

Ant diversity in urban environments in subtropical area: *Camponotus compressus* occupied three urban parks in New Delhi, India.

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Introduction

Ants are the most abundant animal group, especially in tropical and subtropical areas (e.g. Wilson 1987, 1990). Thus, ant diversity is one of the key factors with which to evaluate environmental condition. Several articles have been devoted to the study of ant diversity in urban environments in Asia (e.g. Ito 2001). However, little attention has been given to the study of ant diversity in urban environments in India.

New Delhi is the capital of India. New Delhi has a monsoon-influenced humid subtropical climate. The city was planned by Edwin Lutyens, a leading 20th century British architect. There are several small un-named parks in New Delhi. We paid attention to some of these parks in the city to investigate ant diversity in the urban environment.

This paper has two aims: The first aim is to investigate ant diversity in urban environments in New Delhi using three small un-named parks. The second aim is to study the ants' behavior and their foods.

Materials and Methods

All samplings and observations were conducted in the three un-named parks in New Delhi, India in October 2007 (see Fig.1). We investigated all of the trees and flowerbeds in the parks, whether there were ant colonies or not. If we found one, we collected some ant workers from each colony. We then identified the ant species under the microscope.

We observed their behavior and their main foods. If we found some foods, we collected them, and identified those foods under the microscope.

Results

We collected one ant species, *Camponotus compressus* (Fabricius, 1787). This ant species occupied all of the trees and flowerbeds in the three parks. They tend to homopterans. Ant workers collected nectar from treehoppers and homopterans. We could not find any cases feeding on plants nectar.



Fig. 1. Photograph of a road near a park in New Delhi, India.

Discussion

We found and collected only one ant species, *Camponotus compressus*, in this study. This result indicated that ant diversity of urban parks in New Delhi is very low. This ant species is one of most common species in India, with their distribution spread from Middle East Asia to Russia. They collect nectar from insects such as treehoppers, aphids, coccids and mealy bugs. They also collect nectar such as extra floral nectar (EFN), from plants. In this study site, however, we could not find any ants collecting EFN. Given that most trees are garden species, we can explain why we can not find any ants collecting EFN from these trees. We can conclude that the diversity of native tree species in urban parks in New Delhi is also very low.

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