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Updated Checklist of Spider Diversity (Arachnida: Araneae) in Two Union Territories of Northwest India: Jammu and Kashmir and Ladakh

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Abstract: Jammu and Kashmir and Ladakh Territories lie in the extreme northwest of India. The region has three distinct biogeographic zones, viz. Trans Himalaya, Northwest Himalaya and Semi-arid Plains. The Trans Himalaya is almost represented by Ladakh as like cool desert while Northwest Himalaya mostly by Kashmir and the climate is temperate and northern parts of Jammu, the area of Rajouri, Punch and Bhadrwa like sub-temperate, and the semi-arid plains of rest area of Jammu. These two union territories have great faunal diversity especially in union territory of Jammu and Kashmir. In this review, a total of 284 species of spiders described under 160 genera belonging to 34 families were reported as per the literatures up to October 2022 of two union territories of northwest India viz., Jammu and Kashmir and Ladakh. The biodiversity of spiders is more in Jammu and Kashmir (252 species, 148 genera, 31 families) than Ladakh (42 species, 34 genera, 14 families). However, most of the areas in both territories are unexplored and still virgin regarding the faunal survey programmes and need intensive and extensive survey in those areas by enthusiastic workers. In this study, it was also determined that the cultivated land of the Jammu and Kashmir and Ladakh mostly covered with apple and due to high number of application of pesticides and high level of disturbance, the useful and predatory spiders migrate to uncultivated lands including forest and high hills which has not been unexplored and still virgin and needs more attention for the conservation of these predatory fauna that has great predation ability of harmful pests.

Keywords: Checklist, Faunal distribution, Jammu and Kashmir, Ladakh, Spider, India

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Introduction

Spiders (Arachnida: Araneae) are highly diverse and abundant in the terrestrial ecosystem. They

are distributed worldwide except in arctic zones. In spite of being ecologically significant, spiders

are least accepted because of the commonness of spider fear (arachnophobia) in public. Media also globally spread misinformation about spiders. Except for few species (e.g. black widow spider), none of the spiders is dangerous for human beings. Almost all spiders are predators and more than 99.9% of the food includes insects. Hence, their role in suppressing the insect population is immense. The global spider community accounting for over 50 thousand species is estimated to consume 400-800 million tons of prey (mostly insects) per year (about the total human mass on the earth) regulating insect populations that could otherwise wipe out the crops (Nyffeler and Birkhofer, 2017). The spider community comprise several different ecological guilds (a group of species utilizing the same resource in similar ways) such as they are either of orb web weavers (trap the prey in silken circular or hexagonal web), stalkers or jumping spiders (active hunters), ground runners (chase the prey on the ground), foliage runners (on the foliage of the crops), space builders (irregular web to trap preys), ambushers (grasp unsuspecting insects that come within contact), etc. Thus, the spider community, have several tactics to capture prey depending upon the species, habitats and kind of food. It implies that by having several different guilds, they are generally more likely to suppress insect pests than more homogenous communities like insect predators and parasitoids (Uetz, 1992). Studies exploring the biological control potential of spiders have been conducted in annual cropping systems, such as rice, corn, cotton, soybean, and wheat, demonstrating that spiders can be beneficial and contribute to pest insect suppression (Khan, 2013a). It is stated that if spiders disappear from the earth's surface, human beings will survive only a few years due to food shortages caused by crop infestation caused by insects (Singh, 2022a). Globally, they account for 50,619 species in 4,288 genera belonging to 132 families (World Spider Catalog, 2022). In India, Caleb and Sankaran (2022) listed only 1928 species belonging to 492 genera in 61 families, however, Singh and Singh (2021a) mentioned

2344 species under 596 genera comprising 65 families, though many species recorded by several authors have been marked by them as the case of misidentification. However, there are several species in the wild and in museums that still await description and classification.

The inventory of fauna and flora of a given region is one of the prime objectives for setting up a biodiversity conservation action plan for that region (Singh and Singh, 2020). The conservation status of 99.5% of the spider species has not yet been evaluated by the IUCN globally (Seppälä *et al.*, 2018). Despite recent research works on the diversity and distribution of spiders in India, their number is insufficient as compared to the other parts of the world (Singh, 2022b).

Jammu and Kashmir and Ladakh lie in the extreme northwest of India. The region has three distinct biogeographic zones, viz. Trans Himalaya, Northwest Himalaya and Semi-arid Plains. The Trans Himalaya is almost represented by Ladakh while Northwest Himalaya is mostly by Kashmir and northern parts of Jammu and the Semi-arid Plains by Jammu. All these three regions have different climates, altitudes and precipitation, thus making the area highly biodiversity-rich. Before October 31, 2019, the entire region was a state (Jammu and Kashmir) of India. On this date, the Indian government reconstituted the former state of Jammu and Kashmir into two union territories, one being Jammu and Kashmir and the other being Ladakh (Fig. 1). The region shares border with Himachal Pradesh in most of the southern part, Punjab in south-west and with other countries such as China in the north and east and Pakistan in the west. It comprises an area of 1,01,387 km² (Jammu and Kashmir: 42,241 km²; Ladakh: 59,146 km²). A large area of Jammu and Kashmir and Ladakh is occupied by Pakistan (POK) and China (COK) (Fig. 1B). The present review provides an updated checklist of the fauna of spiders in two territories of northwest India.

The survey of the literature revealed that the existing information on the spider diversity in two union territories, Jammu and Kashmir and Ladakh

are scattered and more than half of the areas have not yet been surveyed for faunal distribution of spiders. Recently, the checklist of spider fauna have been reported from Indian States such as -- Andhra Pradesh (Singh and Sharma, 2022a), Bihar and Jharkhand (Singh and Singh, 2021b), Chhattisgarh (Singh and Singh, 2021c), Goa (Singh and Singh, 2022a), Haryana, Himachal Pradesh, Punjab, Chandigarh and Delhi (Singh and Singh, 2021d), Karnataka (Singh, 2022b), Madhya Pradesh (Singh and Sharma, 2022b), Maharashtra (Singh, 2022a), Odisha (Singh, 2022c), northeast India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura) (Singh and Singh, 2021e), Rajasthan (Singh and Singh, 2022b), Telangana (Singh and Sharma, 2022c), Uttar Pradesh and Uttarakhand (Singh and Singh, 2022c) and Andaman, Nicobar and Lakshdweep (Singh and Singh, 2022d).

Materials and Methods

The present checklist is based on the published literature on spiders, e.g. books, book chapters, journals, proceedings of conferences, Records and Fauna Series of the Zoological Survey of India, Kolkata, a few authentic theses, websites (only research-grade contents), and World Spider Catalog (WSC, 2022) up to October, 2022. In most of the literature published earlier and even in recent publications, there are several errors in the scientific names of the spiders because of their modified status and the publication of other nomenclatural decisions and clarifications. In the present checklist, attempts have been made to correct the errors in the scientific names of the spiders following WSC (2022). For synonymy and endemism of valid spider species, WSC (2022) should be consulted. If a spider species is identified only up to a generic level, it was considered a species if no other species of that genus is reported within that territory or district. The present checklist may contain apparently misidentified species as the source of identification is not mentioned in several research articles published recently.

Results and Discussion

A total of 284 species of spiders described under 160 genera belonging to 34 families were recorded in both the territories (Jammu and Kashmir, and Ladakh) of northwest India. The biodiversity of spiders is more in Jammu and Kashmir (251 species, 148 genera, 31 families) than in Ladakh (42 species, 34 genera, 14 families). However, most of the areas in both territories are still virgin regarding the faunal survey programmes and need intensive and extensive surveys in those areas by enthusiastic workers.

Following is the list of spiders recorded/described from the northwest territories of India.

1. Jammu and Kashmir

Jammu and Kashmir (latitude: 34°50'1.16" N; longitude: 74°47'50.53" E; area: 42,241 km²) is a union territory of India. Its western part is occupied by Pakistan (POK, Fig. 1B). The Line of Control separates Jammu and Kashmir from the Pakistani-administered territories of Kashmir and Gilgit-Baltistan in the west and north. It is bordered by the Kargil district of Ladakh to the northeast, Himachal Pradesh and Punjab to the south, and POK to the west to north. Jammu and Kashmir have several valleys, e.g. the Kashmir Valley, Tawi Valley, Chenab Valley, Poonch Valley, Sind Valley, and Lidder Valley. Along the northeastern border of the Kashmir Valley (avg. height 6,070 m) runs the main range of the Himalayas. The Jhelum is the major Himalayan river which flows through the Kashmir valley. The southern Jammu region is mostly hilly, with the Shivaliks, the middle and the great Himalayas running parallel to each other in a southeast-northwest direction. A narrow southwestern strip constitutes fertile plains. The Chenab, Tawi and Ravi are other important rivers flowing through the Jammu region. The climate of the territory differs with altitude and across regions. Southern and southwestern areas have a subtropical climate, with hot summers and cool winters and receive most of the rainfall during the monsoon

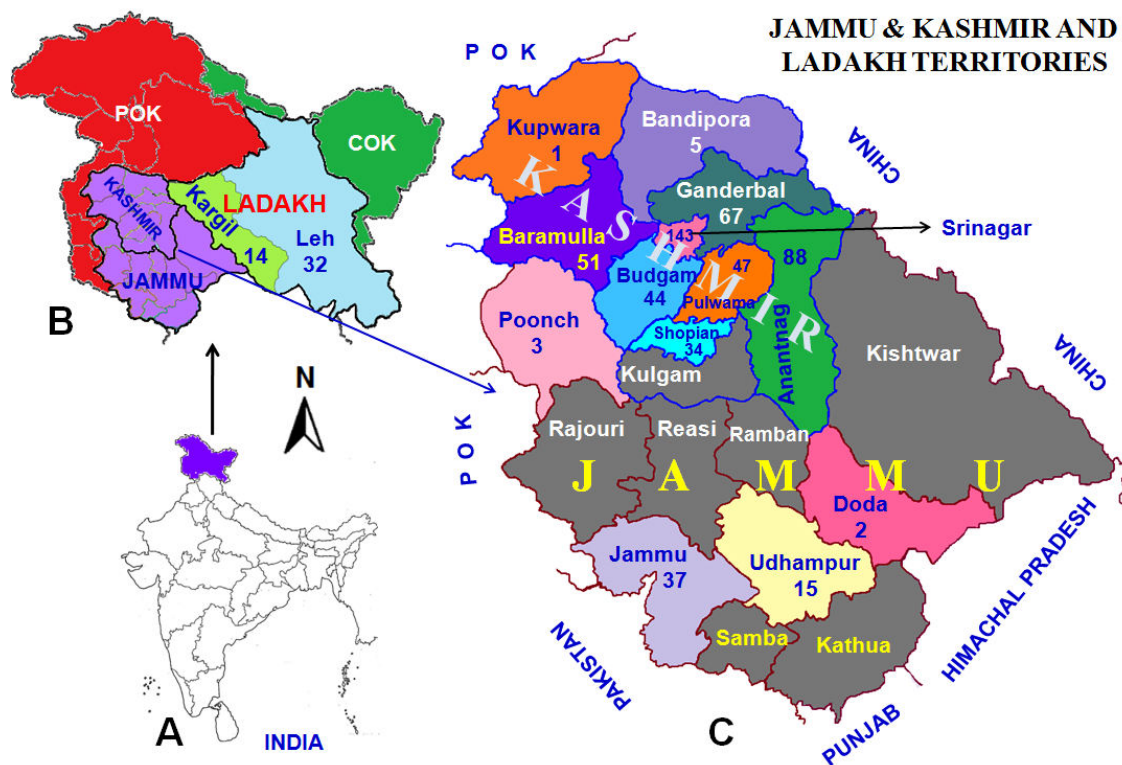


Fig. 1: Number of spider species recorded and/or described from different districts of two Northwest Territories of India (A), Ladakh of India (B), and Jammu and Kashmir (C).

season. The east and north regions have a temperate climate. In winter, temperatures reach below zero degree Celsius. Snowfall is frequent in the valley and mountain areas. For administration, the union territory of Jammu and Kashmir consists of two divisions: Jammu Division and Kashmir Division, and each is divided into 10 districts (Fig. 1C), thus total of 20 districts exist in Jammu and Kashmir.

In Jammu and Kashmir, Pickard-Cambridge (1885) was probably the first who had described/reported the occurrence of 34 species of spiders in different districts of Kashmir. After five decades, Caporiacco (1934, 1935) described about 77 species from several localities of Jammu and Kashmir. Later on Dyal recorded 4 species of spiders from Dal lake. Among the Indian authors during post-independent period, Tikader and Gajbe (1973) were the first to describe a species of

Trochanteriidae, *Plator kashmirensis* from the Poonch district of Jammu. Later on, several workers (Brignoli, 1976; Sharma and Sharma, 1977; Žabka, 1981; Tikader and Bal, 1981; Sadana, 1983; Thaler, 1987; Prószyński, 1992; Thakur *et al.*, 1995) described/recorded few more species from Jammu and Kashmir. In the twenty-first century, Khan (2009, 2011a, b, 2012a, 2013b), Khan and Rather (2012) and Khan and Khan (2013) recorded hundreds of species of spiders from several districts of Kashmir in maize, rice, vegetable fields and in fruit orchards. In recent years, Punjoo and Bhat (2015) recorded more than a hundred species of spiders from the Dachigam National Park (spread in Anantnag and Srinagar districts) of Kashmir.

In the present compilation, a total of 252 species described under 145 genera belonging to 31 families are enlisted that have been

recorded/described from Jammu and Kashmir giving up-to-date information in the light of modern taxonomy (Table 1).

Out of 20 districts of Jammu and Kashmir, most of the valid species of spiders were recorded from Srinagar (143 species) followed by Anantnag (88 species), Ganderbal (67 species), Baramulla (51 species), Pulwama (47 species), Budgam (44 species), Jammu (37 species), Shopian (34 species) and Udhampur (15 species). No spider species was so far collected from 6 districts of Jammu division (Kathua, Kistwara, Rajaouri, Ramban, Reasi, Samba) and one district (Kulgam) of Kashmir division (Fig. 1C). Hence, intensive and extensive faunal survey is required in these areas.

Among the species of spiders described/recorded from Jammu and Kashmir, majority belong to the family Areneidae (36 species) followed by Salticidae (30 species), Linyphiidae and Lycosidae (28 species each), Theriidae (22 species), Gnaphosidae (20 species), Tetragnathidae and Thomisidae (13 species each), Oxyopidae (11 species) and others (less than 10 species) (Table 2). Fourteen species are common in both the divisions. Table 2 also demonstrates that a majority of species recorded in Jammu and Kashmir are identified only up to generic level.

2. Ladakh

Ladakh (latitude: 34°12'34.25" N; longitude: 77°36'54.40" E; area: 59,146 km²) is a union territory of India. Before, October 31, 2019 it was a part of Jammu and Kashmir State of India. A considerable area (78,971 km²) is under illegal occupation of Pakistan and China (Fig. 1B). It is bordered by China (Tibet Autonomous Region) to the east, the Indian state of Himachal Pradesh to the south, Jammu and Kashmir and the POK to the west, and the Karakoram Pass in the far north. Ladakh is divided into two districts, Leh and Kargil. The Indus, Shyok and Nubra river flow in Leh district while the Suru, Dras and Zaskar river flow in Kargil district. Ladakh is the highest plateau in India with most of it being over 3,000 m (highest elevation 7,742 m). Ladakh is a high

altitude desert. The main source of water is the winter snowfall on the mountains. The northern parts of Ladakh receive heavy snowfall and remain cut off from the rest of the areas for several months. Summers are short, though but are long enough to grow crops. Temperature ranges are from 3 to 35 °C in summer and from –20 to –35 °C in winter.

Ladakh has not yet received much attention for surveying the spider fauna. Pickard-Cambridge (1885) was probably the first who had described/reported the occurrence of 7 species of spiders in Leh district of Ladakh. After five decades, Caporiacco (1934, 1935) described/recorded about 14 species from both Leh and Kargil districts in Ladakh. In the twenty-first century, Logunov and Marusik (2003) described a single species, *Marusyllus karnai* (Logunov and Marusik, 2003) from Leh. Uniyal (2006) is the first Indian worker who surveyed some parts of Leh and accounted 15 species of spiders out of which several species were identified only up to the generic level.

In the present compilation, a total of only 42 species described under 34 genera belonging to 14 families are enlisted that have been recorded/described from Ladakh giving up-to-date information in the light of modern taxonomy (Table 3).

Out of 2 districts of Ladakh, most of the valid species of spiders were recorded from Leh (29 species) than Kargil (14 species) (Table 3, Fig. 1B). Only Caporiacco (1934, 1935) described/recorded the spider species from Kargil. Eleven species recorded in Leh are identified only up to the genera level. Hence, an intensive and extensive faunal Survey is required in these areas.

Among the species of spiders described/recorded from Ladakh, the majority belong to the family Gnaphosidae (8 species) followed by Salticidae (6 species), Lycosidae (5 species), and others (less than 5 species) (Table 4). Five families of spiders are represented by only a single species. Among the spider species

Table 1: List of species of spiders recorded/described from the districts of Jammu and Kashmir, India

Families/Species	Districts	References
Agelenidae		
1. <i>Agelena labyrinthica</i> (Clerck, 1757)	Srinagar	Caporiacco, 1935
2. <i>Coelotes stylifer</i> Caporiacco, 1935	Ganderbal	Caporiacco, 1935
3. <i>Coelotes</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Tegenaria domestica</i> (Clerck, 1757)	Srinagar	iNaturalists, 2022
5. <i>Tegenaria</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
Amourobiidae		
1. <i>Callobius</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
Araneidae		
1. <i>Agalenatea redii</i> (Scopoli, 1763)	Udhampur	Caporiacco, 1934
2. <i>Araneus Anantnagensis</i> Tikader and Bal, 1981	Anantnag, Budgam, Srinagar	Tikader and Bal, 1981; Tikader, 1982; Khan, 2011b
3. <i>Araneus diadematus</i> Clerck, 1757	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Araneus ellipticus</i> (Tikader and Bal, 1981)	Anantnag, Jammu, Srinagar	Sharma, 2014; Punjoo and Bhat, 2015
5. <i>Araneus gibber</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
6. <i>Araneus pahalgaonensis</i> Tikader and Bal, 1981	Anantnag, Budgam, Srinagar	Tikader and Bal, 1981; Khan, 2009; Khan and Rather, 2012
7. <i>Araneus panniferens</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
8. <i>Araneus pallax</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
9. <i>Araneus pontii</i> Caporiacco, 1934	Udhampur	Caporiacco, 1934
10. <i>Araneus praedatus</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
11. <i>Araneus</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2009; Khan, 2011a, b, 2012a; Lone <i>et al.</i> , 2015a; Punjoo and Bhat, 2015
12. <i>Araneus trifolium</i> (Hentz)	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2011a, b, 2012a; Khan and Rather, 2012
13. <i>Araniella cucurbitina</i> (Clerck, 1757)	Anantnag, Baramulla, Budgam, Ganderbal, Pulwama, Shopian, Srinagar	Pickard-Cambridge, 1885; Caporiacco, 1935; Khan, 2011a, 2012a, 2013b; Punjoo and Bhat, 2015
14. <i>Araniella nympha</i> (Simon, 1889)	Anantnag, Srinagar	Sadana, 1983; Punjoo and Bhat, 2015
15. <i>Argiope</i> sp.	Anantnag, Budgam, Srinagar	Khan, 2011b; Khan and Rather, 2012; Punjoo and Bhat, 2015
16. <i>Bijoaraneus mitificus</i> (Simon, 1886)	Jammu	Thakur <i>et al.</i> , 1995; Sharma, 2014
17. <i>Chorizopes congener</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
18. <i>Chorizopes stoliczkae</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
19. <i>Cyclosa conica</i> (Pallas, 1772)	Anantnag, Srinagar	Punjoo and Bhat, 2015

Families/Species	Districts	References
20. <i>Cyclosa elongata</i> Biswas and Roychaudhuri, 1998	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b; Khan and Rather, 2012; Punjoo and Bhat, 2015
21. <i>Cyclosa insulana</i> (Costa, 1834)	Jammu	Sharma, 2014
22. <i>Cyclosa kashmirica</i> Caporiacco, 1934	Ganderbal	Caporiacco, 1934
23. <i>Cyrtarachne pallida</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
24. <i>Cyrtophora</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
25. <i>Hypsosinga</i> sp.	Baramulla, Pulwama, Srinagar	Khan, 2011a, 2012a
26. <i>Neoscona achine</i> (Simon, 1906)	Anantnag, Srinagar	Punjoo and Bhat, 2015
27. <i>Neoscona mukerjei</i> Tikader, 1980	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Sadana, 1983; Thakur <i>et al.</i> , 1995; Khan, 2009; Khan, 2011a, 2012a; Khan and Rather, 2012; Sharma, 2014; Khursheed <i>et al.</i> , 2021
28. <i>Neoscona pavida</i> (Simon, 1906)	Anantnag, Srinagar	Punjoo and Bhat, 2015
29. <i>Neoscona shillongensis</i> Tikader and Bal, 1981	Baramulla, Pulwama, Srinagar	Khan, 2009, 2011a, 2012a, 2013b
30. <i>Neoscona</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2009, 2011a, 2012a, 2013b; Khan and Rather, 2012; Khursheed <i>et al.</i> , 2021
31. <i>Neoscona theisi</i> (Walckenaer, 1837)	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2011a, b, 2012a; Khan and Rather, 2012; Punjoo and Bhat, 2015
32. <i>Neoscona vigilans</i> (Blackwall, 1865)	Anantnag, Baramulla, Pulwama, Srinagar	Khan, 2013b, b; Punjoo and Bhat, 2015
33. <i>Nephila pilipes</i> (Fabricius, 1793)	Bandipora, Udhampur	iNaturalists, 2022
34. <i>Nephila</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2011a; Khan and Rather, 2012
35. <i>Plebs himalayaensis</i> (Tikader, 1975)	Anantnag, Jammu, Srinagar	Sadana, 1983; Punjoo and Bhat, 2015
36. <i>Polys</i> sp.	Jammu	Sharma, 2014
37. <i>Singa chota</i> Tikader, 1970	Srinagar	Sadana, 1983
38. <i>Zygiella x-notata</i> (Clerck, 1757)	Srinagar	Caporiacco, 1935
Cheiracanthidae		
1. <i>Cheiracanthium approximatum</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
2. <i>Cheiracanthium himalayense</i> Gravely, 1931	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b
3. <i>Cheiracanthium kashmirens</i> Majumder and Tikader, 1991	Srinagar	Majumder and Tikader, 1991
4. <i>Cheiracanthium triviale</i> (Thorell, 1895)	Jammu	Thakur <i>et al.</i> , 1995
5. <i>Cheiracanthium</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2009, 2011a; Khan and Rather, 2012

Families/Species	Districts	References
Clubionidae		
1. <i>Clubiona deletrix</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
2. <i>Clubiona drassodes</i> Pickard-Cambridge, 1874	Anantnag, Srinagar	Punjoo and Bhat, 2015
3. <i>Clubiona japonicola</i> Bösenberg and Strand, 1906	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2011a, 2012a, 2013b; Khan and Rather, 2012
4. <i>Clubiona</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2009, 2011a, 2012a; Khan and Rather, 2012; Lone <i>et al.</i> , 2015a
Corinnidae		
1. <i>Castianeira</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a
Ctenidae		
1. <i>Bowie cochinesis</i> (Gravely, 1931)	Srinagar	Khan, 2009; Khan and Khan, 2013
2. <i>Bowie himalayensis</i> (Gravely, 1931)	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2009, 2011a, 2012a
3. <i>Bowie indicus</i> (Gravely, 1931)	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2009, 2011a, 2012a
4. <i>Bowie meghalayaensis</i> (Tikader, 1976)	Srinagar	Khan, 2009; Khan and Khan, 2013
5. <i>Bowie sikkimensis</i> (Gravely, 1931)	Srinagar	Khan, 2009; Khan and Khan, 2013
Desidae		
1. <i>Amphinecta</i> sp.	Srinagar	Dyal, 1942
2. <i>Cambridgea</i> sp.	Srinagar	Dyal, 1942
3. <i>Desis</i> sp.	Srinagar	Dyal, 1942
Dictynidae		
1. <i>Archaeodictyna consecuta</i> (O. Pickard-Cambridge, 1872)	Srinagar	Caporiacco, 1935
2. <i>Argyroneta</i> sp.	Srinagar	Dyal, 1942
3. <i>Dictyna</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a
4. <i>Lathys sindi</i> (Caporiacco, 1934)	Ganderbal, Srinagar	Caporiacco, 1934
5. <i>Nigma puella</i> (Simon, 1870)	Srinagar	Caporiacco, 1934
Eresidae		
1. <i>Stegodyphus sarasinorum</i> Karsch, 1892	Jammu	Sadana, 1983; Thakur <i>et al.</i> , 1995
2. <i>Stegodyphus</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a, b
Filistatidae		
1. <i>Zaitunia rufa</i> (Caporiacco, 1934)	Srinagar	Caporiacco, 1934
Gnaphosidae		
1. <i>Berlandina drassodea</i> (Caporiacco, 1934)	Ganderbal	Caporiacco, 1934
2. <i>Berlandina plumalis</i> (Pickard-Cambridge, 1872)	Ganderbal, Srinagar	Caporiacco, 1934
3. <i>Callilepis</i> sp.	Srinagar	Khan, 2009; Punjoo and Bhat, 2015

Families/Species	Districts	References
4. <i>Drassodes dispulsus</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
5. <i>Drassodes himalayensis</i> Tikader and Gajbe, 1975	Anantnag	GajbeUA, 1988
6. <i>Drassodes involutus</i> (Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
7. <i>Drassodes parvidens</i> Caporiacco, 1934	Budgam, Ganderbal, Srinagar	Caporiacco, 1934
8. <i>Drassodes rubicundulus</i> Caporiacco, 1934	Ganderbal	Caporiacco, 1934
9. <i>Drassodes</i> sp.	Anantnag, Baramulla, Pulwama, Srinagar	Khan, 2013b; Punjoo and Bhat, 2015
10. <i>Gnaphosa</i> sp.	Baramulla, Pulwama, Srinagar	Khan, 2013b
11. <i>Haplodrassus dalmatensis</i> (L. Koch, 1866)	Anantnag, Srinagar	Punjoo and Bhat, 2015
12. <i>Haplodrassus omissus</i> (Pickard-Cambridge, 1872)	Ganderbal	Caporiacco, 1934
13. <i>Haplodrassus signifer</i> (C.L. Koch, 1839)	Ganderbal	Caporiacco, 1934
14. <i>Micaria dives</i> (Lucas, 1846)	Ganderbal	Caporiacco, 1934
15. <i>Sergiolus montanus</i> (Emerton, 1890)	Anantnag, Srinagar	Punjoo and Bhat, 2015
16. <i>Setaphis</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
17. <i>Talanites tibialis</i> Caporiacco, 1935	Srinagar	Caporiacco, 1935; Tikader, 1982
18. <i>Zelotes desioi</i> Caporiacco, 1934	Baramulla, Pulwama, Udhampur	Caporiacco, 1934; Khan, 2013b
19. <i>Zelotes pseudopusillus</i> Caporiacco, 1934	Pulwama	Tikader, 1982
20. <i>Zelotes sindi</i> Caporiacco, 1934	Ganderbal	Caporiacco, 1934
21. <i>Zelotes</i> sp.	Anantnag, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
Linyphiidae		
1. <i>Atypena</i> sp.	Srinagar	Khan, 2009
2. <i>Erigone dentipalpis</i> (Wider, 1834)	Ganderbal	Pickard-Cambridge, 1885; Caporiacco, 1935
3. <i>Erigone pseudovagans</i> Caporiacco, 1935	Ganderbal	Caporiacco, 1935
4. <i>Erigone rohtangensis</i> Tikader, 1981	Anantnag, Budgam, Srinagar	Khan and Rather, 2012
5. <i>Gongyliidium confusum</i> Thaler, 1987	Anantnag, Baramulla, Ganderbal	Thaler, 1987; Tanasevitch, 2011
6. <i>Heterolinyphia tarakotensis</i> Wunderlich, 1973	Baramulla	Thaler, 1987
7. <i>Himalaphantes martensi</i> (Thaler, 1987)	Anantnag	Thaler, 1987
8. <i>Indophantes digitulus</i> (Thaler, 1987)	Anantnag, Baramulla, Ganderbal	Thaler, 1987

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9. <i>Lepthyphantes allegrii</i> Caporiacco, 1935	Baramulla	Caporiacco, 1935
10. <i>Lepthyphantes bhudbari</i> Tikader, 1970	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b
11. <i>Lepthyphantes leprosus</i> (Ohlert, 1865)†	Anantnag, Srinagar	Punjoo and Bhat, 2015
12. <i>Lepthyphantes lingsoka</i> Tikader, 1970	Srinagar	Sadana, 1983
13. <i>Lepthyphantes peramplus</i> (Pickard–Cambridge, 1885)	Ganderbal	Pickard–Cambridge, 1885
14. <i>Lepthyphantes</i> sp.	Anantnag, Baramulla, Budgam, Srinagar	Khan and Rather, 2012; Lone <i>et al.</i> , 2015a
15. <i>Linyphia consanguinea</i> O. Pickard–Cambridge, 1885	Ganderbal	Pickard–Cambridge, 1885
16. <i>Linyphia</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, b, 2012a, 2013b; Punjoo and Bhat, 2015
17. <i>Linyphia triangularis</i> (Clerck, 1757)†	Anantnag, Srinagar	Punjoo and Bhat, 2015
18. <i>Megalepthyphantes nebulosus</i> (Sundevall, 1830)	Ganderbal	Caporiacco, 1934
19. <i>Microlinyphia pusilla</i> (Sundevall, 1830)	Bandipora	Caporiacco, 1935
20. <i>Microlinyphia</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a, b
21. <i>Milleriana</i> sp.	Baramulla	Thaler, 1987
22. <i>Neriere birmanica</i> (Thorell, 1887)	Udhampur	Caporiacco, 1935
23. <i>Neriere clathrata</i> (Sundevall, 1830)	Anantnag	Thaler, 1987
24. <i>Neriere radiata</i> (Walckenaer, 1841)	Srinagar	Chakrabarti, 2013
25. <i>Neriere</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
26. <i>Obscuriphantes</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a, b
27. <i>Oedothorax dubius</i> Caporiacco, 1935	Srinagar	Caporiacco, 1935
28. <i>Oedothorax globiceps</i> Thaler, 1987	Anantnag	Thaler, 1987
29. <i>Piniphantes himalayensis</i> (Tanasevitch, 1987)	Ganderbal	Thaler, 1987
30. <i>Scotargus pilosus</i> Simon, 1913	Anantnag	Thaler, 1987
31. <i>Tiso megalops</i> Caporiacco, 1935	Ganderbal	Caporiacco, 1935
32. <i>Troxochrota kashmirica</i> (Caporiacco, 1935)	Ganderbal, Srinagar	Caporiacco, 1935
Liocranidae		
1. <i>Apostenus annulipes</i> Caporiacco, 1935	Udhampur	Caporiacco, 1935
Lycosidae		
1. <i>Alopecosa</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
2. <i>Arctosa</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012; Punjoo and Bhat, 2015

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3. <i>Draposa oakleyi</i> (Gravely, 1924)	Jammu	Sadana, 1983
4. <i>Evippa</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a
5. <i>Evippomma evippiforme</i> (Caporiacco, 1935)	Ganderbal, Srinagar	Caporiacco, 1935
6. <i>Hippasa agelenoides</i> (Simon, 1884)	Anantnag, Srinagar	Punjoo and Bhat, 2015
7. <i>Hippasa flavicoma</i> Caporiacco, 1935	Udhampur	Caporiacco, 1935
8. <i>Hippasa greenalliae</i> (Blackwall, 1867)	Jammu	Sharma, 2014
9. <i>Hippasa himalayensis</i> Gravely, 1924	Jammu	Sharma, 2014
10. <i>Hippasa olivacea</i> (Thorell, 1887)	Jammu	Sadana, 1983
11. <i>Hogna rubromandibulata</i> (O. Pickard-Cambridge, 1885)	Ganderbal, Srinagar	Pickard-Cambridge, 1885; Caporiacco, 1935
12. <i>Lycosa</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, b, 2012a; Lone <i>et al.</i> , 2015a
13. <i>Pardosa algoides</i> Schenkel, 1963	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
14. <i>Pardosa altitudinis</i> Tikader and Malhotra, 1980	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b, b; Khan and Rather, 2012
15. <i>Pardosa flavisterna</i> Caporiacco, 1935	Bandipora, Baramulla, Budgam, Ganderbal, Kupwara, Pulwama, Srinagar	Caporiacco, 1935; Punjoo and Bhat, 2015; Shah and Buhroo, 2022
16. <i>Pardosa fletcheri</i> (Gravely, 1924)	Poonch	Sharma and Sharma, 1977
17. <i>Pardosa fortunata</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
18. <i>Pardosa fuscata</i> (Thorell, 1875)†	Anantnag, Srinagar	Punjoo and Bhat, 2015
19. <i>Pardosa hydaspis</i> Caporiacco, 1935	Udhampur	Caporiacco, 1935
20. <i>Pardosa minuta</i> Tikader and Malhotra, 1976	Jammu	Thakur <i>et al.</i> , 1995
21. <i>Pardosa pseudoannulata</i> (Bösenberg and Strand, 1906)	Jammu	Thakur <i>et al.</i> , 1995
22. <i>Pardosa</i> sp.	Anantnag, Baramulla, Jammu; Srinagar	Khan, 2009; Sharma, 2014; Lone <i>et al.</i> , 2015a; Punjoo and Bhat, 2015
23. <i>Pardosa stellata</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Caporiacco, 1935
24. <i>Pardosa tridentis</i> Caporiacco, 1935	Ganderbal	Caporiacco, 1935
25. <i>Pardosa vindicata</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Caporiacco, 1935
26. <i>Schizocosa concolor</i> (Caporiacco, 1935)	Ganderbal	Caporiacco, 1935
27. <i>Trochosa propinqua</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
28. <i>Trochosa terricola</i> Thorell, 1856	Ganderbal	Caporiacco, 1935
29. <i>Wadicosa fidelis</i> (O. Pickard-	Jammu, Poonch	Thakur <i>et al.</i> , 1995; Sharma

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Cambridge, 1872)		and Sharma, 1977
Mimetidae		
1. <i>Mimetus laevigatus</i> (Keyserling, 1863)	Srinagar	Caporiacco, 1934
Oxyopidae		
1. <i>Oxyopes birmanicus</i> Thorell, 1887	Anantnag, Srinagar	Punjoo and Bhat, 2015
2. <i>Oxyopes elegans</i> L. Koch, 1878	Anantnag, Srinagar	Punjoo and Bhat, 2015
3. <i>Oxyopes javanus</i> Thorell, 1887	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
4. <i>Oxyopes jubilans</i> Pickard-Cambridge, 1885	Ganderbal, Srinagar	Caporiacco, 1935; Pickard-Cambridge, 1885
5. <i>Oxyopes lineatus</i> Latreille, 1806	Anantnag	Punjoo and Bhat, 2015
6. <i>Oxyopes praedictus</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
7. <i>Oxyopes ramosus</i> (Martini and Goeze, 1778)	Anantnag, Srinagar	Punjoo and Bhat, 2015
8. <i>Oxyopes ratnae</i> Tikader, 1970	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan Khan, 2011a, b, 2012a; Khan and Rather, 2012
9. <i>Oxyopes rejectus</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
10. <i>Oxyopes shweta</i> Tikader 1970	Jammu	Thakur <i>et al.</i> , 1995
11. <i>Oxyopes</i> sp.	Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2011a, 2012a
12. <i>Peucetia viridana</i> (Stoliczka, 1869)	Jammu	Sharma, 2014
Philodromidae		
1. <i>Philodromus</i> sp.	Baramulla, Pulwama, Srinagar	Khan, 2011a, 2012a
2. <i>Thanatus albescens</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
3. <i>Thanatus coloradensis</i> Keyserling, 1880	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Thanatus</i> sp.	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a
Pholcidae		
1. <i>Artema atlanta</i> Walckenaer, 1837	Jammu	Sadana, 1983
2. <i>Crossopriza lyoni</i> (Blackwall, 1867)	Ganderbal, Jammu	Caporiacco, 1935; Sadana, 1983
3. <i>Pholcus phalangioides</i> (Fuesslin, 1775)	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Pholcus</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a
5. <i>Physocyclus globosus</i> (Taczanowski, 1874)	Anantnag, Srinagar	Punjoo and Bhat, 2015
Pimoidae		
1. <i>Pimoida gandhii</i> Hormiga, 1994	Anantnag	Hormiga, 1994
Pisauridae		
1. <i>Perenethis dentifasciata</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885

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2. <i>Pisaura mirabilis</i> (Clerck, 1757)	Anantnag, Srinagar	Punjoo and Bhat, 2015
3. <i>Pisaura</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b; Khan and Rather, 2012
4. <i>Stoliczka affinis</i> Caporiacco, 1935	Udhampur	Caporiacco, 1935
Salticidae		
1. <i>Afraflacilla flavipes</i> (Caporiacco, 1935)	Bandipora, Srinagar	Caporiacco, 1935
2. <i>Attulus diductus</i> (Pickard-Cambridge, 1885)	Ganderbal, Srinagar	Caporiacco, 1935
3. <i>Bianor albobimaculatus</i> (Lucas, 1846)	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Brettus anchorum</i> Wanless, 1979	Srinagar	Chakrabarti, 2013
5. <i>Chalcoscirtus glacialis</i> Caporiacco, 1935	Ganderbal	Caporiacco, 1935
6. <i>Cyrba algerina</i> (Lucas, 1846)	Udhampur	Caporiacco, 1935
7. <i>Dendryphantès caporiaccoi</i> Roewer, 1951	Udhampur	Caporiacco, 1935
8. <i>Epocilla aura</i> (Dyal, 1935)	Jammu	Sadana, 1983
9. <i>Euophrys evae</i> Żabka, 1981	Baramulla	Żabka, 1981
10. <i>Evarcha jucunda</i> (Lucas, 1846)	Ganderbal	Caporiacco, 1935
11. <i>Hasarius adansonii</i> (Audouin, 1826)	Ganderbal	Pickard-Cambridge, 1885
12. <i>Heliophanus curvidens</i> (O. P.-Cambridge, 1872)	Srinagar	Prószyński, 1992
13. <i>Marpissa</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
14. <i>Myrmaplata plataleoides</i> (Pickard-Cambridge, 1869)	Anantnag, Srinagar	Punjoo and Bhat, 2015
15. <i>Myrmarachne corpuzrarosae</i> Barrion, 1981	Srinagar	Khan, 2009
16. <i>Myrmarachne hidaspi</i> Caporiacco, 1935	Srinagar	Caporiacco, 1935
17. <i>Myrmarachne himalayensis</i> Narayan, 1915	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, b, 2012a; Khan and Rather, 2012
18. <i>Myrmarachne laeta</i> (Thorell, 1887)	Jammu	Sadana, 1983
19. <i>Myrmarachne melanocephala</i> MacLeay, 1839	Anantnag, Srinagar	Punjoo and Bhat, 2015
20. <i>Myrmarachne</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
21. <i>Nandicius frigidus</i> (Pickard-Cambridge, 1885)	Srinagar	Andreeva <i>et al.</i> , 1984; Prószyński, 1992
22. <i>Nandicius pseudoicioides</i> (Caporiacco, 1935)	Srinagar	Caporiacco, 1935
23. <i>Pellenes allegrii</i> Caporiacco, 1935	Ganderbal, Srinagar	Caporiacco, 1935
24. <i>Phidippus punjabensis</i> Tikader, 1974	Jammu	Thakur <i>et al.</i> , 1995
25. <i>Phidippus</i> sp.	Anantnag, Baramulla,	Sadana, 1983; Thakur <i>et al.</i> ,

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	Budgam, Jammu, Pulwama, Srinagar	1995; Khan, 2011a, 2012a; Khan and Rather, 2012
26. <i>Plexippus paykulli</i> (Audouin, 1826)	Anantnag, Jammu, Srinagar	Sadana, 1983; Punjoo and Bhat, 2015
27. <i>Plexippus petersi</i> (Karsh, 1878)	Srinagar	iNaturalists, 2022
28. <i>Plexippus</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b
29. <i>Rudakius ludhianaensis</i> (Tikader, 1974)	Jammu	Sadana, 1983
30. <i>Salticus benefices</i> (Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
31. <i>Salticus</i> sp.	Baramulla, Srinagar	Khan, 2009; Lone <i>et al.</i> , 2015a
32. <i>Telamonia dimidiata</i> (Simon, 1899)	Doda	iNaturalist, 2022
33. <i>Zygoballus</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2011a, 2012a, 2013b; Khan and Rather, 2012
Scytodidae		
1. <i>Scytodes thoracica</i> (Latreille, 1802)	Anantnag, Srinagar	Punjoo and Bhat, 2015
Selenopidae		
1. <i>Selenops</i> sp.	Jammu	Sadana, 1983
Sicariidae		
1. <i>Loxosceles rufescens</i> (Dufour, 1820)	Anantnag, Srinagar	Punjoo and Bhat, 2015
2. <i>Loxosceles</i> sp.	Baramulla	Lone <i>et al.</i> , 2015a
Sparassidae		
1. <i>Delena cancerides</i> Walckenaer, 1837	Doda	iNaturalist, 2022
2. <i>Heteropoda venatoria</i> (Linnaeus 1767)	Anantnag, Srinagar	Punjoo and Bhat, 2015
3. <i>Olios rossettii</i> (Leardi, 1901)	Anantnag, Srinagar	Punjoo and Bhat, 2015
4. <i>Olios</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2013b; Khan and Rather, 2012
5. <i>Pseudopoda casaria</i> (Simon, 1897)	Udhampur	Jäger, 2001
6. <i>Sparassus</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Srinagar	Khan, 2013b; Khan and Rather, 2012; Lone <i>et al.</i> , 2015a
Tetragnathidae		
1. <i>Eucta</i> sp.	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2011a, 2011a, 2012a
2. <i>Leucauge celebesiana</i> (Walckenaer, 1841)	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2009, 2011a, 2012a, 2013b; Khan and Rather, 2012
3. <i>Leucauge celebesiana</i> (Walckenaer, 1841)	Jammu	Sharma, 2014
4. <i>Leucauge decorata</i> (Blackwall, 1864)	Jammu	Thakur <i>et al.</i> , 1995; Sharma, 2014
5. <i>Leucauge fastigata</i> (Simon, 1877)	Srinagar	Chakrabarti, 2013
6. <i>Leucauge</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2009, 2011a, b; Punjoo and Bhat, 2015

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7. <i>Mesida culta</i> (Pickard-Cambridge, 1869)	Anantnag, Srinagar	Punjoo and Bhat, 2015
8. <i>Orsinome vethi</i> (van Hasselt, 1882)	Srinagar	Sadana, 1983
9. <i>Tetragnatha andamanensis</i> Tikader, 1977	Jammu	Thakur <i>et al.</i> , 1995
10. <i>Tetragnatha extensa</i> (Linnaeus, 1758)	Ganderbal, Srinagar	Pickard-Cambridge, 1885; Caporiacco, 1935
11. <i>Tetragnatha javana</i> (Thorell, 1890)	Anantnag, Budgam, Jammu	Khan and Rather, 2012; Sharma, 2014
12. <i>Tetragnatha keyserlingi</i> Simon, 1890	Anantnag, Budgam, Srinagar	Khan, 2012b; Khan and Rather, 2012; Punjoo and Bhat, 2015
13. <i>Tetragnatha mandibulata</i> Walckenaer, 1842	Jammu	Sadana, 1983
14. <i>Tetragnatha montana</i> Simon, 1874	Anantnag, Srinagar	Punjoo and Bhat, 2015
15. <i>Tetragnatha</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2009, 2011a, 2012a, 2013b; Khan and Rather, 2012
Theridiidae		
1. <i>Achaeearanea</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a
2. <i>Anelosimus</i> sp.	Anantnag, Shopian	Punjoo and Bhat, 2015
3. <i>Coleosoma</i> sp.	Srinagar	Khan, 2009
4. <i>Enoplognatha</i> sp.	Anantnag, Srinagar	Khan, 2009; Punjoo and Bhat, 2015
5. <i>Episinus</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
6. <i>Euryopsis sagittata</i> (Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
7. <i>Euryopsis venutissima</i> (Caporiacco, 1935)	Udhampur	Caporiacco, 1935
8. <i>Latrodectus</i> sp.	Anantnag, Budgam	Khan and Rather, 2012
9. <i>Nesticodes rufipes</i> (Lucas, 1846)	Anantnag, Srinagar	Punjoo and Bhat, 2015
10. <i>Phoroncidia</i> sp.	Anantnag, Srinagar	Punjoo and Bhat, 2015
11. <i>Phylloneta sisyphia torandae</i> (Strand, 1917)	Ganderbal	Pickard-Cambridge, 1885
12. <i>Rugathodes instabilis</i> (O. Pickard-Cambridge, 1871)	Ganderbal	Pickard-Cambridge, 1885
13. <i>Steatoda albomaculata</i> (De Geer, 1778)	Ganderbal, Srinagar	Caporiacco, 1934
14. <i>Steatoda grossa</i> (C.L. Koch, 1838)	Anantnag, Srinagar	Punjoo and Bhat, 2015
15. <i>Steatoda triangulosa</i> (Walckenaer, 1802)	Anantnag, Srinagar	Punjoo and Bhat, 2015
16. <i>Theridion expallidatum</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
17. <i>Theridion latisternum</i> Caporiacco, 1935	Baramulla	Caporiacco, 1935
18. <i>Theridion manjithar</i> Tikader, 1970	Srinagar	Khan, 2013a
19. <i>Theridion melanurum</i> Hahn, 1831	Srinagar	Caporiacco, 1935

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20. <i>Theridion sadani</i> Monga and Singh, 1989	Srinagar	Monga and Singh, 1989
21. <i>Theridion</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, b, 2013b; Khan and Rather, 2012
22. <i>Theridion spinosissimum</i> Caporiacco, 1935	Srinagar	Caporiacco, 1935
23. <i>Theridula</i> sp.	Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b; Khursheed <i>et al.</i> , 2021
Thomisidae		
1. <i>Ebrechtella tricuspidata concolor</i> (Caporiacco, 1935)	Udhampur	Caporiacco, 1935
2. <i>Indoxysticus minutus</i> (Tikader, 1960)	Jammu	Sadana, 1983
3. <i>Misumena oblonga</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
4. <i>Ozyptila trux</i> (Blackwall, 1846)†	Anantnag, Srinagar	Punjoo and Bhat, 2015
5. <i>Runcinia insecta</i> (L. Koch, 1875)	Baramulla, Pulwama, Srinagar	Khan, 2009, 2011a, 2012a
6. <i>Runcinia</i> sp.	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2009, 2011a, 2012a
7. <i>Thomisus nirmali</i> Saha and Raychaudhuri, 2007	Anantnag, Srinagar	Punjoo and Bhat, 2015
8. <i>Thomisus</i> sp.	Anantnag, Baramulla, Budgam, Jammu, Pulwama, Shopian, Srinagar	Thakur <i>et al.</i> , 1995; Khan, 2011a, 2012a; Khan and Rather, 2012; Lone <i>et al.</i> , 2015a
9. <i>Thomisus whitakeri</i> Gajbe, 2004	Baramulla, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a, 2013b
10. <i>Tmarus dejectus</i> (O. Pickard-Cambridge, 1885)	Ganderbal	Pickard-Cambridge, 1885
11. <i>Tmarus stellio</i> Simon, 1875	Udhampur	Caporiacco, 1935
12. <i>Xysticus cristatus</i> (Clerck, 1757)	Ganderbal, Srinagar	Caporiacco, 1935; Punjoo and Bhat, 2015
13. <i>Xysticus maculiger</i> Roewer, 1951	Bandipora	Caporiacco, 1935
14. <i>Xysticus mundulus</i> Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885
15. <i>Xysticus pseudobliteus</i> (Simon, 1880)	Srinagar	Caporiacco, 1935
16. <i>Xysticus</i> sp.	Anantnag, Baramulla, Budgam, Pulwama, Shopian, Srinagar	Khan, 2011a, 2012a; Khan and Rather, 2012
Trochanteriidae		
1. <i>Plator indicus</i> Simon, 1897	Jammu	Sadana, 1983
2. <i>Plator kashmirensis</i> Tikader and Gajbe, 1973	Poonch	Tikader and Gajbe, 1973; Sankaran <i>et al.</i> , 2020
Uloboridae		
1. <i>Uloborus albescens</i> O. Pickard-Cambridge, 1885	Ganderbal	Pickard-Cambridge, 1885

Table 2: Number species described under different genera recorded in different districts of Jammu and Kashmir. Number of species recorded only up to generic level is also shown

Families	Genera	Species	Species identified up to generic level	Number of districts recorded
1. Araneidae	15	36	6	10
2. Salticidae	22	30	6	11
3. Linyphiidae	18	28	7	9
4. Lycosidae	12	28	5	12
5. Theridiidae	14	22	9	8
6. Gnaphosidae	10	20	5	8
7. Tetragnathidae	5	13	3	8
8. Thomisidae	8	13	3	10
9. Oxyopidae	2	11	1	8
10. Ctenidae	1	5	0	5
11. Dictynidae	5	5	2	3
12. Sparassidae	5	5	2	7
13. Cheiracanthidae	1	4	1	8
14. Pholcidae	3	4	1	5
15. Agelenidae	3	3	2	3
16. Clubionidae	1	3	1	7
17. Desidae	3	3	3	1
18. Philodromidae	2	3	2	6
19. Pisauridae	3	3	1	8
20. Trochanteriidae	1	2	0	2
21. Amourobiidae	1	1	1	2
22. Corinnidae	1	1	1	5
23. Eresidae	1	1	1	2
24. Filistatidae	1	1	0	1
25. Liocranidae	1	1	0	1
26. Mimetidae	1	1	0	1
27. Pimoidae	1	1	0	1
28. Scytodidae	1	1	0	1
29. Selenopidae	1	1	0	1
30. Sicariidae	1	1	1	3
31. Uloboridae	1	1	0	1
Total	145	252	64	13

Table 3: List of species of spiders recorded/described from the districts of Ladakh, India

Families/Species	Districts	References
Araneidae		
1. <i>Araneus tartaricus</i> (Kroneberg, 1875)	Leh	Pickard-Cambridge, 1885
2. <i>Neoscona</i> sp.	Leh	Uniyal, 2006
3. <i>Zygiella</i> sp.	Leh	Uniyal, 2006
Corinnidae		
1. <i>Castianeira</i> sp.	Leh	Uniyal, 2006

Families/Species	Districts	References
Filistatidae		
1. <i>Filistata</i> sp.	Leh	Uniyal, 2006
2. <i>Pholcoides chiardolae</i> (Caporiacco, 1934)	Kargil	Caporiacco, 1934
3. <i>Pholcoides seclusa</i> (O. Pickard-Cambridge, 1885)	Kargil, Leh	Pickard-Cambridge, 1885; Caporiacco, 1934; Marusik and Zonstein, 2019
Gnaphosidae		
1. <i>Coreodrassus interlisus</i> Pickard-Cambridge, 1885)	Leh	Pickard-Cambridge, 1885
2. <i>Drassodes dispulsus</i> (O. Pickard-Cambridge, 1885)	Leh	Pickard-Cambridge, 1885
3. <i>Drassodes parvidens</i> Caporiacco, 1935	Kargil, Leh	Caporiacco, 1934; Uniyal, 2006
4. <i>Echemus interemptor</i> Pickard-Cambridge, 1885)	Leh	Pickard-Cambridge, 1885
5. <i>Gnaphosa</i> sp.	Leh	Uniyal, 2006
6. <i>Haplodrassus signifer</i> (C.L. Koch, 1839)	Kargil	Caporiacco, 1934
7. <i>Haplodrassus</i> sp.	Leh	Uniyal, 2006
8. <i>Micaria pulcherrima flava</i> Caporiacco, 1935	Kargil	Caporiacco, 1935
9. <i>Scotophaeus domesticus</i> Tikader, 1962	Leh	Uniyal, 2006
Linyphiidae		
1. <i>Erigone jammu</i> Tanasevitch, 2018	Leh	Tanasevitch, 2018
2. <i>Linyphia</i> sp.	Leh	Uniyal, 2006
Lycosidae		
1. <i>Hogna irascibilis</i> (O. Pickard-Cambridge, 1885)	Leh	Pickard-Cambridge, 1885
2. <i>Pardosa algoides</i> Schenkel, 1963	Leh	Uniyal, 2006; Tikader and Malhotra, 1980; Marusik et al., 2014
3. <i>Pardosa alii</i> Tikader, 1977	Leh	Tikader and Malhotra, 1980
4. <i>Pardosa haupti</i> Song, 1995	Leh	Marusik et al., 2014
5. <i>Pardosa tridentis</i> Caporiacco, 1935	Kargil	Caporiacco, 1935
Oecobiidae		
1. <i>Oecobius</i> sp.	Leh	Uniyal, 2006
Oxyopidae		
1. <i>Ozyptila spinosissima</i> Caporiacco, 1934	Kargil	Caporiacco, 1934
Philodromidae		
1. <i>Philodromus cinereus</i> O. Pickard-Cambridge, 1876	Kargil	Caporiacco, 1935
2. <i>Philodromus</i> sp.	Leh	Uniyal, 2006
3. <i>Rhysodromus lepidus</i> (Blackwall, 1870)	Kargil	Caporiacco, 1935
4. <i>Thanatus vulgaris</i> Simon, 1870	Kargil	Caporiacco, 1935
Salticidae		
1. <i>Attulus avocator</i> (Pickard-Cambridge, 1885)	Leh	Žabka, 1981
2. <i>Chalcoscirtus glacialis</i> Caporiacco, 1935	Kargil	Caporiacco, 1935
3. <i>Chalcoscirtus martensi</i> Zabka, 1980	Leh	Žabka, 1981
4. <i>Marusyllus gregoryi</i> (Logunov, 2010)	Leh	Logunov, 2010
5. <i>Marusyllus karnai</i> (Logunov and	Leh	Logunov and Marusik, 2003

Families/Species	Districts	References
Marusik, 2003)		
6. <i>Yllenus baltistanus</i> Caporiacco, 1935	Leh	Žabka, 1981; Logunov, 2010
Sparassidae		
7. <i>Eusparassus pontii</i> Caporiacco, 1935	Leh	Moradmand, 2013
Theridiidae		
1. <i>Achaearanea budana</i> Tikader, 1970	Leh	Uniyal, 2006
2. <i>Asagena phalerata</i> (Panzer, 1801)	Kargil	Caporiacco, 1934
3. <i>Steatoda albomaculata</i> (De Geer, 1778)	Kargil	Caporiacco, 1934
Thomisidae		
1. <i>Misumena</i> sp.	Leh	Uniyal, 2006
2. <i>Psammitis xysticiformis</i> (Caporiacco, 1935)	Kargil	Caporiacco, 1935
3. <i>Xysticus</i> sp.	Leh	Uniyal, 2006
Trachelidae		
1. <i>Trachelas costatus</i> O. Pickard-Cambridge, 1885	Leh	Pickard-Cambridge, 1885; Marusik et al., 2018

Table 4: Number species described under different genera recorded in different districts of Ladakh. Number of species recorded only up to generic level is also shown

Families	Genera	Species	Species identified upto generic level	Number of districts recorded
Araneidae	3	3	2	1
Corinnidae	1	1	1	1
Filistatidae	2	4	1	2
Gnaphosidae	7	8	2	2
Linyphiidae	2	2	1	1
Lycosidae	2	5	0	2
Oecobiidae	1	1	1	1
Oxyopidae	1	1	0	1
Philodromidae	3	3	1	2
Salticidae	4	6	0	2
Sparassidae	1	1	0	1
Theridiidae	3	3	0	2
Thomisidae	3	3	2	2
Trachelidae	1	1	0	1
Total	34	42	11	2

recorded in Ladakh, 27 species are not represented in the neighbourhood territory, Jammu and Kashmir. Table 3 also demonstrates that a majority of species recorded in Ladakh are identified only up to the genera level.

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