patel & Patel, 1973

*Material examined*

5 immatures, 24.09.2008, University of Sargodha, Sargodha; 1 immature, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha; 3 immatures, *Melia azaderch*, 3.10.2008, Sahiwal, Sargodha, 2 immatures, *Syzgium cumuni*, 4.10.2008, Sahiwal, Sargodha; 1 ♀, 1 ♂, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♀, 1 immature, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Syzgium cumuni*, 10.11.2008, Sahiwal, Sargodha; 1 immature, *Pongamia glabra*, 3.10.2008, Sahiwal, Sargodha; 1 immature, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha; 1 ♀, 1 immature, *Syzgium cumuni*, 4.10.2008, Sahiwal, Sargodha; 3 immatures, *Citrus sinensis*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, 1 ♂, *Zea mays*, 9.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 ♂, 1 immature, *Syzgium cumuni*, 9.10.2008, Sahiwal, Sargodha; 1 ♂, *Eucalyptus* sp., 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Dalbergia sisso*, 9.11.2008, Raitri, Sahiwal, Sargodha.

Family Corinnidae Karsch, 1880

Genus *OEDIGNATHA* Thorell, 1881

18. *Oedignatha poonaensis* Majumder & Tikader, 1991

*Material examined*

1 ♂, 1 ♀, house, 25.10.2008, Sargodha; 1 ♀, house, 19.11.2008, Sargodha.

Family Gnaphosidae Pocock, 1898

Genus *GNAPHOSA* Latreille, 1804

19. *Gnaphosa jodhpurensis* Tikader & Gajbe, 1977

*Material examined*

1 immature, *Oryza sativa*, 30.10.2008, Shahpur, Sargodha.

Genus *Scopoides* Platnick, 1989

20. *Scopoides kuljitae* (Tikader, 1982)

*Material examined*

1 immature, 12.12.2008, Sargodha.

21. *Scopoides pritiiae* (Tikader, 1982)

*Material examined*

1 ♂, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha.

Family Lycosidae Sundevall, 1833

Genus *HIPPASA* Simon, 1885

22. *Hippasa madhuae* Tikader & Malhotra, 1980

*Material examined*

1 immature, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha; 1 immature, *Acacia nilotica*, 9.11.2008, Sahiwal, Sargodha.

23. *Hippasa pisaurina* Pocock, 1900

*Material examined*

1 ♂, 1 ♀, 1 immature, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha.

Genus *LYCOSA* Latreille, 1804

24. *Lycosa madani* Pocock, 1901

*Material examined*

1 ♂, *Phoenix dactylifera*, 25.11.2008, Faroka, Sahiwal, Sargodha; 2 ♂, 1 ♀, 1 immature, ground, 19.04.2009, Sahiwal, Sargodha.

25. *Lycosa tista* Tikader, 1970

*Material examined*

1 ♀, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha.

Genus *PARDOSA* C. L. Koch, 1847

26. *Pardosa birmanica* Simon, 1884

*Material examined*

3 ♂, 1 ♀, 4 immatures, *Oryza sativa*, 7.11.2008, Sahiwal, Sargodha; 1 ♂, 1 immature, *Oryza sativa*, Kotmomin, Sargodha; 1 immature, 10.11.2008, Sahiwal, Sargodha; 3 ♀, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha.

27. *Pardosa mysorensis* (Tikader & Mukerji, 1971)

*Material examined*

1 immature, ground, 26.10.2008, Sahiwal, Sargodha.

28. *Pardosa pseudoannulata* (Bösenberg & Strand, 1906)

*Material examined*

1 ♂, 3 immatures, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha.

29. *Pardosa sumatrana* (Thorell, 1890)

*Material examined*

2 immatures, ground, 7.11.2008, Sahiwal, Sargodha; 6 immature, 3 ♂, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha; 1 ♂, 2 immatures, *Oryza sativa*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, 19.12.2008, Sargodha; 1 immature, *Oryza sativa*, 4.10.2008, Sahiwal, Sargodha; 1 immature, 25.10.2008, Sahiwal, Sargodha; 1 immature, *Pongamia glabra*, 26.10.2008, Sahiwal, Sargodha; 2 immatures, ground, 7.11.2008, Sargodha.

Family Miturgidae Simon, 1886

Genus *CHEIRACANTHIUM* C. L. Koch, 1839

30. *Cheiracanthium inornatum* O. P.-Cambridge, 1874

*Material examined*

1 immature, *Pongamia glabra*, 3.10.2008, Sahiwal, Sargodha.

Family Oecobiidae Blackwall, 1862

Genus *OECOBIUS* Lucas, 1846

31. *Oecobius putus* O. P.-Cambridge, 1876

*Material examined*

3 ♀, house, 11.11.2008, Sargodha.

Family OXYOPIDAE Thorell, 1870

Genus *OXYOPES* Latreille, 1804

32. *Oxyopes ratnae* Tikader, 1970

*Material examined*

1 immature, *Zea mays*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Citrus limonia*, 3.10.2008, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha; 3 immatures, *Acacia nilotica*, 3.10.2008, Sahiwal, Sargodha; 2 immatures, *Zea mays*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 ♂, *Rosa* sp., 19.04.2008, Sahiwal, Sargodha; 1 ♀, *Punica granatum*, 23.02.2009, Sahiwal, Sargodha.

Genus *PEUCETIA* Thorell, 1869

33. *Peucetia viridana* (Stoliczka, 1869)

*Material examined*

2 immatures, *Zizyphus jujuba*, 23.02.2009, Sahiwal, Sargodha.

Family Philodromidae Thorell, 1870

Genus *PHILODROMUS* Walckenaer, 1826

34. *Philodromus betrabatai* Tikader, 1966

*Material examined*

2 immatures, *Dalbergia sisso*, 9.11.2008, Sahiwal, Sargodha; 1 immature, *Morus nigra*, 25.11.2008, Sahiwal, Sargodha; 1 ♂, 2 immatures, *Eucalyptus* sp., 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Citrus sinensis*, 9.11.2008, Raitri, Sahiwal, Sargodha.

35. *Philodromus devhutai* Tikader, 1966

*Material examined*

1 ♂, 2 immatures, *Acacia nilotica*, 9.11.2008, Sahiwal, Sargodha.

Family Pholcidae C. L. Koch, 1850

Genus *ARTEMA* Walckenaer, 1837

36. *Artema atlanta* Walckenaer, 1837

*Material examined*

1 ♂, 24.09.2008, University of Sargodha, Sargodha; 2 ♂, 2 immatures, house, 19.11.2008, Sargodha; 1 ♂, 1 immature, Faroka, Silanwali, Sargodha.

Family Salticidae Blackwall, 1841

Genus *MARPISSA* C.L. Koch, 1846

37. *Marpissa decorata* Tikader, 1974

*Material examined*

2 ♀, *Cestrum nocturnum*, 24.11.2008, Faroka, Sahiwal, Sargodha; 2 immatures, *Tamarindus indica*, 19.02.2009, Sargodha.

38. *Marpissa tigrina* Tikader, 1965

*Material examined*

2 immatures, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, 2 immatures, *Dalbergia sisso*, 4.10.2008, Sahiwal, Sargodha; 1 immature, 25.9.2008, University of Sargodha, Sargodha; 1 immature, *Zea mays*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 ♀, *Syzgium cumuni*, 4.10.2008, Sahiwal, Sargodha; 2 immatures, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Rosa* sp., 26.10.2008, Sahiwal, Sargodha; 1 immature, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Syzgium cumuni*, 10.11.2008, Sahiwal, Sargodha; 2 immatures, *Ficus religiosa*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, 28.11.2008, Sargodha; 1 ♀, 1 ♂, 1 immature, *Pongamia glabra*, 3.10.2008, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha; 1 immature, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Morus nigra*, 25.11.2008, Sahiwal, Sargodha; 1 ♂, *Morus nigra*, Raitri, Sahiwal, Sargodha; 1 ♀, 6 immatures, *Citrus sinensis*, 9.11.2008, Raitri, Sahiwal, Sargodha; 2 ♂, 1 immature, *Gardenia florida*, 9.11.2008, Raitri,

Sahiwal, Sargodha; 1 ♀, 1 ♂, *Syngium cumuni*, 16.3.2009, Sahiwal, Sargodha; 1 immature, *Tamarindus indica*, 19.2.2009, Sahiwal, Sargodha; 1 ♂, *Zizyphus jujuba*, 23.2.2009, Sahiwal, Sargodha; 1 ♀, *Syngium cumuni*, 16.3.2009, Sahiwal, Sargodha; 1 ♂, *Citrus limonia*, 16.3.2009, Sahiwal, Sargodha; 4 immatures, *Eucalyptus* sp., 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Gardenia florida*, 9.11.2008, Raitri, Sahiwal, Sargodha.

Genus *PLEXIPPUS* C.L. Koch, 1846  
39. *Plexippus paykulli* (Audouin, 1825)

*Material examined*

2 ♂, 3 ♀, *Morus alba*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 immature, 24.9.2008, University of Sargodha, Sargodha; 3 ♀, 16.11.2008, University of Sargodha, Sargodha; 3 immatures, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, 14.10.2008, University of Sargodha, Sargodha; 2 immatures, *Melia azaderch*, 3.10.2008, Sahiwal, Sargodha; 2 ♂, 25.10.2008, University of Sargodha, Sargodha; 1 ♂, 1 immature, *Citrus limonia*, 3.10.2008, Sahiwal, Sargodha; 2 ♀, 1 immature, *Oryza sativa*, 30.10.2008, Shahpur, Sargodha; 1 ♂, *Oryza sativa*, 26.10.2008, Sahiwal, Sargodha; 1 ♂, *Oryza sativa*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 ♂, *Oryza sativa*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 ♂, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 ♀, 29.11.2008, Sargodha; 1 immature, *Pongamia glabra*, 3.10.2008, Sahiwal, Sargodha; 1 ♂, *Ficus religiosa*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 ♂, 3 immatures, *Acacia nilotica*, 3.10.2008, Sahiwal, Sargodha; 1 ♂, 3 immatures, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha; 2 ♂, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 4.10.2008, Sahiwal, Sargodha; 1 ♂, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 immature, *Morus nigra*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 immature, *Oryza sativa*, 19.4.2008, Sahiwal, Sargodha; 1 ♀, 1 ♂, *Morus nigra*, 25.11.2008, Faroka, Sahiwal, Sargodha; 1 ♂, *Zizyphus jujuba*, 23.2.2009, Sahiwal, Sargodha; 1 immature, *Citrus limonia*, 16.3.2009, Sahiwal, Sargodha.

Genus *RHENE* Thorell, 1869  
40. *Rhene indica* Tikader, 1973

*Material examined*

1 immature, 25.09.2008, University of Sargodha, Sargodha; 1 immature, *Zizyphus jujuba*, 9.11.2008, Sahiwal, Sargodha; 1 immature, *Gardenia florida*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Citrus sinensis*, 9.11.2008, Raitri, Sahiwal, Sargodha.

Family Scytodidae Blackwall, 1864

Genus *SCYTODES* Latreille, 1804  
41. *Scytodes propinqua* Stoliczka, 1869

*Material examined*

2 immatures, house, 29.10.2008, Sargodha.

42. *Scytodes thoracica* (Latreille, 1802)

*Material examined*

1 immature, 24.09.2008, University of Sargodha, Sargodha.

Family Sparassidae Bertkau, 1872

Genus *OLIOS* Walckenaer, 1837  
43. *Olios lutescens* (Thorell, 1894)

*Material examined*

1 ♂, 1 ♀, 1 immature, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha; 1 immature, *Eucalyptus* sp., 10.11.2008, Lakhiwal, Sahiwal, Sargodha.

44. *Olios mahabangkawitus* Barrion & Litsinger, 1995

*Material examined*

2 immatures, 25.10.2008, University Of Sargodha, Sargodha; 2 immatures, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 2 immatures, *Zizyphus jujuba*, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Dalbergia sisso*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha; 1 ♂, *Rosa* sp., 1 immature, *Zea mays*, 10.11.2008,

Lakhiwal, Sahiwal, Sargodha; 3 immatures, *Gardenia florida*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 ♂, *Morus alba*, 10.11.2008, Sahiwal, Sargodha.

45. *Olios punctipes* Simon, 1884

*Material examined*

1 ♀, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha.

46. *Olios punjabensis* Dyal, 1935

*Material examined*

1 immature, *Pongamia glabra*, 22.02.2009, Lakhiwal, Sahiwal, Sargodha; 2 immatures, *Phoenix dactylifera*, 4.10.2008, Sahiwal, Sargodha.

Family Tetragnathidae Menge, 1866

Genus *GUIZYGIELLA* Zhu, Kim & Song, 1997

47. *Guizygiella indica* (Tikader & Bal, 1980)

*Material examined*

2 ♀, 1 ♂, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 ♀, *Syzgium cumuni*, 4.10.2008, Sahiwal, Sargodha; 1 ♂, *Acacia nilotica*, 04.10.2008, Sahiwal, Sargodha; 1 ♂, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha; 4 ♂, 3 ♀, 1 immature, *Phoenix dactylifera*, 04.10.2008, Sahiwal, Sargodha; 1 ♂, *Zizyphus jujuba*, 09.11.2008, Raitri, Sahiwal, Sargodha; 1 ♂, 19.04.2008, Sahiwal, Sargodha; 1 ♂, *Gardenia florida*, 09.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Citrus sinensis*, 09.11.2008, Raitri, Sahiwal, Sargodha; 1 ♀, 2 ♂, 1 immature, *Zizyphus jujuba*, 23.02.2009, Sahiwal, Sargodha; 1 immature, *Syzgium cumuni*, 19.04.2009, Sahiwal, Sargodha; 1 ♀, *Punica granatum*, 19.02.2009, Sahiwal, Sargodha; 1 ♀, *Citrus limonia*, 19.04.2009, Sahiwal, Sargodha; 2 ♀, house, 25.11.2008, Sargodha.

48. *Guizygiella melanocrania* (Thorell, 1887)

*Material examined*

4 ♂, *Syzgium cumuni*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Citrus limon*, 10.11.2008, Sahiwal, Sargodha.

Genus *LEUCAUGE* White, 1841

49. *Leucauge decorata* (Blackwall, 1864)

*Material examined*

7 ♀, *Citrus limonia*, 16.03.2009, Sahiwal, Sargodha; 1 ♀, *Citrus limonia*, 19.04.2008, Sahiwal, Sargodha; 1 ♀, 9.11.2008, Sahiwal, Sargodha; 1 ♀, *Acacia nilotica*, 9.11.2008, Sahiwal, Sargodha.

50. *Leucauge dorsotuberculata* Tikader, 1982

*Material examined*

1 ♂, 25.09.2008, University of Sargodha, Sargodha.

Genus *TETRAGNATHA* Latreille, 1804

51. *Tetragnatha javana* (Thorell, 1890)

*Material examined*

1 ♂, *Oryza sativa*, 25.09.2008, Sahiwal, Sargodha; 1 immature, *Rosa* sp., 10.11.2008, Sahiwal, Sargodha; 1 immature, *Syzgium cumuni*, 10.11.2008, Sahiwal, Sargodha.

Family Thomisidae Sundevall, 1833

Genus *RUNCINIA* Simon, 1875

52. *Runcinia affinis* Simon, 1897

*Material examined*

1 immature, 25.09.2008, Sargodha; 1 immature, *Oryza sativa*, 30.10.2008, Shahpur, Sargodha; 1 immature, *Oryza sativa*, 10.11.2008, Lakhiwal, Sahiwal, Sargodha.

Genus *THOMISUS* Walckenaer, 1805

53. *Thomisus labefactus* Karsch, 1881

*Material examined*

1 immature, 19.10.2008, Sargodha; 1 ♂, 25.10.2008, University of Sargodha, Sargodha; 1 immature, *Dalbergia sisso*, 4.10.2008, Sahiwal, Sargodha; 1 immature, *Pennisetum typhoides*, 7.11.2008, Sargodha; 1 ♂, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Morus alba*, 25.11.2008, Sahiwal, Sargodha; 1 ♂, *Rosa* sp., 19.04.2008, Sahiwal, Sargodha; 1 ♂, 1 immature, *Zizyphus jujuba*, 23.02.2009, Sahiwal, Sargodha; 1 ♂, 23.02.2009, Sahiwal, Sargodha.



Sahiwal, Sargodha; 2 ♂, *Zea mays*, 10.11.2008, Lakhiwal, Sargodha; 1 immature, *Eucalyptus* sp., 10.11.2008, Lakhiwal, Sahiwal, Sargodha; 1 immature, *Dalbergia sisso*, 9.11.2008, Raitri, Sahiwal, Sargodha; 3 immature, *Acacia nilotica*, 9.11.2008, Raitri, Sahiwal, Sargodha.

54. *Thomisus okinawensis* Strand, 1907

*Material examined*

1 immature, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Ficus religiosa*, 10.11.2008, Sahiwal, Sargodha; 1 ♂, *Rosa* sp., 26.10.2008, Sahiwal, Sargodha; 2 ♂, *Gardenia florida*, 9.11.2008, Raitri, Sahiwal, Sargodha; 1 immature, *Zizyphus jujuba*, 9.11.2008, Raitri, Sahiwal, Sargodha.

59. *Thomisus pugilis* Stoliczka, 1869

*Material examined*

1 immature, *Pyrus communis*, 10.11.2008, Sahiwal, Sargodha; 1 immature, *Punica granatum*, 23.02.2009, Sahiwal, Sargodha.

Family Uloboridae Thorell, 1869

Genus *ULOBORUS* Latreille, 1806

56. *Uloborus danolius* Tikader, 1969

*Material examined*

1 ♂, 1 immature, 25.09.2008, University of Sargodha, Sargodha.

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