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## Diversity of Yellow Sac Spiders (Cheiracanthiidae: Araneae: Arachnida) in India

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### Abstract

The present article deals with the distribution of one of the spider family Cheiracanthiidae (Araneae: Arachnida), commonly known as yellow sac spiders, in different Indian states and union territories and also provides an update checklist based on the literature published up to September 30, 2020. It includes total 38 species of yellow sac spiders described under only 2 genera in India. The records demonstrated that only four species of these spiders are widely distributed: *Cheiracanthium danieli* Tikader, 1975, *Cheiracanthium indicum* O. Pickard-Cambridge, 1874, *Cheiracanthium melanostomum* (Thorell, 1895) and *Cheiracanthium triviale* (Thorell, 1895). No yellow sac spider is reported from Chhattisgarh, Jharkhand, Haryana, Nagaland, Telangana and Ladakh yet. Species diversity is much more in Gujarat (14 species each) and Maharashtra (13 species) followed by Tamil Nadu (10 species), West Bengal (9 species), Madhya Pradesh and Uttarakhand (7 species in each), Kerala (6 species), and less number of species in other states. More than half (57.9%) species recorded in India are endemic. Despite their role as insect predators and being crucial to the health of terrestrial ecosystems, none of the species recorded in India is listed in IUCN Red List.

**Keywords:** Cheiracanthiidae, distribution, faunal diversity, India, yellow sac spiders.

### Introduction

The Cheiracanthiidae Wagner, 1887 (syn. Eutichuridae Lehtinen, 1967) is one of the araneomorph (Araneomorphae: Opisthothelae: Araneae: Arachnida) spider family, the members of which are commonly known as yellow sac spiders. It includes 358 species under 13 genera globally [1]. The largest genus *Cheiracanthium* C.L. Koch, 1839 contains 218 species and has previously been placed in both the Clubionidae Wagner, 1887 and the Miturgidae Simon, 1886 [2]. They are usually pale in colour with yellow to light brown abdomen. Both sexes are small and vary from 0.5 to 1.0 cm in size. The body is often yellow and can range in color to tan, light brown, and pale green depending on location and diet. They have a brown stripe down the back of their abdomen. Their legs are long, with the first pair longer than the others. All legs have hard black hairs that make them superb climbers. A sac spider typically builds a flat silk sac as the place where it rests most of the daytime. Such silk sacs may be found in houses in the corners of walls and ceilings and outdoors under any object or in a leaf. In homes with light, neutral-coloured walls and ceilings, the silk sacs may go unnoticed, as they are small and blend in with the background colouration. The female yellow sac spiders produce about 5 silken egg sacs and lay 30-50 eggs inside it and remain nearby to guard them. The young spiderlings often remain within the silken sac for a while and come out at night in search of food. Yellow sac spiders are beneficial predators in agricultural fields, are also known to be mildly venomous to human beings. They are active foragers and they search for prey rather than capture it within a web as they never spin web. During foraging for prey at night in human dwellings, they may encounter humans and bite them. Their bite is usually very painful at the beginning, with developing redness, inflammation and itching of the skin. The burning sensation associated with the bite remains for an hour, with rash and blistering occurring during the next 1-10 hours [3].

In India, only 38 species of spiders belonging to the family Cheiracanthiidae are known described under only 2 genera: *Cheiracanthium* C.L. Koch, 1839 (37 species) and *Eutichurus* Simon, 1897 (2 species). These spiders are reported from 23 states of India and 2 union territories. Recently, the distributions of following taxa of spiders recorded from different states and union territories of India were updated: Mygalomorphae (tarantulas and their close kin) [4] and Salticidae [5, 6, 7, 8].

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The present article deals with the distribution of the family Cheiracanthiidae in different Indian states and union territories and provides an update checklist.

### Materials & Methods

This checklist is prepared on the basis of the literature published in recent past books, journals and few authentic theses and World Spider Catalogue (WSC) up to 30 September, 2020. Several species reported and described from India have been misidentified and seems to be reported erroneously as several species reported from India are said to be identified by using existing literature without a re-examination of the corresponding types and without consulting any spider taxonomist. Hence, such reports need re-examination. Also, in most of the literature, published earlier, several errors crept in their scientific names even in the recent ones. It happened because such contents become outdated quickly and, due to their perceived comprehensiveness, readers sometimes overlook newer sources of data. Additionally, the researches on spider taxonomy are continued with the description of new taxa, their modified status, and the publication of other nomenclatural decisions [6]. In the present checklist, attempts have been made to correct the errors in the scientific names of the spiders following WSC [1]. Only those synonymies were mentioned that were reported in India, for other synonymy WSC [1] may be consulted. All the endemic species are marked with (\*).

### Results and Discussion

The family Cheiracanthiidae includes 38 species described under 2 genera in India reported in this article. However, only 29 species of this family are reported earlier from India [9]. The additional records may either be erroneous report, escaped to mention or very recently revalidated, e.g. *Cheiracanthium sadanai* Tikader, 1976 [1]. The records demonstrated that only four species of Cheiracanthiidae are widely distributed in India, e.g. *Cheiracanthium danieli* Tikader, 1975, *Cheiracanthium indicum* O.P.-Cambridge, 1874, *Cheiracanthium melanostomum* (Thorell, 1895) and *Cheiracanthium triviale* (Thorell, 1895). No yellow sac spider is reported from Chhattisgarh, Jharkhand, Haryana, Nagaland, Telangana and Ladakh yet. Species diversity is much more in Gujarat (14 species) and Maharashtra (13 species) followed by Tamil Nadu (10 species), West Bengal (9 species), Madhya Pradesh and Uttarakhand (7 species in each), Kerala (6 species), and less number of species in other areas (Fig. 1). Extensive survey for these spiders is required in almost all states. These species are listed below along with references. Out of 38 species of the spiders listed below, 22 species (57.9%) are endemic to India. Some species reported earlier as endemic to India [10] are reported from other countries also. Despite the spiders are most diverse group of predators and being crucial to the health of terrestrial ecosystems, none of the species recorded in India is listed in IUCN Red List.

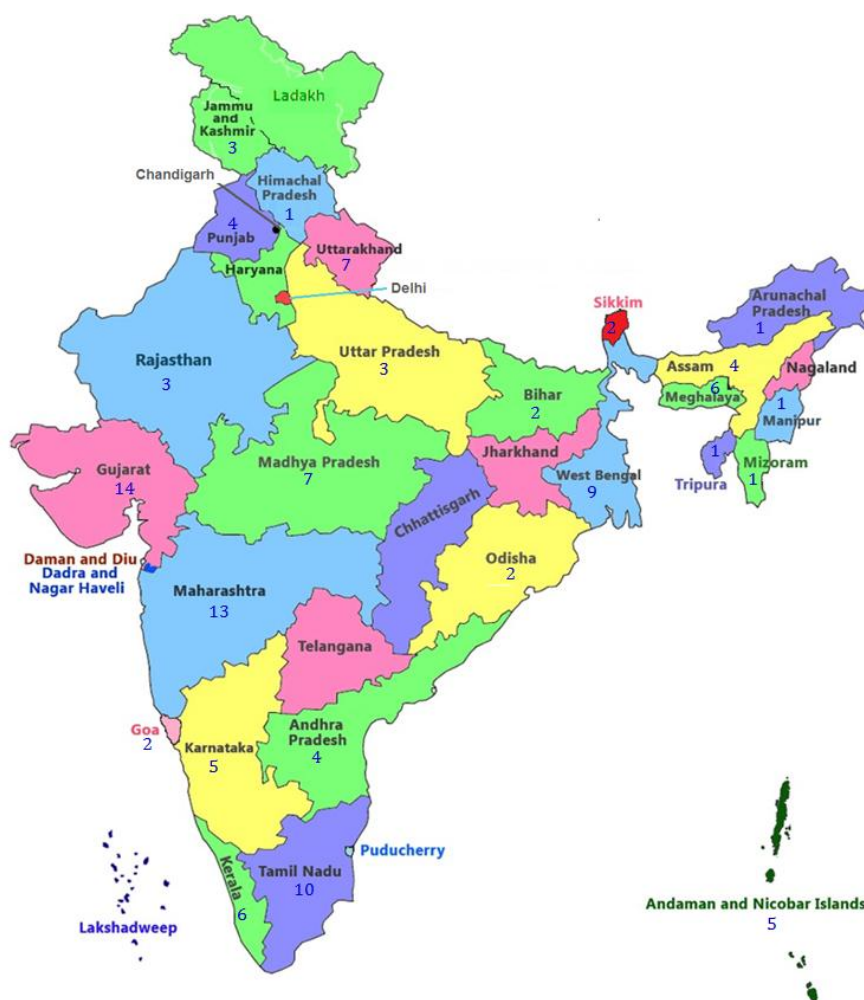


Fig 1: Number of species of yellow sac spiders (Cheiracanthiidae) in Indian states and union territories.

**I. Specieswise List of Yellow Sac Spiders in Indian States and Union Territories****1. *Cheiracanthium adjacens* O. Pickard-Cambridge, 1885**

- NW Himalaya <sup>[11]</sup>.
- Uttar Pradesh <sup>[12, 13, 14]</sup>.

**2. *Cheiracanthium aizwalense* Biswas & Biswas, 2007\***

- Mizoram <sup>[15]</sup>.

**3. *Cheiracanthium approximatum* O. P.-Cambridge, 1885**

syn. *Chiracanthium adjacens* O. Pickard-Cambridge, 1885, male only; *Cheiracanthium hugiscium* Barrion & Litsinger, 1995

- Himachal Pradesh <sup>[16]</sup>.
- Jammu & Kashmir <sup>[17, 18]</sup>.
- Punjab <sup>[16]</sup>.

**4. *Cheiracanthium conflexum* Simon, 1906\***

- Kerala <sup>[19]</sup>.
- Tamil Nadu <sup>[20, 21]</sup>.

**5. *Cheiracanthium conspersum* (Thorell, 1891)\***

syn. *Eutittha conspersa* Thorell, 1891)

- Andaman & Nicobar Islands <sup>[11, 22]</sup>.

**6. *Cheiracanthium danieli* Tikader, 1975\***

- Assam <sup>[23, 24]</sup>.
- Gujarat <sup>[25]</sup>.
- Karnataka <sup>[26, 27]</sup>.
- Kerala <sup>[28, 29, 30]</sup>.
- Maharashtra <sup>[11, 31, 32, 33, 34, 35, 36, 37]</sup>.
- Odisha <sup>[38, 39, 40]</sup>.
- Rajasthan <sup>[41, 42]</sup>.
- Tamil Nadu <sup>[43]</sup>.
- Tripura <sup>[44]</sup>.
- Uttar Pradesh <sup>[45]</sup>.
- Uttarakhand <sup>[46]</sup>.

**7. *Cheiracanthium furculatum* Karsch, 1879**

- Gujarat <sup>[25, 47]</sup>.

**8. *Cheiracanthium himalayense* Gravely, 1931\***

syn. *Cheiracanthium himalayensis* Gravely, 1931

- Maharashtra <sup>[11, 48, 49, 50, 51, 52, 53]</sup>.
- Gujarat <sup>[11, 48, 49, 50, 51, 52, 53]</sup>.
- Meghalaya <sup>[11, 48, 49, 50, 51, 52, 53]</sup>.
- Uttarakhand <sup>[11, 52, 54]</sup>.
- West Bengal <sup>[11, 48, 49, 50, 51, 52, 53, 55, 56, 57, 58]</sup>.

**9. *Cheiracanthium inclusum* (Hentz, 1847)**

- Maharashtra <sup>[59]</sup>.

**10. *Cheiracanthium incomptum* (Thorell, 1891)\***

syn. *Eutittha incompta* Thorell, 1891

- Andaman & Nicobar Islands <sup>[11, 22]</sup>.

**11. *Cheiracanthium indicum* O. Pickard-Cambridge, 1874**

- Meghalaya <sup>[11, 48, 49, 53, 60]</sup>.
- Gujarat <sup>[11, 49, 53, 60]</sup>.
- Kerala <sup>[19]</sup>.
- Madhya Pradesh <sup>[11]</sup>.
- Maharashtra <sup>[11, 33, 34, 49, 53, 60, 61, 62]</sup>.
- Rajasthan <sup>[11]</sup>.

- Sikkim <sup>[11, 48, 53, 60]</sup>.
- Tamil Nadu <sup>[20, 55]</sup>.
- West Bengal <sup>[11, 48, 49, 53, 55, 57, 60]</sup>.

**12. *Cheiracanthium inornatum* O. P.-Cambridge, 1874\***

- Gujarat <sup>[25, 63, 64]</sup>.
- Madhya Pradesh <sup>[65]</sup>.
- Maharashtra <sup>[11, 32, 62, 66]</sup>.

**13. *Cheiracanthium insigne* O. Pickard-Cambridge, 1874**

- Assam <sup>[11, 51, 53, 55, 67]</sup>.
- Bihar <sup>[11, 51, 53, 55, 67]</sup>.
- Maharashtra <sup>[11, 53, 59, 62]</sup>.
- Tamil Nadu <sup>[11, 21, 51, 55, 53, 67]</sup>.
- West Bengal <sup>[11, 48, 51, 57, 53, 67]</sup>.

**14. *Cheiracanthium insulanum* (Thorell, 1878)**

- =*Eutittha insulana* Thorell, 1878)
- Tamil Nadu <sup>[11, 21, 68]</sup>.

**15. *Cheiracanthium jabalpureense* Majumder & Tikader, 1991**

- Madhya Pradesh <sup>[11]</sup>.
- Maharashtra <sup>[69]</sup>.

**16. *Cheiracanthium kashmireense* Majumder & Tikader, 1991**

- Jammu & Kashmir <sup>[11]</sup>.

**17. *Cheiracanthium melanostomum* (Thorell, 1895)**

- Andaman & Nicobar Islands <sup>[11, 50, 51]</sup>.
- Assam <sup>[24, 53]</sup>.
- Bihar <sup>[11, 49, 50, 51, 55]</sup>.
- Goa <sup>[11, 50, 51]</sup>.
- Gujarat <sup>[11, 25, 49, 50, 51, 63, 70, 71, 72, 73, 74, 75]</sup>.
- Karnataka <sup>[11, 26, 49, 50, 51, 55, 76]</sup>.
- Kerala <sup>[28, 29, 30, 77, 78, 79, 80]</sup>.
- Madhya Pradesh <sup>[11]</sup>.
- Maharashtra <sup>[11, 49, 50, 51, 53, 60]</sup>.
- Meghalaya <sup>[49]</sup>.
- Odisha <sup>[11, 49, 50, 51, 55, 81]</sup>.
- Punjab <sup>[11, 82]</sup>.
- Rajasthan <sup>[11, 42, 49, 50, 51, 83, 84]</sup>.
- Tamil Nadu <sup>[11, 43, 55]</sup>.
- Uttarakhand <sup>[54, 85]</sup>.
- West Bengal <sup>[11, 48, 49, 50, 51, 55, 57, 60, 67, 86]</sup>.

**18. *Cheiracanthium mildei* L. Koch, 1864**

- Karnataka <sup>[87]</sup>.

**19. *Cheiracanthium murinum* (Thorell, 1895)**

syn. *Cheiracanthium murina* (Thorell, 1895)

- Kerala <sup>[79, 80]</sup>.
- Maharashtra <sup>[11, 48, 53, 60]</sup>.
- West Bengal <sup>[11, 48, 53, 55, 60]</sup>.

**20. *Cheiracanthium mysoreense* Majumder & Tikader, 1991\***

syn. *Cheiracanthium mysorensis* Majumder & Tikader, 1991

- Gujarat <sup>[11, 48, 50, 51]</sup>.
- Karnataka <sup>[11, 48, 50, 51]</sup>.
- Madhya Pradesh <sup>[11, 48, 50, 51]</sup>.
- West Bengal <sup>[11, 48, 50, 51, 56, 57]</sup>.

**21. *Cheiracanthium nalsaroverense* Patel & Patel, 1973\***syn. *Cheiracanthium nalsaroverensis* Patel & Patel, 1973

- Gujarat [11, 25, 70, 88, 89, 90].

**22. *Cheiracanthium pauriense* Majumder & Tikader, 1991\***syn. *Cheiracanthium pauriensis* Majumder & Tikader, 1991

- Uttarakhand [11, 54].
- West Bengal [11, 48, 57].

**23. *Cheiracanthium poonaense* Majumder & Tikader, 1991\***syn. *Cheiracanthium poonaensis* Majumder & Tikader, 1991

- Gujarat [25, 91, 92].
- Maharashtra [11, 61, 69, 93].

**24. *Cheiracanthium punctorium* (Villers, 1789)**syn. *Clubiona nutrix* (Walckenaer, 1805)

- Andaman & Nicobar Islands [22].
- Gujarat [94].

**25. *Cheiracanthium punjabense* Sadana & Bajaj, 1980\***syn. *Cheiracanthium punjabensis* Sadana & Bajaj, 1980

- Punjab [95, 96].

**26. *Cheiracanthium rupicola* (Thorell, 1897)**syn. *Cheiracanthium gyirongense* Hu & Li, 1987

- Gujarat [25, 63].
- Uttarakhand [97].

**27. *Cheiracanthium sadanai* Tikader, 1976\***

- Gujarat [11, 71].
- Punjab [11, 82].
- Uttarakhand [54].

**28. *Cheiracanthium sambii* Patel & Reddy, 1991\***

- Andhra Pradesh [98].

**29. *Cheiracanthium saraswatii* Tikader, 1962\***

- Andhra Pradesh [99].
- Karnataka [27].
- Meghalaya [11, 49, 100, 101].
- Gujarat [11, 25, 49, 71, 102].
- Madhya Pradesh [49].
- Maharashtra [61].

**30. *Cheiracanthium seshii* Patel & Reddy, 1991\***

- Andhra Pradesh [98].

**31. *Cheiracanthium sikkimense* Majumder & Tikader, 1991\***

- Sikkim [11, 53].
- West Bengal [53].

**32. *Cheiracanthium tanmoyi* Biswas & Roy, 2005\***

- Kerala [103].

**33. *Cheiracanthium triviale* (Thorell, 1895)**syn. *Cheiracanthium trivalis* (Thorell, 1895)

- Andhra Pradesh [52].
- Arunachal Pradesh [104].
- Goa [11, 49, 52, 104, 105].

- Gujarat [25, 64].
- Jammu & Kashmir [106].
- Madhya Pradesh [11, 49, 50, 51, 52, 53, 105, 104, 107].
- Maharashtra [11, 49, 50, 51, 53, 104, 105].
- Manipur [52, 53, 105, 108].
- Meghalaya [49].
- Tamil Nadu [11, 21, 49, 50, 51, 52, 53, 67, 104, 105].
- Uttar Pradesh [52].
- Uttarakhand [11, 54].
- West Bengal [48, 50, 51, 52, 55, 56, 57, 67, 86, 105, 104, 109].

**34. *Cheiracanthium trivittatum* Simon, 1906 \***

- Tamil Nadu [11, 20, 21].

**35. *Cheiracanthium turiae* Strand, 1917**syn. *Clubiona andamanensis* Tikader, 1977

- Andaman & Nicobar Islands [11, 110].

**36. *Cheiracanthium vorax* O. Pickard-Cambridge, 1874\***

- Maharashtra [11, 62].

**37. *Cheiracanthium* sp.**

- Goa [111].
- Gujarat [47, 74, 90, 64, 112, 113].
- Jammu & Kashmir [114, 115, 116, 117].
- Karnataka [27].
- Kerala [118, 119, 120, 121].
- Rajasthan [122, 123].
- Tamil Nadu [124, 43, 125].
- Uttar Pradesh [126].
- Uttarakhand [85, 97, 127].
- West Bengal [86].

**38. *Eutichurus chingliputensis* Majumder & Tikader, 1991\***

- Tamil Nadu [11, 21].

**39. *Eutichurus tezpurensis* Biswas, 1991\***

- Assam [128].
- Tamil Nadu [128].

**II. Distribution of Yellow Sac Spiders in Different States of India****1. Andhra Pradesh**

- *Cheiracanthium sambii*
- *Cheiracanthium saraswatii*
- *Cheiracanthium seshii*
- *Cheiracanthium triviale*

**2. Arunachal Pradesh**

- *Cheiracanthium triviale*

**3. Assam**

- *Cheiracanthium danieli*
- *Cheiracanthium insigne*
- *Cheiracanthium melanostomum*
- *Eutichurus tezpurensis*

**4. Bihar**

- *Cheiracanthium insigne*
- *Cheiracanthium melanostomum*



**5. Goa**

- *Cheiracanthium melanostomum*
- *Cheiracanthium triviale*

**6. Gujarat**

- *Cheiracanthium danieli*
- *Cheiracanthium furculatum*
- *Cheiracanthium himalayense*
- *Cheiracanthium indicum*
- *Cheiracanthium inornatum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium mysorensense*
- *Cheiracanthium nalsaroverense*
- *Cheiracanthium poonaense*
- *Cheiracanthium punctorium*
- *Cheiracanthium rupicola*
- *Cheiracanthium sadanai*
- *Cheiracanthium saraswatii*
- *Cheiracanthium triviale*

**7. Himachal Pradesh**

- *Cheiracanthium approximatum*

**8. Karnataka**

- *Cheiracanthium danieli*
- *Cheiracanthium melanostomum*
- *Cheiracanthium mildei*
- *Cheiracanthium mysorensense*
- *Cheiracanthium saraswatii*

**9. Kerala**

- *Cheiracanthium conflexum*
- *Cheiracanthium danieli*
- *Cheiracanthium indicum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium murinum*
- *Cheiracanthium tanmoyi*

**10. Madhya Pradesh**

- *Cheiracanthium indicum*
- *Cheiracanthium inornatum*
- *Cheiracanthium jabalpurensense*
- *Cheiracanthium melanostomum*
- *Cheiracanthium mysorensense*
- *Cheiracanthium saraswatii*
- *Cheiracanthium triviale*

**11. Maharashtra**

- *Cheiracanthium danieli*
- *Cheiracanthium himalayense*
- *Cheiracanthium inclusum*
- *Cheiracanthium indicum*
- *Cheiracanthium inornatum*
- *Cheiracanthium insigne*
- *Cheiracanthium jabalpurensense*
- *Cheiracanthium melanostomum*
- *Cheiracanthium murinum*
- *Cheiracanthium poonaense*
- *Cheiracanthium saraswatii*
- *Cheiracanthium triviale*
- *Cheiracanthium vorax*

**12. Manipur**

- *Cheiracanthium triviale*

**13. Meghalaya**

- *Cheiracanthium himalayense*
- *Cheiracanthium indicum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium saraswatii*
- *Cheiracanthium triviale*

**14. Mizoram**

- *Cheiracanthium aizwalense*

**15. Odisha**

- *Cheiracanthium danieli*
- *Cheiracanthium melanostomum*

**16. Punjab**

- *Cheiracanthium approximatum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium punjabense*
- *Cheiracanthium sadanai*

**17. Rajasthan**

- *Cheiracanthium danieli*
- *Cheiracanthium indicum*
- *Cheiracanthium melanostomum*

**18. Sikkim**

- *Cheiracanthium indicum*
- *Cheiracanthium sikkimense*

**19. Tamil Nadu**

- *Cheiracanthium conflexum*
- *Cheiracanthium danieli*
- *Cheiracanthium indicum*
- *Cheiracanthium insigne*
- *Cheiracanthium insulanum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium triviale*
- *Cheiracanthium trivittatum*
- *Eutichurus chingliputensis*
- *Eutichurus tezpurensis*

**20. Tripura**

- *Cheiracanthium danieli*

**21. Uttar Pradesh**

- *Cheiracanthium adjacens*
- *Cheiracanthium danieli*
- *Cheiracanthium triviale*

**22. Uttarakhand**

- *Cheiracanthium danieli*
- *Cheiracanthium himalayense*
- *Cheiracanthium melanostomum*
- *Cheiracanthium pauriense*
- *Cheiracanthium rupicola*
- *Cheiracanthium sadanai*
- *Cheiracanthium triviale*

**23. West Bengal**

- *Cheiracanthium himalayense*
- *Cheiracanthium indicum*
- *Cheiracanthium insigne*
- *Cheiracanthium melanostomum*
- *Cheiracanthium murinum*

- *Cheiracanthium mysorensense*
- *Cheiracanthium pauriense*
- *Cheiracanthium sikkimense*
- *Cheiracanthium triviale*

### III. Distribution of Yellow Sac Spiders in Different Union Territories of India

#### Andaman & Nicobar Islands

- *Cheiracanthium conspersum*
- *Cheiracanthium incomptum*
- *Cheiracanthium melanostomum*
- *Cheiracanthium punctorium*
- *Cheiracanthium turiae*

#### Jammu & Kashmir

- *Cheiracanthium approximatum*
- *Cheiracanthium kashmirensense*
- *Cheiracanthium triviale*

#### Conclusion

A total of only 38 species under 2 genera of yellow sac spiders belonging to the family Cheiracanthiidae were recorded in almost all states except Chhattisgarh, Jharkhand, Haryana, Nagaland, Telangana and Ladakh. Maximum species of these spiders were recorded from Gujarat (14 species) and Maharashtra (13 species) followed by Tamil Nadu (10 species), West Bengal (9 species), Madhya Pradesh and Uttarakhand (7 species in each), Kerala (6 species), and less number of species in other areas. Extensive survey for these spiders is required in almost all states.

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#### References

1. WSC. World Spider Catalog. Version 21.5. Natural History Museum Bern, online at <http://wsc.nmbe.ch>. 30 October, 2020.
2. Ono H. The spiders of Japan with keys to the families and genera and illustrations of the species. Tokai University Press, Kanagawa 2009, 739.
3. Papini R. Documented bites by a yellow sac spider (*Cheiracanthium punctorium*) in Italy: a case report. Journal of Venomous Animals and Toxins Including Tropical Diseases 2012;18(3):349-354.
4. Singh R, Singh G. Diversity of mygalomorph spiders (Araneae: Opisthothelae) in India. International Journal of Biological Innovations 2020; 2(2): 178-201.
5. Singh R, Singh G, Singh BB. Diversity of Asemoneinae, Eupoinae, Hispaninae, Lyssomaninae, Onomastinae and Spartaeinae (Arachnida: Araneae: Salticidae) in India: a checklist and bibliography. Research Journal of Life Sciences, Bioinformatics, Pharmaceuticals and Chemical Science 2020;6(5):29-46.
6. Singh R, Singh G, Singh BB. Diversity of Amycoidea and Astioidea (Arachnida: Araneae: Salticidae: Salticinae) in India. Journal of Entomology and Zoology Studies 2020;8(5):1478-1488.
7. Singh R, Singh G, Singh BB. Diversity of Marpissoida, Chrysillini and Hasariini (Arachnida: Araneae: Salticinae: Salticidae) in India. Research Journal of Life Sciences, Bioinformatics, Pharmaceutical, and Chemical Sciences 2020;6(6):1-26.
8. Singh R, Singh G, Singh BB. Diversity of simonid spiders (Araneae: Salticidae: Salticinae) in India. International Journal of Biological Innovations 2020;2(2):247-276.
9. Caleb JTD, Sankaran PM. Araneae of India, version 2020. <https://indianspiders.in/> accessed on 30 September 2020.
10. Hadole P, Kamble S, Manthen S, Bodkhe A. Precinctive spider species in India. Indian Journal of Arachnology. 2015;4(1):64-130.
11. Majumder SC, Tikader BK. Studies on some spiders of the family Clubionidae from India. Records of the Zoological Survey of India, Occasional Paper 1991;102:1-175.
12. Hore U, Uniyal VP. Diversity and composition of spider assemblages in five vegetation types of the Terai Conservation Area India. The Journal of Arachnology, American Arachnological Society 2008;36(2):251-258.
13. Hore U, Uniyal VP. Effect of prescribed fire on spider assemblage in Terai grasslands India. Turkish Journal of Arachnology 2008;1(1):15-36.
14. Hore U. Diversity and structure of spider assemblages in Terai Conservation Area. Ph. D. thesis, Saurashtra University, Rajkot, Gujarat 2009. <http://etheses.saurashtrauniversity.edu/id/eprint/589>
15. Biswas B, Biswas K. Araneae: Spiders. Fauna of Mizoram, State Fauna Series. Zoological Survey of India, Kolkata 2007;14:455-475.
16. Marusik YM, Omelko MM, Simmons ZM. Redescription of two west Himalayan *Cheiracanthium* (Aranei: Cheiracanthiidae). Arthropoda Selecta 2020;29(3):339-347.
17. Caporiacco L di. Aracnidi dell'Himalaia e del Karakoram raccolti dalla Missione italiana al Karakoram (1929-VII). Memorie della Società Entomologica Italiana Genova 1935;13:161-263.
18. Picard-Cambridge O. Araneidea. In: Scientific results of the second Yarkand mission; based upon the collections and notes of the late Ferdinand Stoliczka, Ph. D. Government of India, Calcutta 1885, 115.
19. Joseph MM, Paul J, Sankaran PM, Sebastian PA. Preliminary results on the spider fauna (Arachnida: Araneae) of the high altitude shola ecosystem in the Western Ghats. Proceedings of the National Conference on Ecology Sustainable Development and Wildlife Conservation 2017, 41-49.
20. Simon E. Arachnides (2e partie). In: Voyage de M.Maurice Maindron dans l'Inde méridionale. 8e Mémoire. Annales de la Société Entomologique de France 1906;75:279-314.
21. Karthikeyani R, Caleb JTD, Gajbe UA, Muthuchelian K. Checklist of spiders (Arachnida: Araneae) of the State of Tamil Nadu India. Munis Entomology Zoology 2017;12(1):180-193.
22. Thorell T. Spindlar från Nikobarerna och andra delar af södra Asien. Kongliga Svenska Vetenskaps-Akademiens Handlingar 1891;24(2):1-149.
23. Gupta R, Devi OS, Islam M. (Eds.). Common spiders from select protected areas of upper Assam. Assam State Biodiversity Board, Rehabari, Guwahati 2015, 186.
24. Basumatary P, Brahma D. Checklist of spiders from Chakrashila Wildlife Sanctuary Assam. International

- Journal of Zoology Studies 2017;2(5):22-26.
25. Yadav A, Solanki R, Siliwal M, Kumar D. Spiders of Gujarat: a preliminary checklist. *Journal of Threatened Taxa* 2017;9(9):10697-10716.
  26. Murali S, Jalali SK, Shylesha AN, Shivalinga Swamy TM, Gandhi Gracy R. Predatory spider fauna in Brinjal crop their abundance and composition. *Journal of Entomology and Zoology Studies* 2017;5(5):675-681.
  27. Nautiyal S, Khan YDI, Kaechele H, Bhaskar K. Diversity and distribution of spiders in Gogi, Yadgir District: a semi-arid landscape in southern India. *International Journal of Ecology and Environmental Sciences* 2017;43(3):195-204.
  28. Malamel JJ, Samson PD. A pioneering study on the spider (Arachnida: Araneae) fauna of Kumarakom Bird Sanctuary. *International Journal of Science, Environment and Technology* 2014;3(3):872-880.
  29. Adarsh CK, Nameer PO. A preliminary checklist of spiders (Araneae: Arachnida) in Chinnar Wildlife Sanctuary, Western Ghats, India. *Journal of Threatened Taxa* 2016;8(4):8703-8713.
  30. Jose AC, Sudhin PP, Prasad PM, Sreejith KA. Spider diversity in Kavvayi river basin Kerala, Southern India. *Current World Environment* 2018;13(1):100-112.
  31. Tikader BK. A new species of spider of the genus *Cheiracanthium* Koch (Family: Clubionidae) from India. *Journal of the Bombay Natural History Society* 1975;72:43-45.
  32. Bastawade DB, Khandal D. Arachnida: Araneae (Spiders). In: Fauna of Sanjay Gandhi National Park (Invertebrates) Borivali, Mumbai (Maharashtra), Conservation Area Series. Zoological Survey of India, Kolkata 2006;26:139-184.
  33. More S, Sawant V. Spider Fauna of Radhanagari Wildlife Sanctuary, Chandoli National Park and Koyna Wildlife Sanctuary. *Indian Journal of Arachnology* 2013;2(1):81-92.
  34. More S. Diversity of spider fauna from Bamnoli region of Koyna Wildlife Sanctuary. *International Journal of Science and Research* 2015;4(6):1690-1693.
  35. More SB. Spider diversity from Vakoba Devrai region of Radhanagari Wildlife Sanctuary. *International Journal of Science and Research* 2015;4(6):179-181.
  36. Wankhade VB, Manwar N. Explorative study on the diversity and characteristics of spider families. *International Journal of Zoology and Research* 2016;6(1):15-24.
  37. Lanka LP, Kamble SS, Bodkhe AK. An Addition to spider fauna from the vicinity of Radhanagari Wildlife Sanctuary of Kolhapur District. *International Journal of Scientific Engineering and Research* 2017;5(7):280-283.
  38. Panda S, Mishra S, Priyadarshini D, Parida P. Spiders of Nandankanan. Forest Department, Government of Odisha 2011, 64.
  39. Mohapatra AK, Biswas T, Parida SP. Spider Diversity in RIE campus. RIE Bhubaneswar 2014, 76.
  40. Chetry A, Moran J. Diversity of Namsai District, Arunachal Pradesh, India. *International Journal of Basic and Applied Research* 2019;9(7):343-351.
  41. Kumari V, Saini KC, Singh NP. Diversity and distribution of spider fauna in arid and semi-arid region of Rajasthan. *Journal of Biopesticides* 2017;10(1):17-24.
  42. Jangid AK, Dewasi SR, Kumar L, Yadav D, Sharma Valid, Upadhyay M, *et al.* Diversity of spiders (Arachnida: Araneae) from central Aravalli Range, Rajasthan. *Serket* 2019;17(1):61-67.
  43. Dharmaraj J, Gunasekaran C, Rajkumar V. Diversity and plethora of spider fauna at different habitats of the Nilgiris, Tamilnadu south India. *International Journal of Recent Scientific Research* 2018;9(3A):24634-24637.
  44. Dey A, Debnath S, Debbarma B, Chaudhuri PS. A preliminary study on spider diversity from a house hold garden, artificial mixed plantation in West Tripura India. *Journal of Research in Biology* 2013;3:1009-1017
  45. Tandon PL, Lal B. Predatory spiders associated with insect pests of mango in India. *Bulletin of Entomology* 1983;24:144-147.
  46. Quasin S, Uniyal VP. Spider diversity along altitudinal gradient in Milam Valley, Nanda Devi Biosphere Reserve, Western Himalaya. *Indian Forester* 2011;137(10):1207-1211.
  47. Siliwal M, Suresh B, Pilo B. Fauna of protected areas-3. Spiders of Purna Wildlife Sanctuary Dangs, Gujarat. *Zoos' Print Journal* 2003;18(11):1259-1263.
  48. Biswas B, Biswas K. Araneae: Spiders. State Fauna Series 3: Fauna of West Bengal, Zoological Survey of India, Kolkata 1992;3:357-500.
  49. Biswas B, Majumder SC. Araneae: Spider. In. Fauna of Meghalaya, State Fauna Series, Zoological Survey of India, Kolkata 1995;4(2):93-128.
  50. Majumder SC. Taxonomic studies of some spiders from mangrove and semi-mangrove areas of Sundarban. *Memoirs of the Zoological Survey of India*, Kolkata 2004;20(2):1-42.
  51. Majumder SC. Studies on some spiders from eastern coastal region of India. *Memoirs of the Zoological Survey of India*, Kolkata 2005;20(3):1-57.
  52. Saha S, Roy TK, Raychaudhuri D. Survey on spider faunal diversity of Darjeeling tea plantations. *Munis Entomology and Zoology* 2016;11(2):622-635.
  53. Dhali DC, Saha S, Raychaudhuri D. Litter and ground dwelling spiders (Araneae: Arachnida) of reserve forests of Dooars, West Bengal (Monograph). *World Scientific News* 2017;63:1-242.
  54. Biswas B, Biswas K. Fauna of Uttarakhand. State Fauna Series 18 (Part-3). Araneae: Spider. Zoological Survey of India, Kolkata 2010, 243-282.
  55. Gravely FH. Some Indian spiders of the families Ctenidae, Sparassidae, Selenopidae and Clubionidae. *Records of the Indian Museum, Calcutta* 1931;33:211-282.
  56. Majumder SC. Pictorial handbook on spiders of Sunderbans, West Bengal. Zoological Survey of India, Kolkata 2007, 138.
  57. Majumder SC, Talukdar S. Studies on taxonomy and diversity of spiders from Darjeeling hills with special reference to family Clubionidae in light of conservation. *Records of the Zoological Survey of India, Occasional Paper* 2013;340:1-96.
  58. Raychaudhuri D, Saha S, Roy TK. Spiders: A proficient candidate in practising IPM for Darjeeling Tea. *World Scientific News* 2016;38:1-62.
  59. Deshmukh US, Tekade AP. A report on the diversity of spider fauna from Charghad river basin of Morshi, Amravati India. *Bioscience Biotechnology Research Communications* 2019;12(3):809-813.
  60. Sen S, Dhali DC, Saha S, Raychaudhuri D. Spiders (Araneae: Arachnida) of Reserve Forests of Dooars:

- Gorumara National Park, Chapramari Wildlife Sanctuary and Mahananda Wildlife Sanctuary. World Scientific News 2015;20:1-339.
61. Meshram A. Spiders (Arachnida: Araneae) from Toranmal Sanctuary, Maharashtra India. *E-International Scientific Research Journal* 2011;(4):326-334.
  62. Picard-Cambridge O. On some new species of *Drassides*. *Proceedings of the Zoological Society of London* 1874;42(1):370-419.
  63. Solanki R. Ecology and diversity of spider fauna in southern tropical dry deciduous forests of Gujarat. Ph. D. Thesis, The M.S. University of Baroda, Vadodara Gujarat, India 2016, 305.
  64. Solanki R, Siliwal M, Kumar D. A preliminary checklist of spiders (Araneae: Arachnida) in Jambughoda Wildlife Sanctuary, Panchmahal District, Gujarat, India. *Journal of Threatened Taxa* 2020;12(11):16576-16596.
  65. Keswani S. Diversity population and microhabitat used by spiders in citrus agroecosystem. *Indian Journal of Arachnology* 2014;3(2):90-101.
  66. Keswani S, Vankhede G. Diversity, population and habitat used by spiders in banana-agro-ecosystem. *Indian Journal of Arachnology* 2014;3(1):12-27.
  67. Tikader BK, Biswas B. Spider fauna of Calcutta and vicinity: Part-I. *Records of the Zoological Survey of India, Occasional Paper* 1981;30:1-149.
  68. Sugumaran MP, Soundararajan RP, Lakshmanan V. Spider fauna in the horticultural crops of the Yercaud hills. *Zoos' Print Journal* 2007;22(6):2721-2722.
  69. Rithe K. Spider diversity from relocated area of Melghat Tiger Reserve. *Indian Journal of Arachnology* 2012;1(2):92-105.
  70. Patel BH, Pillai GK. Studies on the spider fauna of groundnut fields in Gujarat, India. *Biological Control* 1988;2(2):83-88.
  71. Patel BH, Vyas R. Spider of Hingolghadh Nature Education Sanctuary, Gujarat, India. *Zoos' Print Journal* 2001;16(9):589-590.
  72. Kumar D, Shivakumar MS. Seasonal abundance of spiders in pigeonpea agroecosystem. *Indian Journal of Environmental Sciences* 2006;10(1):43-46.
  73. Kumar D, Yashkamal K. Study of prey spectrum of social spider *Stegodyphus sarasinorum* (Karsch) (Araneae: Eresidae) and its potential as biological control agent. *Proceeding of the National Academy of Science, India, Section B* 2011;81(2):171-179.
  74. Parasharya BM, Pathan VA. Diversity of spider fauna in Lucerne (*Medicago sativa* L.). *Journal of Biological Control* 2013;27(4):253-259.
  75. Solanki R, Kumar D. Effect of pesticides on spider population in cotton Agro-system of Vadodara (Gujarat). *The IIS University Journal of Science and Technology* 2014;3(1):48-52.
  76. Bhat PS, Srikumar KK, Raviprasad TN. Seasonal diversity and status of spiders (Arachnida: Araneae) in cashew ecosystem. *World Applied Sciences Journal* 2013;22(6):763-770.
  77. Sebastian PA, Mathew MJ, Beevi SP, Joseph J, Biju CR. The spider fauna of the irrigated rice ecosystem in central Kerala, India across different elevational ranges. *The Journal of Arachnology* 2005;33(2):247-255.
  78. Mathew EV, Sudhikumar A, Sebastian PA. Vertical stratification of spiders in Kuttanad rice agroecosystem Kerala. *Journal of Biological Control* 2014;28(2):62-67.
  79. Dhali DC, Sunil Jose K, Sureshan PM. Arachnida: Araneae (Spiders). *Fauna of Malabar Wildlife Sanctuary, Kozhikode, Kerala Conservation Area Series. Zoological Survey of India* 2019;62:155-189.
  80. Rajeevan S, Kunnath SM, Varghese T, Kandambeth PP. Spider diversity (Arachnida: Araneae) in different ecosystems of the Western Ghats, Wayanad region, India. *South Asian Journal of Life Science* 2019;7(2):29-39.
  81. Biswas B. Araneae-Spiders (Families: Araneidae, Gnaphosidae and Salticidae), In: *State Fauna Series, Fauna of Orissa, Part-1, Zoological Survey of India, Kolkata* 1987, 257-272.
  82. Tikader BK. Two new species of spiders of the genera *Cheiracanthium* Koch and *Clubiona* Latreille (family: Clubionidae) from India. *Journal of the Bombay Natural History Society* 1976;73:175-177.
  83. Sen S, Saha S, Raychaudhuri D. Spiders of Ranthambore National Park, Rajasthan. *Insect Environment* 2009;16(4):172-173.
  84. Saha S, Dhali DC, Raychaudhuri D. Spider fauna (Araneae: Arachnida) of Rajasthan with special reference to Ranthambore National Park, Rajasthan, India. *Indian Journal of Arachnology* 2015;4(1):30-40.
  85. Pooja A, Anilkumar, Quasin S, Lekshmi S, Uniyal VP. Spider fauna of Navdanya Biodiversity Farm, Uttarakhand, India. *Indian Forester* 2019;145(4):392-397.
  86. Talukdar S, Majumder SC. Diversity of spider fauna of Bortibeel North 24 Parganas, West Bengal, their possible utilities as significant biological pestcontrol in the paddy field-ecosystem. *Records of the Zoological Survey of India* 2008;108(2):39-45.
  87. Tabasum NR, Nagaraj B, Shantakumari S, Sreenivasa V, Sai Sandeep Y. Assessment of spider diversity and composition along the Tungabhadra Irrigation Channel at Ballari, Karnataka. *International Journal on Biological Sciences* 2018;9(1):36-44.
  88. Patel, BH, Patel HK. On some new species of spiders of family Clubionidae (Araneae: Arachnida) with a record of genus *Castianeira* Keyserling from Gujarat, India. *Proceedings of the Indian Academy of Science* 1973;78(B):1-9.
  89. Parmar BM. The spider diversity from different habitats around Biosciences, Vallabh Vidyanagar. *International Journal of Science and Research* 2013;4(10):1985-1988.
  90. Parmar BM, Patel KB, Joshi JD, Chaudhari NR. Faunastic study of spider diversity from islands and costal areas of gulf of Kutch India. *Life Sciences Leaflets* 2015;67:12-23.
  91. Siliwal M, Suresh B, Dhuru S, Pilo B. Spider diversity of riparian zone of river Vishwamitri, Gujarat. *Journal of Current Science* 2003;3(2):429-434.
  92. Trivedi V. Diversity of spiders in groundnut crop fields in village area of Saurashtra region. *Journal of the Bombay Natural History Society* 2009;106(2):184-189.
  93. Sawane AP. Diversity and distribution of spiders (Arachnids: Aranae) from Chandrapur District, Maharashtra, India. *International Interdisciplinary Research Journal*. 2016; 6(1): 70-72.
  94. Prajapati JN, Patel SR, Surani PM. Pictorial checklist of agrobiont spiders of Navsari Agricultural University, Navsari, Gujarat, India. *International Journal of Current Microbiology and Applied Sciences* 2018;7(7):409-420.
  95. Sadana GL, Bajaj K. A new Indian species of *Cheiracanthium* Koch (Araneida, Clubionidae).



- Entomologist's Monthly Magazine. 1980;115:131-132.
96. Kumari K. Taxonomy of spiders (Arachnida: Araneae) from northern India. M. Phil. thesis, Department of Zoology, Punjabi University, Patiala 1983.
  97. Uniyal VP, Sivakumar K, Quasin S. Diversity of spiders in Nanda Devi Biosphere Reserve. Wildlife Institute of India, Dehradun. DST Project Completion Report 2011, 199.
  98. Patel BH, Reddy TS. On some new species of *Cheiracanthium* C.L. Koch and *Simalio* Simon (Araneae: Clubionidae) from coastal Andhra Pradesh, India. Records of the Zoological Survey of India 1991;89:269-276.
  99. Palem H, Kanike S, Purushottam VRS. Diversity of spider fauna (Arachnida: Araneae) in different ecosystems, Eastern Ghats, Southern Andhra Pradesh, India. South Asian Journal of Life Sciences 2016;4(2):51-60.
  100. Tikader BK. Studies on some Indian spiders (Araneae: Arachnida). Journal of the Linnean Society of London, Zoology 1962;44(300):561-584.
  101. Tikader BK. Studies on spider fauna of Khasi and Jaintia hills, Assam, India. Part III. Journal of the Assam Science Society 1969;11:154-163.
  102. Patel BH. Spiders of Vansada National Park, Gujarat. Zoos' Print Journal 2003;18(4):1079-1083.
  103. Biswas B, Roy R. Description of three new species of the genera *Thomisus* Walckenaer, *Cheiracanthium* C.L. Koch, and *Tinus* Cambridge of the families Thomisidae, Clubionidae and Pisauridae from India. Records of the Zoological Survey of India 2005;105(3-4):37-42.
  104. Biswas B, Biswas K. Araneae: Spiders. In: Fauna of Arunachal Pradesh, State Fauna Series. Zoological Survey of India, Kolkata 2006;13(2):491-518.
  105. Biswas BK, Biswas K. Araneae: Spiders. In: Fauna of Manipur. State Fauna Series. Zoological Survey of India Kolkata 2004;10(2):25-46.
  106. Thakur JN, Singh JP, Verma OP, Diwakar MC. Spider fauna in the rice ecosystem of Jammu. Journal of Biological Control 1995;9(2):125-126.
  107. Gajbe P. Checklist of spiders (Arachnida: Araneae) of Madhya Pradesh and Chhattisgarh. Zoo's Print Journal 2003;18(10):1223-1226.
  108. Kananbala A, Bhubaneshwari M, Siliwal M. A checklist of spiders (Arachnida: Araneae) of Manipur India with some first records and a new species *Conothele khunthokhanbi* (Family: Ctenizidae). Journal of Entomology and Zoology Studies 2018;6(5):2209-2214.
  109. Agrawal VC, Ghose RK. Fauna of Conservation Areas No. 8: Fauna of Sunderbans Tiger Reserve, Zoological Survey of India 1995, pp. 1-46.
  110. Tikader BK. Studies on spider fauna of Andaman and Nicobar islands, Indian Ocean. Records of the Zoological Survey of India 1977;72:153-212.
  111. Pandit R, Dharwadkar M. Preliminary checklist of spider fauna (Araneae: Arachnida) of Chandranath Hill, Goa, India. Journal of Threatened Taxa 2020;12(11):16697-16606.
  112. Parmar BM, Patel KB. Preliminary study of spiders (Order: Araneae) from Taranga Hills. International Journal of Science and Research 2015;6(11):23-25.
  113. Parmar BM. Preliminary study of spiders (Order: Araneae) from Satlasana taluka. International Journal of Pharmacy and Biological Sciences 2018;8(3):735-740.
  114. Khan AA. Biodiversity of spider fauna (Arachnida: Araneae) in horticultural ecosystem of Kashmir. Indian Journal of Ecology 2009;36(1):59-64.
  115. Khan AA. Spider fauna (Arachnida: Araneae) in horticultural ecosystem of Kashmir. In: Gupta VK, Verma AK (Eds.), Animal Diversity Natural History and Conservation, Vol. 1, Daya Publishing House, Delhi 2013, 313-338.
  116. Khan AA. Spider fauna on temperate rice in Kashmir. Oryza 2011;48(2):147-153.
  117. Punjoo S, Bhat GA. First report of spiders (Arachnida: Araneae) from Dachigam National Park, Kashmir, India. International Journal of Research 2015;2(2):707-719.
  118. Patel BH. Fauna of Protected Areas - A Preliminary list of Spiders with the descriptions of three new species from Parambikulam Wildlife sanctuary, Kerala. Zoos' Print Journal 2003;18(10):1207-1212.
  119. Sebastian PA, Murugesan S, Mathew MJ, Sudhikumar AV, Sunish E. Spiders in Mangalavanam an ecosensitive mangrove forest in Cochin, Kerala, India (Araneae). European Arachnology-Acta Zoologica Bulgarica 2005;1:315-318.
  120. Sunil Jose K, Sudhikumar AV, Davis S, Sebastian PA. Preliminary studies on the spider fauna (Arachnida: Araneae) in Parambikulam Wildlife Sanctuary in Western Ghats, Kerala, India. Journal of the Bombay Natural History Society 2008;105(3):264-273.
  121. Sathiamma B, Jayapal SP, Pillai GB. Observations on spiders predacious on the coconut leaf eating caterpillar *Opisina arenosella* Wlk. (= *Nephantis serinopa* Meyrick) in Kerala: Biology of *Rhene indicus* Tikader (Salticidae) and *Cheiracanthium* sp. (Clubionidae). Entomon 1986;12(2):121-126.
  122. Chauhan R, Sihag V, Singh NP. Distribution and biocontrol potential of chosen spiders. Journal of Biopesticides 2009;2(2):151-155.
  123. Lawania KK, Trigunayat MM. A Comparative Study of the spider (Araneae) fauna in Keoladeo National Park (KNP), Nahargarh Wildlife Sanctuary (NWS) and Sarsarovar Bird Sanctuary (SBS) India. International Journal on Agricultural Sciences 2015;6(1):141-146.
  124. Kapoor V. Effects of rainforest fragmentation and shade-coffee plantations on spider communities in the Western Ghats, India. Journal of Insect Conservation 2008;12:53-68.
  125. Caleb JTD. Spiders (Arachnida: Araneae) from the vicinity of Araabath Lake, Chennai, India. Journal of Threatened Taxa 2020;12(1):15186-15193.
  126. Lawania KK, Mathur P. Baseline studies on the spider fauna (Araneae) of Braj region (Braj-Bhoomi) India. International Journal of Basic and Applied Biology 2014;2(1):137-141.
  127. Gupta N, Siliwal M. A checklist of spiders (Arachnida: Araneae) of Wildlife Institute of India, campus Dehradun, Uttarakhand, India. Indian Journal of Arachnology 2012;1(2):73-91.
  128. Biswas B. Description of a new species of *Eutichurus* (Araneae: Clubionidae) from India. Records of the Zoological Survey of India 1991;88:101-104