

DIVERSITY OF ANTS IN KARAMADAI REGION OF METTUPALAYAM, COIMBATORE, TAMIL NADU, INDIA.

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Abstract

The present study deals with the diversity of ants in Karamadi region of Coimbatore, india. Ants were collected from different sited of karamadi region with the help of trapping, brush method and hand picking method. Twenty three species were identified among the 4 subfamilies reported were subfamily Formicinae was dominated with 10 species followed by Myrmicinae with 9 species, Dolichoderinae and Pseudomyrmicinae with 2 species each. Ant diversity is less in karmadi region compared with Periyanaickenpalayam region.

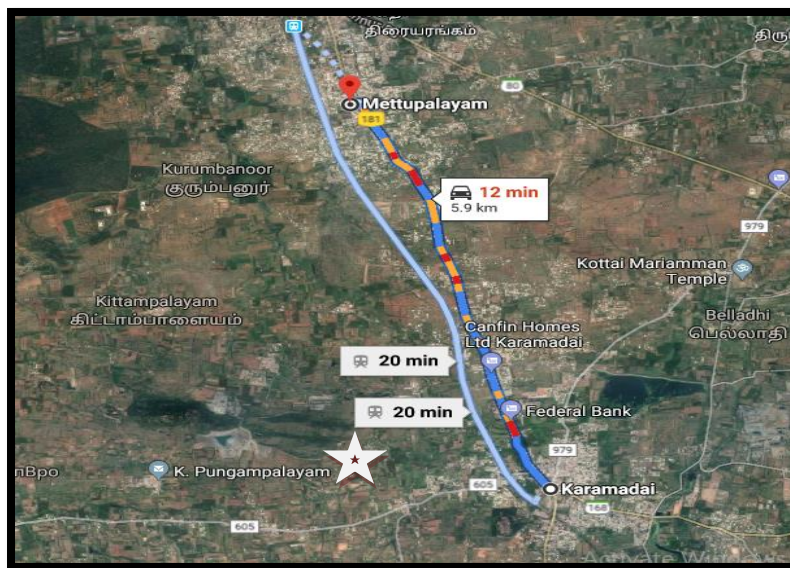
Keywords: *Ants, karamadi, Diversity.*

Introduction

Biodiversity conservation and management are of worldwide concerns. Ant is one of the most diverse and ubiquitous groups of the social insect. Ant belongs to a single large family Formicidae, largest of order Hymenoptera. It is represented by 26 extant subfamilies with 14,711 valid species and 428 valid genera [1]; out of these, 152 species are listed by IUCN and from India, 10 subfamilies are represented by 100 genera with 828 species. In India, Himalaya and the Western Ghats harbor a large number of ant species, 656 species from 88 genera were recorded from Himalaya, and 455 species from 75 genera were recorded from the Western Ghats, especially in Tamil Nadu, 184 species from 51 genera were recorded [2, 3]. They can serve as model organisms for exploring the nature and dynamics of ecological communities due to the ease with which they can be sampled and the potential for experimental manipulation [2, 3].

Ants are found everywhere, except in Iceland, green-land and Antarctica, [4]. But the number of species declines with increasing latitude, altitude and aridity [5]. Currently, they are 15,983 extant and species are subspecies as per the recent classification [6]. They are grouped in to 20 subfamilies, with 464 genera. Ants are conspicuous and important parts of virtually all terrestrial ecosystems [4, 7, 8]. Toward understanding the function of ant communities, ecologists have often used single linear measures of size [9].

Materials and methods



Mettupalayam is a taluk and municipality of Coimbatore Rural district, located to the north of the city of Coimbatore on the way to Ooty. It is located in the foot hills of Nilgiri hills about 35 km north of downtown Coimbatore and about 50 km north of Tiruppur, in the Indian state of Tamil Nadu. Karamadai is located near Mettupalayam, a suburb of Coimbatore in the Indian state of Tamil Nadu. It is a northern suburb of Coimbatore city, located on Coimbatore-Ooty NH 67

Results

Table 1 showing identified specimens from Karamadai Regions of Mettupalayam.

S.No	GENERA	SPECIES	COMMON NAME
Subfamily: Formicinae			
1.	<i>Camponotus</i>	<i>Radiates</i> (Forel,1892)	Carpenter ant
2.	<i>Camponotus</i>	<i>Compressus</i> (Fabricus,1787)	Common Godzilla ant
3.	<i>Camponotus</i>	<i>Irritans</i> (Smith F,1957)	Giant honey ant
4.	<i>Camponotus</i>	<i>Sericus</i> (Fabricus,1789)	Golden backed ant

5.	<i>Camponotus</i>	<i>Fabricus</i> (Fabricus,)	Carpenter ant
6.	<i>Camponotus</i>	<i>Parius</i> (Emery, 1925d)	Shiny black sugar ant
7.	<i>Camponotus</i>	<i>Mitis</i> (Smith)	Carpenter ant
8.	<i>Paratrechina</i>	<i>Logicornis</i> (Latreille, 1802)	Crazy ant
9.	<i>Oecophlla</i>	<i>Smaragidina</i> (Fabricus)	Weaver ant
10.	<i>Anoplolepis</i>	<i>Graclipes</i> (Smith)	Yellow crazy ant
Subfamily: Myrmicinae			
11.	<i>Monomorium</i>	<i>Minimum</i> (Buckely, 1867)	Little black ant
12.	<i>Monomorium</i>	<i>Pharaonis</i> (Linnaeus, 1758)	Pharaoh ant
13.	<i>Monomorium</i>	<i>Destructor</i> (Jerdon,)	carpenter ant
14.	<i>Tetramorium</i>	Spp	Ant
15.	<i>Tetramorium</i>	<i>Bicarinatum</i> (Nylender)	Tramp ant
16.	<i>Crematogaster</i>	<i>Spe</i>	Acrobat ant
17.	<i>Crematogaster</i>	<i>Subnuda</i> (Mayr,1879)	Carpenter ant
18.	<i>Solenopsis</i>	<i>Geminate</i> (Fabricus)	Fire ant
19.	<i>Pheidole</i>	<i>Megacephala</i> (Fabricus)	African bigheaded ant
Subfamily: Dolichoderinae			

20.	<i>Tapinoma</i>	<i>Indicum</i> (Forel, 1895)	Ghost ant
21.	<i>Tapinoma</i>	<i>Sessile</i> (Say, 1836)	Odour ant
Subfamily: Pseudomyrmicinae			
22	<i>Tetraoponera</i>	<i>Rufonigra</i> (Jerdon)	Bicoloured ant
23	Tetraoponera	Allaborans (Walker, 1859)	Polished leaf border ant

Twenty three species (n=23) of ants were identified in our study area. The survey was conducted at karamadi region April 2019 – June 2019. A total of four subfamilies (n=4) were identified, among 11 genera and 23 species were identified. The Formicinae subfamily and Myrmicinae richest in our study area. Dolichoderinae and Pseudomyrmicinae were less in number. The most dominant genus is *Camponotus* and *Monomorium*.

Discussion

In the present study, 23 species of ants in 7 genera representing four subfamilies namely Formicinae, Myrmicinae, Ponerinae, Dolichoderinae and Pseudomyrmicinae were recorded.

Savitha [10] observed the response of ant to disturbance gradients in and around Bengaluru, India and estimated that ant species richness and abundance was higher in the undisturbed site. *Oecophylla smaragdina* species was rich in the coconut field in cultivated areas [11]. As observed by many workers [12] species abundance pattern indicated a relatively small proportion of abundant species against large number of rare species. Species richness is typically recorded to change across tropical forest disturbance gradients [13-15].

Camponotus was a frequently occurring species in everywhere. The *Camponotus* had the greatest individual numbers. These ants are called as carpenter ants because of their “Nesting behaviours” [16].

Conclusion

The present study so that the diversity of ants species in karamadi region. The karamadi is the small village near to Mettupalayam now the region suffers from several threats such as deforestation, urbanization and irrigation. The present investigation on diversity of ants in the Karamadi village, Coimbatore district clearly indicated that the richness of ants fauna in the city. The present study showed that the 23 species of ants belonging under the 4 subfamilies and 11 genera of Ants species and also large number of *Camponotus* and *monomorium* genera were observed in the human habitat area due to climatic condition and food preference of the species.

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