



## Checklist of spiders from Vallakadavu Range of Western Ghats, Kerala, India

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**ABSTRACT:** In the preliminary study conducted to document the spider fauna in Vallakadavu range, Idukki district, Kerala, a total of 33 species of spiders belonging to 29 genera from 12 families were recorded. Among the 12 families recorded, Araneidae was the most predominant with orb web weavers. From the guild analysis, the recorded families were categorized into seven principle types of web patterns. The study extends the range of *Poecilotheria striata* Pocock, 1895 in the state to the east.

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**KEYWORDS:** Araneidae, Theraphosidae, web patterns, Idukki district

Spiders are among the largest and most diversified Arthropod groups. They are abundant and pervasive in nearly all environments and are one of the most essential components of global biodiversity. Thus far, 49,754 species have been recognised (World Spider Catalog, 2021). Joseph *et al.* (1997) documented 20 spider species in Periyar Tiger Reserve. This Reserve located in the Western Ghats, Idukki District of Kerala contains many unexplored regions that potentially serve as spider hotspots.

The present study was conducted in Vallakadavu range of Periyar East division, Periyar Tiger Reserve. It is located between 76° 55' and 77° 25' East Longitude and 9° 18' and 9° 41' North Latitude extended over an area of 777 km<sup>2</sup>. The vegetation comprises of semi evergreen forests, moist deciduous forests, transitional fringe evergreen

forests, grasslands, Vayals and Eucalyptus plantations. The study was conducted during December 2020. Opportunistic observations were mainly used for the study. Spiders were mainly collected by handpicking method as recommended by Tikader (1987). The collected spiders were preserved in alcohol (70%). The nomenclature followed is as per the World Spider Catalogue (2021).

During this investigation, a total of 33 spider species belonging to 30 genera and 12 families were identified. With 11 species, Araneidae was the most abundant family, followed by salticidae with five species. *Argiope anasuja* and *Nephila pilipes* were found to be the most common species in Araneidae. *Hippasa* and *Pardosa* were genera that represented the family Lycosidae. The Family Theraphosidae of Mygalomorphae is comprised of

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**Table 1. Spiders from Vallakadavu Range, Western Ghats**

No	Family/ Guild	Scientific name
1	Araneidae/ Orb web weavers	<i>Herennia multipuncta</i> (Doleschall, 1859)
2		<i>Argiope anasuja</i> (Thorell, 1887)
3		<i>Cyclosa bifida</i> (Doleschall, 1859)
4		<i>Anepsion maritatum</i> (O. Pickard-Cambridge, 1877)
5		<i>Cyrtophora cicatrosa</i> (Stoliczka, 1869)
6		<i>Eriovixia laglaizei</i> (Simon, 1877)
7		<i>Neoscona</i> sp 1
8		<i>Neoscona</i> sp 2
9		<i>Nephila kuhli</i> (Doleschall, 1859)
10		<i>N. pilipes</i> (Fabricius, 1793)
11	Ctenidae/ Ground runners	<i>Ctenus</i> sp
12	Hersillidae/ Ambushers	<i>Hersilia savignyi</i> (Lucas, 1836)
13	Lycosidae/ Ground runners	<i>Hippasa agelenoides</i> (Simon, 1884)
14		<i>Pardosa atropalpis</i> (C.L. Koch, 1847)
15		<i>Pardosa</i> sp 1
16		<i>Pardosa</i> sp 2
17	Linyphiidae/ Sheet web weavers	<i>Prosoponoides</i> sp (Millidge & Russell-Smith, 1992)
18	Oxyopidae/ Stalkers	<i>Oxyopes</i> sp (Latreille, 1804)
19	Salticidae/ Stalkers	<i>Hyllus semicupreus</i> (Simon, 1885)
20		<i>Myrmarachne</i> sp (MacLeay, 1839)
21		<i>Phintella vittate</i> (C.L. Koch, 1846)
22		<i>Plexipus paykulli</i> (Audouin, 1826)
23		<i>Carrhotus viduus</i> (C.L. Koch, 1846)
24		<i>Olios</i> sp (Walckenaer, 1837)
25	Tetragnathidae/ Orb web weavers	<i>Opadomata fastigata</i> (Simon, 1877)
26		<i>Leucauge decorata</i> (Blackwall, 1864)
27		<i>Tetragnatha mandibulata</i> (Walckenaer, 1841)
28	Theraphosidae/ Ground runners	<i>Annandaliella</i> sp 1
29		<i>Annandaliella</i> sp 2
30		<i>Poecilotheria</i> sp
31	Theridiidae/ Space web builders	<i>Argyrodes</i> sp (Simon, 1864)
32		<i>Parasteatoda celsabdomina</i> (Zhu, 1998)
33	Thomisidae/ Ambushers	<i>Tmarus truncates</i> (L. Koch, 1876)



Fig.1 *Poecilotheria striata* occurrence in Vallakadavu Range

huge spiders that reside in burrows, trees and the ground or beneath rocks.

The genera *Annandaliella*, *Plesiophrictus* and *Poecilotheria* have been identified within the family Theraphosidae. They are endemic to the Western Ghats of India. The occurrence of *Poecilotheria striata* Pocock, 1895 (Fig. 1) in Vallakadavu Range of Periyar tiger reserve is new information indicating the species' distribution to the east. *Annandaliella* and *Plesiophrictus* species do not belong to any of the currently recognised species.

The Periyar Tiger Reserve is home to twelve families, 30 genera, and 33 species of spiders. They are classified as orb web weavers, ground runners, ambushers, sheet web weavers, foliage hunters, space web builders and stalkers. Among these orb web weavers were more dominant. Spiders classified into 12 families, 29 genera and 33 species were categorized into seven principle types of web

patterns. Orb web weavers (40%), ground runners (21%), ambushers (6%), sheet web weavers (3%), foliage hunters (6%), space web builders (6%) and stalkers (18%). Among these orb web weavers were dominant. This is a preliminary list of the spiders recorded in the Vallakadavu region in the East Division of the Periyar Tiger Reserve.

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