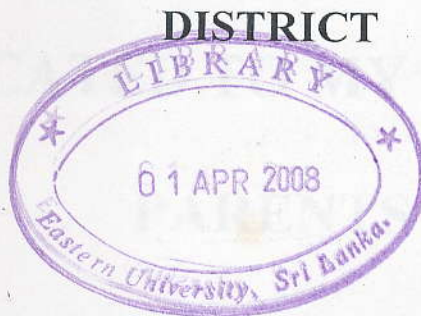


**IDENTIFICATION OF WHITEFLY SPECIES  
(HEMIPTERA: ALEYRODIDAE) AND THEIR  
ASSOCIATED PARASITOIDS ON SELECTED  
VEGETABLE CROPS IN THE BATTICALOA**



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## ABSTRACT

Parasitoids offer the best and environmentally friendly potential to control the pest population. This study involved the identification of whitefly species and their associated parasitoids on selected vegetable crops in the Batticaloa district. The leaves of whitefly infested chilli, *Capsicum annum* and manioc, *Manihot esculenta* were collected from five home gardens (Thannamunai, Mylampavelli, Eravur, Kommathurai and Vantharumoolai) at weekly intervals for the period of one month. The leaf samples were collected from ten plants at random within the selected one square meter area of the selected home gardens. Collected samples were precisely observed and the total nymphal instars and parasitized pupae were recorded for the estimation of parasitization. The non parasitized and parasitized pupae were separated for the identification of whitefly species and their parasitoids respectively.

Four hundred mounted slides of pupal cases and adult parasitoids were examined to identify the species based on their morphological and morphometric characteristics. Adult parasitoids were also mounted because of their small size. A number of different keys, reference collections, taxonomic catalogues and many descriptions were used in the identification. The whitefly species that attacked chilli and manioc was identified as *Bemisia tabaci* Gennadius and the parasitoid that parasitized on *Bemisia* species was *Encarsia guadeloupa*e Viggiani. The parasitization rates of *Encarsia guadeloupa*e on *Bemisia tabaci* associated with chilli and manioc were 53.13% and 42.42% respectively and there was no significant difference ( $P > 0.05$ ) in the rate of parasitism between these two crops.

The results of this study revealed that, the *Encarsia guadeloupa*e has a great potential to suppress *Bemisia tabaci* on vegetable cultivation in the Batticaloa region.

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