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DIVERSITY OF SPIDERS IN FOREST NEARBY ASHTI, DIST-WARDHA (M.S.)

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ABSTRACT:

Ashti forest is located in Wardha District (Maharashtra) and is surrounded by small villages in Ashti Tahsil. Ashti Tahsil is one of the large Tahsil in Wardha District, Maharashtra State having population 10936. lt lies between latitudes 21.2081°N and longitudes 78.1963°E.

Diversity of spiders was not studied in Ashti forest ranges previously, so the present study was carried out to study the diversity of spiders in Ashti forest. District Wardha. The duration of study was six months, from July 2022 to December 2023. Samples were collected by using visual search and hand collection, sweeping net and litter sampling. Collected specimens were then preserved in 70% ethyl alcohol in plastic tubes. Identification were done using Tikader and Malhotra (1980), Tikader (1982), Gajbe (1999). Unidentified new species were considered up to genus level.

In six months study period about 75 samples were obtained of which 57 were adults representing 13 families, 25 genera and 32 species. The most dominant family reported was in the order of Araneidae > Salticidae > Oxyopidae > Thomisidae. Habitat loss and degradation due to grazing and deforestation were the threats documented during present study. This data will be helpful to the forest department for future management of biodiversity in Ashti forest.

Keywords: - Spiders, Diversity, Ashti, Forest., Wardha, Maharashtra.

INTRODUCTION :

India is a country rich in fauna and flora. Spiders are one of the most diverse group of terrestrial predators , although generalization about habitat use by spiders are complicated by their wide diversity in foraging strategies They are abundant and diverse with over 34000 recognized species, comprise among the largest invertebrate fauna in any habitat (Coddington & Lavy 1991; Foelix, 1996). Spiders are ecologically important organisms for balancing the ecosystem and in transferring energy directly from below-ground detritus food web to the above ground terrestrial food webs of familiar amphibians , reptiles, birds and mammals (Johnson, 2000).They help in maintaining ecological balance in the nature by feeding on small insects and in return these spiders are being eaten by birds and other bigger insects (Bhattacharya et.al.2017). Since spiders belong to a group of the most diverse organisms, it is necessary to study its diversity as it has been previously neglected or ignored (Palem et.al.,2016).

Review of available literature reveals that Blackwell (1864); Stolickza (1869) and Sheriffs (1929) were the pioneer workers of Indian spiders. They described many species from India, Burma and Sri Lanka. Later in twentieth century, many workers such as Gravely (1921); Gajbe (1987, 1999); Biswas and Biswas (2004); Uniyal (2006); Sebastian and Peter (2009, 2017) were documented Indian spiders. The major contribution to the Central Indian Archnology were made by Wankhede (2011).

The aims of this study is to investigate spider fauna in forest surrounding Ashti Tahsil and to provide base line information for future studies.

STUDY AREA:

Ashti Tahsil is one of the large Tahsil in Wardha District, Maharashtra State having

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population 10936. lt lies between latitudes 21.2081°N and longitudes 78.1963°E. Ashti village is surrounded by forest and there are patches of forests in villages of Ashti Tahsil.

MATERIAL AND METHODS:

The present study was carried out during July 2022 to December 2022. Samples were collected by using visual search and hand collection, sweeping net and litter sampling. Collected specimens were then preserved in 70% ethyl alcohol in plastic tubes. Identification were done using Tikader and Malhotra (1980), Tikader (1982), Gajbe (1999). Unidentified new species were considered up to genus level.

This is the first approach to study the spider fauna in this region. The aims of this study were to investigate the spider fauna in this region, thus providing base line information for future studies. In order to know how and where to protect biodiversity, this study aims to contribute towards an improved understanding of these issues.

RESULTS AND DISCUSSION:

Total 75 samples were obtained from Ashti forest representing 13 families, 28 genera and 32 species. The most dominant family was Araneidae. The dominance was in the order Araneidae >Salticidae >Oxyopidae >Thomicidae.

Spiders are the most diverse and abundant invertebrate predators in terrestrial ecosystems. This ubiquity, diversity and ecological role of spiders make them a promising focal group for invertebrate conservation and useful indicators of the effects of land management of local biodiversity (Maelfait and Hendrickx, 1998; Marc et,al., 1999). But as the deforestation and settlements increases, there is loss in the natural habitat of spiders (Khan et.al.,2019).

CONCLUSION:

Spiders being the largest portion of invertebrate fauna with over 34000 recognized species. Ashti forest area exhibits remarkable and good number of spider diversity. From the recent studies the importance of spiders as ecological indicators is also inferred. The ecosystem with rich floral diversity provides a favourable environment to the spider fauna and emphasizes the need for conservation of this ecosystem by characterizing species diversity.

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Table.1- Checklist of spider genus/species from Ashti forest,Di. Wardha

Sr. No.	Family	Genus/Species
1.	Araneidae	Araneus mitificus
		Araneus sp.
		Cyclosa sp.
		Neoscona sp.
		Poltys sp.
		Zygeilla sp.
		Neoscona singhagadensis
		Cyclosa hexatuberculeta
2.	Gnaphosidae	Zelotes sp.
3.	Miturgidae	Cheirachanthium spp
4.	Clubionidae	Oedignatha sp.
5.	Salticidae	Telomonia sp.
		Harmochirus sp.
		Myrmarahnae sp.
		Phidippus sp.
		Marpissa sp.
		Euophrys sp.
6.	Scytodidae	Scytodus sp.
7.	Oxyopidae	Oxyopus sp.
		Oyopus kundensis
		Oxyopus pankaji Gajbe 1999
		Oxyopus pawanii Gajbe 1992
		Oyopus bharatae Gajbe 1999
8.	Thomisidae	Thomisus sp.
		Theredion sp.
		Bomis sp.
		Regillus sp.
9.	Hersiliidae	Hersilia sp.
10.	Pholcidae	Pholcus sp.
11.	Eresidae	Stegodephus sp.
12.	Tetragnathidae	Tetragnatha sp.
13.	Sparassidae	Olias sp.

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