

## **Study of Ant Diversity in Various Localities of Akola, Maharashtra, India**

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### **ABSTRACT**

Ants are abundant insects and are considered important in ecosystem functioning they have diverse ecological role including nutrient cycling seed dispersal. This research is carried out from January 2018 to April 2018. During this research ant samples were collected from the two ecological habitats. In this finding ants of about 8 species were found different species were collected through different methods and recorded their diversity. Species such as longicornis, pharaonis, indica, C.sericus, hespera, nigra, spathifera, geminate. Among all the species longicornis has found at a greater frequency while the frequency of species indica were reported very less. While considering species richness diversified species were mostly found in the month of April followed by month of January and it was very less in February and march during this research ants were collected by using pitfall traps, scented traps and hand collection methods ants were generally collected during morning and was preserved by the wet preservation methods.

**Key words:** Ants, diversity, species, ecological habitats, Akola city.

### **INTRODUCTION**

Ants are one of the least studied groups with respect to their taxonomy and ecology in India. Species identification of ants is difficult because of lack of reference collection and the fact that most of the available keys are either out of print and unavailable are restricted to the ant fauna of specific region ants account for an estimated 30% of terrestrial biomass (holldobler and Wilson 1990) and play many important ecological role having direct interaction with the soil plants and animals at all tropic levels

Ant communities are influenced by both biotic and abiotic factors (Cushman 1993, perfecto and vandermeer1996) distribution of ant species varies along latitudinal gradients which correspond to gradual changes in a certain environmental factor such as a climate and vegetation factors. Globally there are about 12571 extant ants species as per the recent classification all ants are grouped in 21 sub families all the ants species fall into signal family formicidae this family is included in the super family vespidae of the order hymenoptera which is place in the class insecta.

The objective of this study was to found the ant diversity and distribution in different habitat. Habitat considered for this research is PDKV and Nehru amusement park.

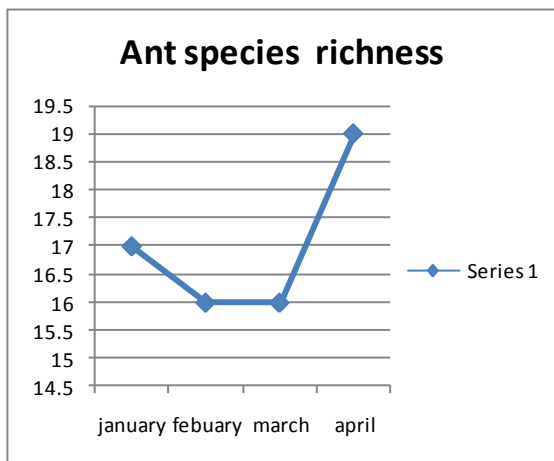
### **MATERIALS AND METHODS**

The ants sample were collected from various localities on and around Akola city within 15km of the city center 3 ecological habitat PDKV, Nehru park and residential area were chosen for sampling. Akola is located at latitude 20.7<sup>0</sup> north and longitude 77.07<sup>0</sup> east. It is at an altitude of 925 ft (282m) above the sea level. Akola has a tropical savanna climate (koppen climate classification AW) and people predominantly wear cotton cloths. Akola has national weather station which serves as the local weather centre. Annual5 temperature ranges from a high of 48 <sup>0</sup>C (118 <sup>0</sup>F) to a low of 10 <sup>0</sup>C (50 <sup>0</sup>F). Akola lies on the tropic of cancer and become very hot during summers, especially in may. Although it can be very hot in the day, it is

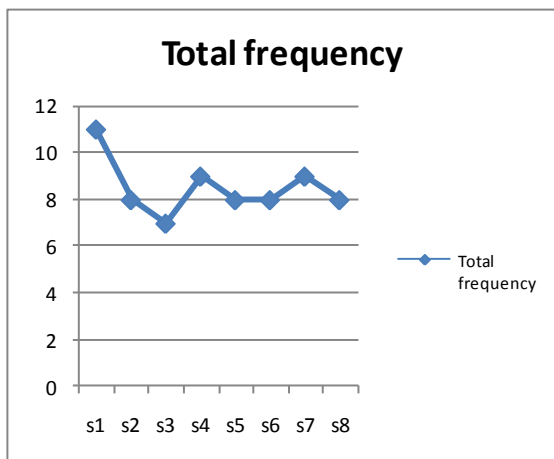
cooler at night the annual rainfall occurs in monsoon season between June and

September but some rain does fall during January and February.

number	Subfamily	Species	January	February	March	April	Total ferquency
1	Formicinae	Paratrechina longicornis	2	3	3	3	11
2	Myrmicinae	Monomorium pharaonis	2	2	2	2	8
3	Vaspodae	Monomorium indicum	3	1	1	2	7
4	Formicinae	Componotus sericeus	2	3	2	2	9
5	Myrmicinae	Chremotogaster hespera	3	1	2	2	8
6	Pseudomyrmicinae	Tetroponeia nigra	1	2	2	3	8
7	myrmicinae	Pheidole spathifera	2	2	2	3	9
8	myrmicinae	Solonopses geminate	2	2	2	2	8
			17	16	16	19	Total



Table



## RESULT

8 species of ants were identified in the study area of Akola city at allied region. All the collected ants were identified into 4 sub families that myrmicinae, formicidae, vaspodae, pseudomyrmiciae, all this 8

species are diversely collected from the forest, human habitat and park.

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