International Journal of Plant Protection | Volume 5 | Issue 1 | April, 2012 | 96-98

IJPP

Research Article

Nesting habits and nest structure of stingless bee, *Trigona iridipennis* Smith at Dharwad, Karnataka

C.S. DANARADDI[1]*, MANJUNATH TATTIMANI[2], SANGAMESHA HAKKALAPPANAVAR[3], SHILPA B. BIRADAR[4] AND SUNIL A. SATYAREDDI[5]

[1]Deapartment of Agricultural Entomology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA
[2]Department of Agronomy, C.C.S. Haryana Agricultural University, HISAR (HARYANA)
[3]Department of Agricultural Entomology, College of Agriculture, Navile, SHIMOGA (KARNATAKA) INDIA
[4]Departmentn of English (Optional), Kuvempu University, SHIMOGA (KARNATAKA) INDIA
[5]Deapartment of Agronomy, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

ARITCLE INFO

Article Chronicle :
Received : *24.09.2011*
Revised : *05.11.2011*
Accepted : *22.02.2012*

Key words :
Stingless bee,
Trigona iridipennis,
Nesting habits,
Structure

*Corresponding author:

ABSTRACT

The nesting sites of *Trigona iridipennis* Smith at Dharwad were tree trunks and wall cavities. The colonies nested in wall cavities (12 colonies) and tree cavities (5 colonies) were located at the mean height of 192.57 and 222.6 mm from the ground level, respectively. The mean cavity size in colonies nested in wall cavities was 132.65 x 143.30x 165.05 mm. Of the 17 colonies observed, 11 colonies had an entrance tube. The length and width of the entrance tube was 96.55 and 3.32 mm in wall cavities and 108.80 and 5.08 mm in tree cavities. The brood cells were arranged in clusters and surrounded by pollen and honey pots. The mean dimensions of brood cells, pollen and honey pots were 2.14 x 1.70 mm, 7.26 x 4.49 mm and 7.73 x 5.04 mm in length and width, respectively.

How to view point the article **:** Danaraddi, C.S., Tattimani, Manjunath, Hakkalappanvar, Sangamesha, Biradar, Shilpa B. and Satyareddi, Sunil A. (2012). Nesting habits and nest structure of stingless bee, *Trigona iridipennis* Smith at Dharwad, Karnataka. *Internat. J. Plant Protec.*, **5**(1) : 96-98.

INTRODUCTION

Stingless bees which belongs to the family Apidae and sub-family Meliponinae, are the smallest of the honey producing bees. They are highly social insects like honey bees living in perennial colonies and nesting in concealed places. Stingless bee colonies usually consist of hundreds or thousands of workers (Wille, 1983). According to Michener (2000), size of stingless bee colonies ranged from a few dozen to more than 100,000 workers. Stingless bees besides yielding honey, are important and effective pollinators of many crop species. Nine species of crops are confirmed as effectively pollinated by stingless bees and they make a contribution to the pollination of nearly 60 other crops (Heard, 1988). More than 500 species of stingless bees occur throughout the world (Ruttner, 1988). However, *Trigona iridipennis* Smith is the only species that occurs in India. In order to exploit the stingless bees, both for pollination as well as for honey production, a sound knowledge on its nesting habits and nest structure is essential. Hence, the present studies on these aspects were taken up at Dharwad and the results are presented in this paper.

MATERIALS AND METHODS

These studies were made during 2006-07 at Dharwad which is located in the transitional tract of Karnataka at 15° 26' N latitude and 75° 07' East longitude and at an altitude of 678 meters above the mean sea level. Colonies of *T. iridipennis* were searched in all the possible concealed places in and around the main campus of the University of Agricultural Sciences and the nesting habits were studied by recording the observations like, nesting place, number of colonies nested in each place, height from the ground level, cavity dimension (width, height and length of the cavity) and length and width of entrance tube

The internal structure of the nest was studied by opening the colonies in the wall cavities. Observations were