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ANT FAUNA FROM WESTERN MAHARASHTRA

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ABSTRACT:
In present study the survey of ant fauna was carried out from Sangli city for 6 months. The samples were collected eary in the morning from July to December. The survey reveals that Eleven species belonging to family Formicidae & four sub families like Fomicinae, Myrmicinae, Dolichoderinae & Ponerinae were recorded. The sub family Formicinae shows dominance.

Keywords: - Ants, Formicidae, Sangli.

INTRODUCTION :

The phylum Arthropoda is biggest phylum in animal kingdom which includes the biggest class Insecta. The class Insecta has order Hymenoptera & family Formicidae which include ants along with related wasps and bees. Indian ant fauna represent diversity, includes 12 known sub families like, Aaenictinae, Amblyoponinae, Cerapachyinae, Dolichoderinae, Dorylinae, Ectatomminae, Formacinae, Leptanillinae, Hyrmicinae, Ponerinae, Proceratinae & Pseudomyrmecinae (Shabina A. Nagariya, Santosh S. Pawar 2012)

All the known species of ants are eusocial (Gadagkar *et. al.* 1993). As per the recent classification all ants are grouped into 26 sub families with 428 valid genera & 14711 valid species (Bolton B. 2011). Hymenopterans also provide important value to the ecosystem & to human beings. As described by Suryanto (1993) ants can be used as biological control agent of an insect pests as they feed on other insects & small invertebrates.

Ants are found on all continents except Antarctica & only a few large islands such as Green land, Iceland, parts of Polynesia & Hawaiian island lack native ant species (Jones & Alice S. 2008 ; Thomos & Philip 2007).

In India sub family Myrmicinae have maximum species diversity of 42.7% followed by the sub family Formicinae with 29.1% of species Ponerinae contributes about 13.4% of species Dorylinae 6.6% & Dolichoderinae 3.6% (Bharti H. 2016).

Ants are an especially diverse and ecologically important group whose social behavior and ecological dominance have been the subjects of intense biological study (Hölldobler and Wilson 1990). Despite this long history of research and their ecological importance, considerable gaps remain in our understanding of the

African ant fauna (Robertson 2000a and included references). For example, the species-level taxonomy of driver ants (Aenictus and Dorylus) is fragmentary and out-of-date, despite their spectacular predatory and nomadic behavior and the evidence that certain “keystone” species exert a major influence on the composition of forest arthropod communities (Franks and Bossert 1983; Gotwald 1995). A more complete inventory of African ants is essential to advance understanding of their ecology, evolution, and behavior, and to take full advantage of their

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demonstrated value in conservation priority setting, biomonitoring, and biological control (Agosti *et al.* 2000).

Ants communicate with each other using pheromones, sounds & touch (Jackson De. Rantnieks FL. aug. 2006). Many human culture make use of ants in cuisine, medication & ritauls. Some species are valued in their role as biological pest control agents (Holldobler & Wilson 1990). This survey of literature shows scanty data degarding ants from Sangli. Hence, an attempt has been made to document the ant fauna from the study area. The results are discussed in the light of recent literature.

MATERIAL & METHODS :

Study area – In & around Sangli.

Duration – Weekly samples were collected early in the morning.

Collection – The specimens were collected by using forceps and brush.

Preservation – The collected samples were preserved in 70% of alcohol & brought to the laboratory, the sample were observed under stereomicroscope.

RESULTS :

During present study 11 species of ants were recorded in the study area. All the collected ants are belonging to 4 sub families. Of these 11 species, 5 are belonging to sub family Formicinae, 4 belonging to Myrimicinae subfamily 2 species are belonging to Dolichoderinae & 1 species is belonging to Ponerinae.

Identification – The identification was made by using the key by Bolton B. (1994)

DISCUSSION:

Ants include about 1% of all described species of insects with 2136 subspecies & 12116 extent species in 298 genera coming under 21 sub families all over the world (Sivdasan et. al. 2013). Nineteen species of ants in there subfamilies & genera were found near Prince George, British Colombia.

Ants have been poorly studied in the sub-boreal forests of central British Columbia (BC). Few collections are available, and the species that occur there can only be deduced by puzzling together data from adjacent regions. In a recent synthesis of what is known about the ant fauna in BC (Naumann and others 1999), only one species, Formica podzolica Francoeur, is represented by collections near Prince George (table 1), where our study is conducted. Francoeur (1997) found 19 species in the Yukon, the majority of which are also present in BC. It is also possible that transcontinental species not listed in table 1, but listed by Francoeur (1997) as being present in the Yukon, occur in north-central BC. However, no records exist. The number of species in the north-central part of BC is uncertain, because Buckell (1932), from which most of the northern information in table 1 is derived, does not specify locales. Instead, he indicates wide geographic regions, e.g., the Chilcotin, which spans several biogeoclimatic zones (Meidinger and Pojar 1991). In other words, many ant species that occur in the southern parts of the Chilcotin or Cariboo regions are unlikely to occur in the Prince George area.

In India, currently list of 828 valid species belonging to 10 subfamilies under 100 genera is released by Bharti H. (2016). The ant diversity is Kuttan and region of Kerala. 25 species of ants were documented.

The ant fauna of the 12 localities Uttara Kannada district of Karnataka consist of six subfamilies, 32 genera & 140 species.

The diversity of ants (Hymenoptera) was studied in 2010 to 2012 at Maharashtra nature park society (MNPS) Mumbai. During the present study 28 species of ants representing 6 subfamilies. In Sangli district there are 11 species belonging to 4 subfamilies under 10 genera.

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Table 1- Ant Species

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Sr No.	**Family**	**Sub Family**	***Species***	**No. of Species**
1	Formicidae	Formicinae	*Brachymyrmex patogonicus.*	4
			Camponotus compressor.	10
			Oecophyllasmar agdina	7
			Crematogaster rothneyi.	8
			Paratrechina longicornis.	12
2	Formicidae	Myrmicinae	*Aphaenogaster sardoa.*	4
			Solenopsis germinate.	15
			Pogonomyrmex barbatus	12
			Pheidoles pathifera.	10
3	Formicidae	Dolichoderinae	*Tapinomamelano cephalum.*	9
4	Formicidae	Ponerinae	*Leptogenys falcigera.*	2

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Plate No. 1: Photographs of Ants . Fig. A to F

A. *Brachymyrmex patogonicus*

B. *Camponotud compressor*

C. *Solenopsis germinata*

D. *Crematogaster rothneyi*

E. *Aphaenogaster sardoa*

F. *Oecophylla smaragdia*

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Plate No. 2 Photographs of Ants .Fig. G to I

G. *Leptogenys falcigera*

H. *Paratrechina longicornis*

I. *Pheidole spathifera*

K. *Oecophylla smaragdina*

L. *Tapinomamelano cephalum.*

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