

## **Host range and natural enemies of the newly reported mealybug species *Phenacoccus solenopsis* Tinsley 1898 (Hemiptera: Pseudococcidae), in the Batticaloa District**

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Mealybugs are important plant sucking insect pests causing severe damages in a wide variety of plants and are one of the major threats to agriculture, horticulture and home garden crops. The cotton mealybug *Phenacoccus solenopsis* Tinsley was first reported in Sri Lanka in 2009 by the authors. This polyphagous exotic pest originated from USA and at present it is widely spread in The Eastern and Northern parts of Sri Lanka. The present study was conducted in randomly selected twenty five locations at Batticaloa district, during the period from June 2008 to March 2010 to identify different host plants harboured by this species, associated ant species and the natural enemies.

In Batticaloa district *Phenacoccus solenopsis* was recorded from 30 plant species of 10 families including some important field crops and weeds. Plants from Malvaceae, Solanaceae, Amaranthaceae, Asteraceae and Verbenaceae were the most preferred hosts of this mealybug. It was found that natural control by means of natural enemies and weather factors play an important role in the abundance of this species in the region. In this study it was observed that, there was close association of ants with the mealybugs especially of the fire ants of genus *Solenopsis*. Six different species of ants associated with cotton mealybug were observed and among them four were identified. Apart from this, some natural enemies of mealybugs including predators and parasitoids were observed. This group includes predators as lacewing larvae, adult and larval lady bird beetles and tiny parasitic wasps. These natural enemies were observed to have a considerable role in the natural control of the cotton mealybugs.

Key words: Exotic, *Phenacoccus solenopsis*, Natural control, Natural enemies, parasitoid