

# First Study of Report on Mutualism Related to Ants in the Thar Desert

<sup>1</sup>Shyam Sunder Meena, <sup>2</sup>Tansukh Barupal

S.B.K. Government P.G.College

Jaisalmer, Rajasthan, India 345001.

**Abstract:** The enterprise of a strong relationship between species is a critical issue in conservation biology. Such an association could provide the basis for the concern of cost-effective and easy-to-maintain biodiversity. The present study reveals and discovered the mutualism between ant and two different species of plant hoppers. In this type of relationship both organisms are beneficiary i.e. plant hopper secret carbohydrate which is feed by ant and plant hopper gets protection from different types of predators like Lizard spider skink and wasp etc.

**Keywords:** conservation biology, cost-effective, mutualism, plant hoppers, ant.

## INTRODUCTION:

An organism is a self reproducing system proficient of growing and maintaining itself and is directly prejudiced by the surrounding environment. Ants are social insects that belong to order Hymenoptera. They are evolved about 120 million years ago (ward, 2007). Insect may be green black, red or metallic body (agosti et al., 2000). Insects having versatile importance. They are soil turners, indicator of ecosystem, predators, pollinators and scavengers to important component of food chain (Bharti, 2011). As ants, plant hoppers are also important component of ecosystem as importance source for many species of grassland birds. So this type of association is very importance for nature and maintaining ecosystem.

## MATERIAL AND METHODS:

### The study area

The state of Rajasthan is the largest state of India located between 69°30' to 78°17'C longitudes and 23°3' to 20'13 N latitude. In Rajasthan thar desert is mostly found in Jaisalmer district which is situated in 26°55'3.47"N, 70°54'13.93"E. and the study area is found in jaisalmer is SBK Government PG College Jaisalmer Rajasthan. The position of Jaisalmer is show in map in Rajasthan in figure no.1.



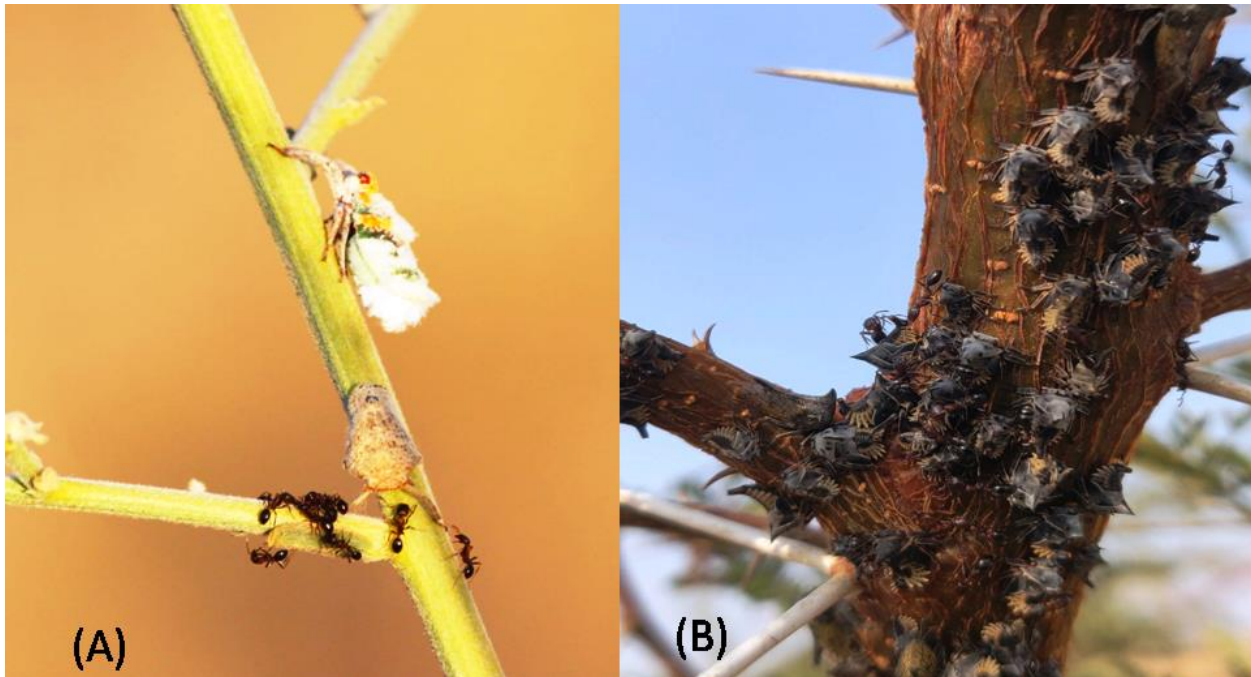
Fig.1. Position of Jaisalmer district in Rajasthan map

**Methodology:**

Extensive survey was done and data recorded with high resolution camera canon 600d with 250-600 mm tamron lense 18 mega pixal.

**Result:**

The present study reveals and discovered the mutualism between ant and two different species of plant hoppers (Fig.No.2.) In this type of relationship both organisms are beneficiary i.e. plant hopper secret carbohydrate (Honey dew) which is feed by ant and plant hopper gets protection from different types of predators like Lizard spider skink and wasp etc. The plant hopper and ants were identified by the Dr. S.S.Meena, department of zoology, SBK Govt. College, Jaisalmer, Rajasthan.

**Fig. No. 2.**

- (A) Mutualism between ant and Eurybrachidae plant hoppers.  
(B) Mutualism between ant and Horned plant hoppers

**References:**

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