



SPIDER DIVERSITY OF SUBURBAN SOUTH BANGALORE, KARNATAKA

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ABSTRACT

This study on the species diversity of spiders from the suburban area of Turahalli forest, South Bangalore, Karnataka includes survey and documentation. The samples collected from August to December 2015 during the monsoon season revealed the presence of eleven families with 18 species. The family Araneidae was observed with maximum number of species (5) amounting to 27.7% with the families Niphilidae, Oxyopidae and Salticidae having two species each. Male and female were found for all the dominant species. *Oxyopes* spp., showed maximum number of males (37.5%), while female was maximum with *Argiope anasuja* (Thorell) (18.65%). Simpson's diversity index computed revealed that it is indicating lesser richness in species diversity.

Key words: Turahalli forest, spiders, families, Simpson's diversity index, males, female

Spiders belongs to the class Arachnida under phylum Arthropoda, with an order Araneae. Most of these are terrestrial and few are aquatic. Spiders predate on many insects like ants, bugs, and mites and thus help by biological control. Wide variety of species of spiders are known from India as well in Karnataka. Sebastian (2005) reported 51 species from the Mangalvanam bird sanctuary. Jose (2008) documented 27 species from the Parambikulam tiger reserve. Mini B. and Ragavendranatha (2012) documented 40 species from Indian Institute of Science, Bangalore. Anshu Chavhan and Vidyavathi (2017) observed 40 species of spiders from the Karnataka University campus, Dharwad; 71 species from Kadavi bird sanctuary, Shivamogga by Prashanthakumar and Venkateshwarulu (2017). This study explores the diversity of spiders from the Turahalli forest, South Bangalore, Karnataka.

MATERIALS AND METHODS

Towards south Bangalore about 20km off from Kanakapura road is located Turahalli forest. It is a dry and deciduous forest located in the suburban region, extending to 236 ha (12,8816831° N, 77.5249823° E; 888 masl). The flora of the area includes figs (*Ficus tinctoria*) and Neralemara (*Syzygium cumini*). The most common herb is the *Bytteneria herbacea*. Regular surveys were done from August to December, 2015 during monsoon season as the species richness of spiders will be more. The spiders were collected twice in a month, in the morning hours between 8-10 am and evening from 5-6 pm, mainly by visual encounter

method, and hand collection method. The samples were collected in small plastic containers, brought to the laboratory and preserved in 70% ethanol. The identification of these were done with the "key to South Indian Spiders" (www.southindianspiders.org) and "Spiders of India" (Sebastian and Peter). The details like eye pattern, number of eyes, position of eyes, abdominal shape, segmentation pattern. These features were observed using stereozoom microscope (Labomed) and photographed using digital camera Nikon Coolpix s 6300. The measurement of diversity of spiders were calculated with computation of Simpsons Diversity Index (SDI) $D = 1 + \frac{\sum n(n-1)}{N(N-1)}$ where n = no. of individuals of each species; D=0.151; and N = Total no. of individuals of all species

RESULTS AND DISCUSSION

Surveys led to collection of 18 species of spiders under 10 families, with the common ones being: signature spiders, orb weaver spider, decorative silver web spider, red house spider, Indian ornamental tarantula, funnel web spider, yellow sac spider, black wood spider, gaint wood spider, golden lynx spider, jumping spider, grass crab spider, and white kneed spider (Table 1; Fig. 1-11). Araneidae is the most dominant family with five species- 27.7%, while other families Nephilidae, Salticidae, and Oxyopidae revealed only two species each (11.11%).

From Araneidae family *Argiope anasuja* accounted

