

Study on Jumping Spiders (Aranae: Araneomorphae: Salticidae) Diversity in Shraddha Public School Campus Gariaband, Chhattisgarh, India

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DOI : <https://doi.org/10.51583/IJLTEMAS.2025.140300037>

Received: 12 March 2025; Revised: 01 April 2025; Accepted: 05 April 2025; Published: 15 April 2025

Abstract: The present research paper represents the diversity of jumping spiders in Shraddha Public School Campus, Gariaband. In this study, for continuing two months (October 2025- November 2024), the spiders found in the campus were recorded using direct visual method. All the collected specimens were identified using standard spider taxonomy keys. The identification revealed that 15 species of jumping spiders were recorded from the campus belonging to 12 genus. This study provides fundamental knowledge about 15 species of jumping spiders falling under the same group family Salticidae found in the campus which will help in understanding the diversity of jumping spiders found in Chhattisgarh.

Keywords: Jumping spider, Aranae, Salticidae, Gariyaband, diversity, Chhattisgarh.

I. Introduction

Jumping spiders are small, air breathing, terrestrial, invertebrate organisms and most evolved group of spiders that belong to the phylum Arthropoda class Arachnida and order Aranae (Kujur et al. 2016) (Nichat et al. 2024a). They are important creatures who maintains indirectly ecosystem by controlling pest population, parasite transmission and prey predator relationship in food chain. The body of a jumping spider is divided into two parts, the cephalothorax and the abdomen (Nayak 2025a). Both parts are attached to a cylindrical part called the pedicle. The cephalothorax is the first part of the body. This is the fused part of the head and the thorax. The chelicera and padipalp are attached to this part. Chelicera is the key characteristic of spiders (Nichat et al. 2024b, Nayak et al. 2025b). Eight eyes in two rows are arranged in front of the cephalothorax. On the ventral side of the cephalothorax there is an oval or triangular shaped sternum to which the spiders legs are attached (Nichat et al. 2025). The second part is called abdomen or opisthosoma. The abdomen of the female is much larger than that of the male. All the internal organs of the spider such as reproductive organs, silk and digestive organs are found in it. There are approximately 52,803 species of spiders in the world, which come under 4427 genera and 136 families (WSC, 2025), of which the largest family is Salticidae. 2244 species of spiders have been recorded in India, which belong to 536 genera and 65 families (Singh et al. 2023).

Family: Salticidae Blackwall, 1841

The family Salticidae is the largest group of spiders. These are modern spiders related to Araneomorphae. They are highly predatory and aggressive. They are found everywhere. There are 6809 species of jumping spiders all over the world which belong to 689 genera (WSC, 2025), whereas in India there are only 352 species which belong to 115 genera (Singh et al. 2023). In Chhattisgarh, 4 jumping spiders were first recorded in Ramjharana of Raigarh (Ekka et al. 2015) and 3 in Indra Vihar Park and 2 in Rose Garden (Kujur et al. 2016). 3 species of jumping spiders have been recorded in Gomarda wild life sanctuary (Kujur et al. 2016), one in Chhura, 5 in Khutaghat of Bilaspur (Toppo et al. 2022), 12 in Deobhog region of Gariaband district (Nichat et al. 2024a) and 13 species 11 Genera of jumping spiders in Chhura region. Recently (Nichat et al. 2025), one jumping spider *Stenaelurillus metallicus* Caleb & Mathai, 2016 has also been recorded in Gariaband (Nayak et al. 2025a).

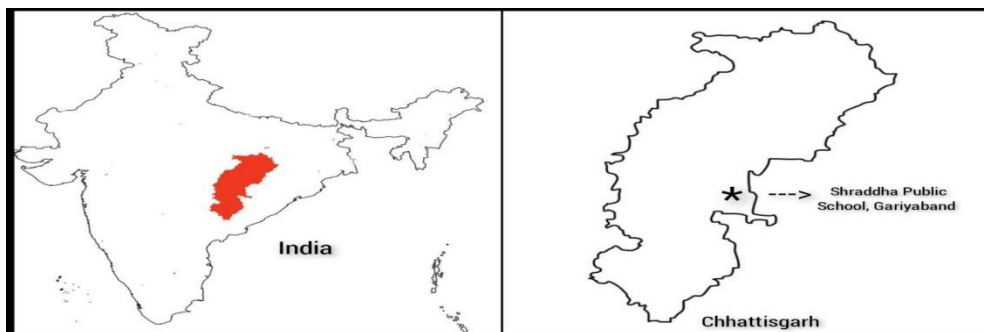


Figure1: Map of India & Chhattisgarh that inform location of study area.



Figure 2: Study area (Shraddha Public School Campus Gariyaband, Chhattisgarh, India)

II. Materials and methods

Sampling area: Shraddha Public School is located in Gariyaband district of Chhattisgarh state of India. The study is situated in latitude 2062687° and longitude 82.071878°. The campus is covered with brick walls. The east side of the campus has Saal trees (*Shorea robusta*) and the entire agricultural land is to the west.

Sampling Techniques and Preservation:

We have observed all the jumping spiders using the direct visual method and have taken a live picture of them. We took all the photographs using INFINIX SMART HD camera. The samples are collected from trees, shrubs, wall and wood of the campus. The spider specimens were photographed the live specimens for better study and we identified them by using these photos.

Identification: All the Pictures of Spiders, we identified them on the basis of their morphological configuration, leg arrangement and body pattern. For their identification, we used some books like Spider Genera of India and Spider Fauna of India (Toppo et al. 2020 & 2022). As well as some websites, INATURALIST and World Spider Catalogue and a recently (2015-2025) published original research article also used.

III. Results and discussion

Being modern spiders, jumping spiders can survive much better than other spiders. Their number is also the highest in any region. 15 jumping spider species have been recorded in the campus which belong to 12 genera. 2 species each have been recorded under *Carrhotus*, *Menemerus* & *Plexippus* genera and 1 spider species each from other genera. These three genera together cover half the number of jumping spiders in this study. See Table 1 & Graph.

Table 1: List of all jumping spiders that are observed in Shraddha Public School Campus, Gariyaband, Chhattisgarh.

S.N.	Genera	Species
1.	<i>Bianor</i> G. W. Peckham & E. G. Peckham, 1886	<i>Bianor angulosus</i> Audouin, 1879
2.	<i>Carrhotus</i> Thorell, 1891	<i>Carrhotus sannino</i> Thorell, 1877
3.		<i>Carrhotus viduus</i> Koch, 1846
4.	<i>Chrysilla</i> Thorell, 1887	<i>Chrysilla volupe</i> Karsch, 1879
5.	<i>Hasarius</i> Simon, 1871	<i>Hasarius adansoni</i> Audouin, 1826
6.	<i>Hyllus</i> C. L. Koch, 1846	<i>Hyllus semicupreus</i> Simon, 1885
7.	<i>Menemerus</i> Simon, 1868	<i>Menemerus bivittatus</i> Dufour, 1831
8.		<i>Menemerus nigli</i>
9.	<i>Phintella</i> Strand, 1906	<i>Phintella vittata</i> Koch, 1846
10.	<i>Plexippus</i> C. L. Koch, 1846	<i>Plexippus Paykulli</i> Audouin, 1826
11.		<i>Plexippus petersi</i> Karsch, 1878
12.	<i>Rhene</i> Thorell, 1869	<i>Rhene flavicomans</i> Simon, 1902

13.	<i>Siler</i> Simon, 1889	<i>Siler semiglaucus</i> Simon, 1901
14.	<i>Telamonia</i> Thorell, 1887	<i>Telamonia dimediata</i> Simon, 1899
15.	<i>Asemonea</i> O. Pickard-Cambridge, 1869	<i>Asemonea tenuipes</i> O.P.Cambridge, 1869

Figure 3: All jumping spiders that are observed in School campus.

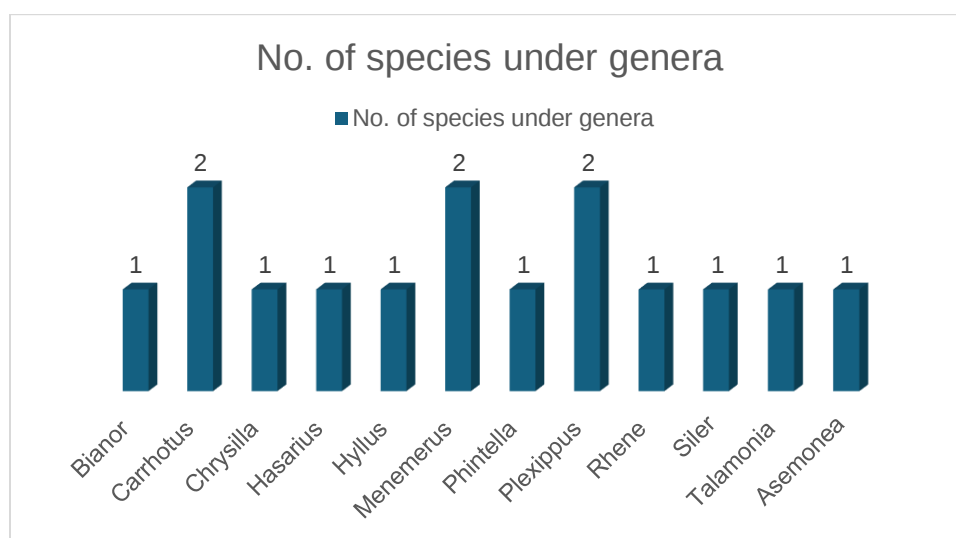
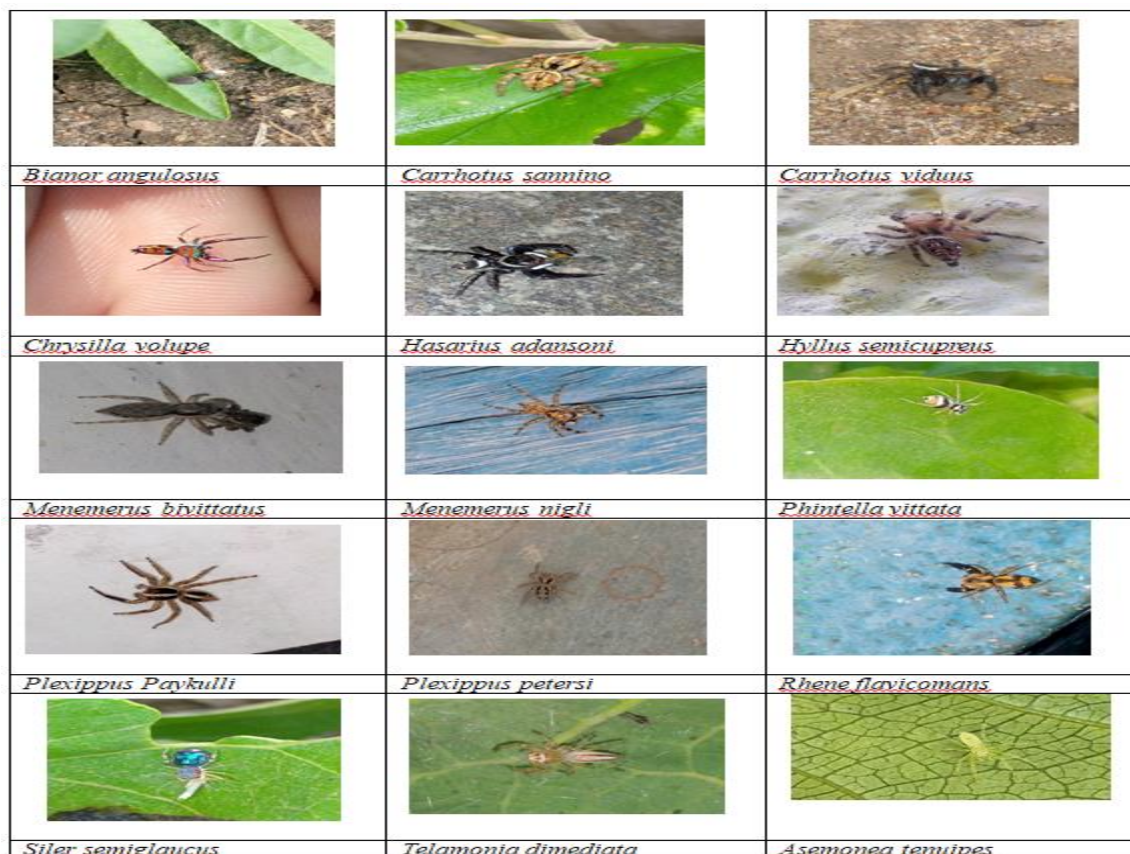


Figure 4: Graphical representation of Genera and species number of jumping spiders.

IV. Conclusion

In this study, the diversity of these jumping spiders has been described that even a small campus shows a lot of diversity. Compared to other spiders, these spiders adapt easily and live a long life due to their body structure helps them compete with other species in this ecosystem and survive. During this study, 15 jumping spiders were recorded in this campus which belong to 12 genus, in which all the species are exotic species and none is endemic to India. These are very common jumping spiders. This

study gives a fundamental knowledge about the jumping spiders found in this campus that even in a small campus there is a lot of diversity even among the spiders of a single group. The number of spiders in a particular area can be very high, for this it does not depend on the area of the place but on whether the vegetation there is dense or not.

Acknowledgement

Nil.

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