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SPIDER DIVERSITY OF RUNDIV, SIDHESHWAR AND RAMNADI AREA OF CHANDOLI NATIONAL PARK

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Abstract:
Spider diversity studied from Northern Western Ghats of Chandoli National Park. Western Ghats area of India is considered as an important biodiversity hot spot. A total of 58 species belonging to 38 genera and 16 families are recorded from the study area during 2012-2014. The Sanctuary area has got Global National significance. The spiders from Family araneidae, lycosidae, salticidae and thomisidae are the characteristic families of this region.
Keywords: Spider, Western Ghats, Chandoli

Introduction:

Chandoli National Park is spread over the geographical area of 32 illages located at the junction of Sangli, Satara, Kolhapur and Ratnagiri districts, The area of this Sanctuary is 308.97 sq.km. Warna river originates in protected area near village Patherpung. The Sanctuary area has got Global National significance. The rich biodiversity of this area provides nice opportunity for research and education. The present study of Spider fauna will be a great significance from the point of view biodiversity. As such there is no work on any aspect of Spider fauna of Chandoli National Park hence with the present work I will try to fill up a gap of information regarding biodiversity of Spider fauna in these areas. Spiders comprise one of the largest orders of animals. The pioneering contribution on the taxonomy of Indian spiders is that of European arachnologist Stoliczka (1869). Review of available literature reveals that the earliest contribution by Blackwall (1867); Karsch (1873); Simon (1887); Thorell (1895) and Pocock (1900) were the pioneer workers of Indian spiders. They described many species from India. Tikader (1980, 1982), Tikader, and Malhotra (1980a,b) described spiders from India. Tikader (1980) compiled a book on Thomisidae spiders of India, comprising two subfamilies, 25 genera and 115 species. Pocock (1900) and Tikader (1980, 1987) made major contributions to the Indian Arachnology. Tikader (1987) published the first list of Indian spiders, which included 1067 species belonging to 249 genera in 43 families. Gajbe (1995-2003) described 147 new spider species from different habitats of India. The updated spider checklist given by Keswani et al. (2012) of SGB Amravati University Arachnology laboratory shows 1686 species from 438 genera and 60 families. According to world spider catalogue there are Spiders of protected areas in India, are studied by Gajbe (1995a) in lndravati Tiger Reserve and recorded 13 species. Rane and Singh (1977) recorded five species and Gajbe (1995b) 14 species from Kanha Tiger Reserve, Madhya Pradesh. Gajbe (2003) prepared a checklist of 186 species of spiders in 69 genera under 24 families distributed in Madhya Pradesh and Chhattisgarh. Patel (2003) described 91 species belonging to 53 genera from Parabikulum Wildlife Sanctuary, Kerala. ManjuSilwal et al. (2003) recorded 116 species from 66 genera and 25 families of spiders from Puma wildlife Sanctuary, Dangs, Gujarat. Sivaperuman et al., (2004) studied the spiders in Desert National Park, Rajasthan. So far nobody has worked out or studied the spider fauna from this region of Chandoli National Park and hence we have decided to explore the spider diversity from this area.

Material and Methods:

The study were made during early morning hours (6 hours to 9 hours) and day time (16 hours to 18 hours), from different parts of the microhabitats, like, rolled or folded leaves, plant branches, leaf litter, tree trunks, rock surface, grass blades dry hay and grasses, moist places, under stones, pebbles, humus, bushes, on the bark and branches of trees, water logged locations, etc. The Lycosids and Gnaphosids were studied from the soil surface and also from the river beds. Most of the spiders searched visually. Each spider was identified mainly on the basis of morphological characteristics, epigyne and or palp structure by using the literature (Kaston, 1978; Barrion and Litsinger, 1995; Tikader, 1987 and Mujumdar, 2007). The details of body parts of specimens were examined under a good quality stereo zoom microscope. The identification of species was carried out by the comparison of morphological features with the help of published literature,

standard books and field guides.

Result and Discussion:

A total of 58 species (Table-1) belonging to 38 genera and 16 families were recorded from the study area during 2011-2013. Among all these 16 families, high diversity was observed in the families Araneidae (15 species) > Salticidae(11 species) > Lycosidae (09 species) > Thomisidae 05 species). Table : 1 Diversity of spiders in Rundiv Sidheshwar and Ramnadi region of Chandoli National Park 1. Araneidae – Orb Web Spiders 1. Araneus mitifica (simon) Female 2. Araneus himalayaensis (Tikadar) 1975 3. Argiope aemula (Walckenaer) Female 4. Argiope aemula (Thorell) Male 5. Argiope anasuja Female 6. Cyclosa bifida (Doleschall) Female 7. Cyclosa hexatuberculata (Tikadar) Female 8. Cyclosa confraga (Thorell) 1892 9. Cyclosa insulans (Costa), 1934. 10. Gasteracantha geminata (Fabricius) 1798, Female 11. Gasteracantha kuhli(C L. Koch) Female 12. Telecantha brevispina (,Doleschall) Female 13. Larinia emertoni (Gajbe and gajbe) 2004 14. Neoscona mukerjei (Tikader) Female 15. Neoscona bengalensis (Tikadar and Bal,) 1981 2. Corinnidae – Ant Mimicking Sac Spiders 16. Castianeira zetes (Simon) 1897 Female 3. Eresidae – Social Spiders 17. Stegodyphus sarasinorum (Karsch,) 1891 Female 4. Gnaphosidae – Ground Spiders/Mouse Spiders 18. Gnaphosa poonaensis (Tikadar) 1973 5. Hersiliidae – Two Tailed Spiders/Bark Spiders 19 Hersilia Savignyi (Lucas) 1836 Female 6. Lycosidae – Wolf Spiders 20 Archtosa indica (Tikadar and Malhotra) 1980 21 Evippa mandlaensis (Gajbe)2004 22 Hippasa greenalliae (Blackwell) 1867. 23 Hippasa hansae(Gajbe and Gajbe) 1999 24 Hippasa holmerae (Thorell) 1895 25 Hippasa madhuae(Tikadar and Malhotra)1980 26 Pardosa birmanica (Simon) 1884 27 Pardosa leucopalpis (Gravely)1924 28 Pardosa ranjani Gajbe 2004 7. Oxyopidae – Lynx Spiders 29 Oxyopes pankaj(Gajbe and Gajbe) 2001 30 Oxyopes tikaderi (Biswas and Majumdar) 1995 31 Peucetia viridian (Stoliczka)1869. 8. Philodromidae – Running Crab Spiders/Elongated Crab Spiders 32 Philodromus pali (Gajbe) 2000 9. Pholcidae – Daddy Long Leg Spiders 33 Pholcus phalangioides (Fuesslin)1775 10. Pisauridae – Nursery Web Spiders 34 Pisaura gitae Tikadar 1970 Female 35 Nilus marginatus Simon 1888 11. Salticidae – Jumping Spiders 36 Epeus albus (Proszynski)1992 37 Menemerus bivittatus (Dufour)1831 38 Hyllus semicupreus (Simon)1885 39 Myrmarachne jajpurensis (Proszynski) 1992 40 Myrmarachne (Maratha Tikadar) 1973 41 Myrmarachne satarensis (Narayan) 1915 42 Myrmarachne uniseriata (Narayan) 1915 43 Phintella vittata C. L.(Koch)1846 44 Plexippus petersi Female 45 Rhene decorate (Tikadar) 1977 46 Telamonia dimidiata (simon 1899) Female 12. Scytodidae – Spitting Spiders 47 Scytodes fusca, (Walckenaer)1837 13. Sparassidae – Giant Crab Spiders 48 Heteropoda venatoria,(Linnaeus,) 1767 49 Olios millet (Pocock,) 1901 14. Tetragnathidae 50 Leucauge decorate (Blackwall), 1864 Female 51 Tetragnatha javanus,(Thorell,) 1890. 15. Theridiidae – Comb Footed Spiders/Cob Web Spiders 52 Latrodectus hasselti (Thorell) 1870 53 Rhomphaea projiciens (O. P. Cambridge). 1896 16. Thomisidae – Crab Spiders/Flower Spiders 54 Thomisus pathaki (Gajbe) 2004 55 Thomisus pooneus (Tikadar) 1965 56 Xysticus bharatae(Gajbe and Gajbe)1999 57 Xysticus breviceps (O. P. Cambridge)1885 58 Xysticus tikaderi (Bhandari and Gajbe) 2001

Conclusion:

Thus the results indicate the dominance of araneidae, lycosidae, salticidae and thomisidae. A total of 58 species (Table-1) belonging to 38 genera and 16 families were recorded from the study area during 2011-2013. The rich biodiversity of this area provides nice opportunity for research and education. Spiders have a very significant role to play in ecology by being exclusively predatory and thereby maintaining ecological equilibrium.

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