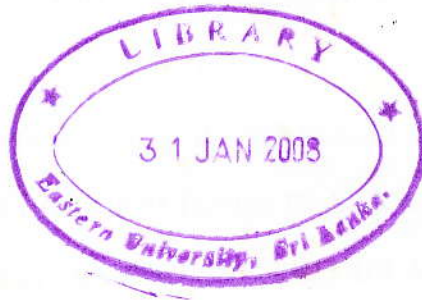


A STUDY ON THE IDENTIFICATION OF WHITEFLY SPECIES
(HEMIPTERA: ALEYRODIDAE) AND THEIR ASSOCIATED
PARASITOIDS IN SELECTED WILD PLANTS

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ABSTRACT

At present, the whiteflies (Hemiptera: Aleyrodidae) are one of the most deleterious insect pests in the Batticaloa district of Sri Lanka. The whiteflies attack a wide range of plants including vegetables, medicinal, fruit and wild crops. Martin and Mound (2007) reported that there are more than 1500 whitefly species found throughout the world. David (1993) reported that the Fauna of Sri Lankan whitefly consists of 49 species. However until now, no studies have been conducted on whitefly species in the Batticaloa district. Eventhough, whiteflies can be controlled by chemical, cultural and physical methods, these can be effectively managed by bio-control agents especially parasitoids.

This study was conducted in the Agronomy farm, Eastern University, Sri Lanka and adjacent areas. Twenty infested leaves were collected from each of the host wild plants for this study. The insects belong to the family: Aleyrodidae of the order: Hemiptera were identified by collecting the fresh pupal cases and pupa of whiteflies. After mounting on the slides, the pupa and pupal cases were observed under the microscope and morphological characters were recorded. Finally, the whitefly species were identified with the help of taxonomic catalogues and identification keys.

The parasitized pupae of whitefly were reared until the emergence of adult parasitoids. The emerged adult parasitoids were closely examined under the

microscope and morphological characters were recorded. Each parasitoid was identified with the help of taxonomic catalogues, pictorial and identification keys.

There were three different species of whiteflies namely *Trialeurodes vaporariorum*, *Bemisia tabaci* and *Aleurodicus dispersus* infested the wild crops.

Two Hymenopteran parasitoids species, *Encarsia cibcensis* and *Encarsia guadeloupa* were found as parasitoids of the whitefly species attacking the wild plants in the study area. Among these two parasitoids, *Encarsia cibcensis* was predominantly found in this area. Both parasitoids parasitized the nymphal instars and emerged from the pupae of whitefly.

Two wild plants namely wild *Manihot* sp. and *Terminalia catappa* were recorded as the host plants for the above mentioned whiteflies in the study area.

CONTENTS

ABSTARCT	I
ACKNOWLEDGEMENT	III
CONTENTS	V
LIST OF TABLES	X
LIST OF FIGURES	XI
CHAPTER-01 INTRODUCTION	01
CHAPTER-02 REVIEW OF LITERATURE	06
2.1. Whiteflies	06
2.1.1. Historical perspective	06
2.1.2. Origin and Distribution	07
2.1.3. Host plant selection	08
2.1.4. Control and management practices	08
2.1.4.1. Cultural and physical control	09
2.1.4.2. Host plant resistance	09
2.1.4.3. Chemical control	10
2.1.4.4. Biological control	10
2.1.4.4.1. Pathogens	11
2.1.4.4.2. Predators	11
2.1.4.4.3. Parasitoids	12
2.1.4.4.3.1. <i>Encarsia</i>	14
2.1.4.4.3.2. <i>Eretmocerus</i>	15
2.1.4.4.3.3. <i>Amitus</i>	15

2.2. Whitefly species complex in the world	16
2.2.1. Biological classification	16
2.3. Whitefly species in Sri Lanka	17
2.3.1. <i>Bemisia tabaci</i> (Sweetpotato whitefly)	17
2.3.1.1. Biological classification	17
2.3.1.2. Biology and Ecology	17
2.3.1.3. Morphology	18
2.3.1.3.1. Eggs	18
2.3.1.3.2. Nymphs	19
2.3.1.3.3. Adults	20
2.3.1.4. Geographical distribution	20
2.3.1.5. Host plants	21
2.3.1.6. Economic impact and Damages	21
2.3.1.7. Control	22
2.3.1.7.1. Cultural Control	22
2.3.1.7.2. Chemical Control	22
2.3.1.7.3. Biological Control	22
2.3.1.8. Natural enemies	23
2.3.2. <i>Trialeurodes vaporariorum</i> (Greenhouse Whitefly)	25
2.3.2.1. Biological classification	25
2.3.2.2. Biology and Ecology	25
2.3.2.3. Morphology	26
2.3.2.3.1. Eggs	26
2.3.2.3.2. Nymphs	26
2.3.2.3.3. Adult	27

2.3.2.4. Geographical distribution	28
2.3.2.5. Host plants	28
2.3.2.6. Economic impact and Damage	28
2.3.2.7. Control	29
2.3.2.7.1. Biological Control	29
2.3.2.7.2. Chemical control	29
2.3.2.8. Natural enemies	30
2.3.3. <i>Aleurodicus dispersus</i> (Spiraling Whitefly)	31
2.3.3.1. Biological classification	32
2.3.3.2. Biology and Ecology	31
2.3.3.3. Morphology	33
2.3.3.3.1. Eggs	33
2.3.3.3.2. Nymphs	33
2.3.3.3.3. Adult	34
2.3.3.4. Geographical distribution	35
2.3.3.5. Host plants	35
2.3.3.6. Economic impact and Damage	36
2.3.3.7. Control	37
2.3.3.7.1. Chemical control	37
2.3.3.7.2. Biological control	37
2.3.3.8. Natural Enemies	38
2.4. Host wild plants of whiteflies	39
2.4.1. <i>Terminalia catappa</i> (Tropical almond)	39
2.4.1.1. Biological classification	39
2.4.1.2. Ecology	40

2.4.1.3. Geographical distribution	40
2.4.1.4. Uses	41
2.4.1.5. Diseases and pests	41
2.4.2. <i>Manihot</i> spp. complex (wild Manioc species)	42
2.4.2.1. Biological classification	42
2.4.2.2. Geographical distribution	42
2.4.2.3. Diseases and pests	43
CHAPTER-03 MATERIALS AND METHODS	44
3.1. Location	44
3.2. Period	45
3.3. Methodology	45
3.3.1 Collection of samples	45
3.3.2 Identification of whitefly species	45
3.3.2.1 Slide mounting	46
3.3.3 Rearing of parasitoids	47
3.3.4 Identification of Parasitic species	48
3.3.4.1 Removal of body parts and dehydration	48
3.3.4.2 Slide mounting	48
CHAPTER-04 RESULTS AND DISCUSSION	50
4.1. Whitefly species attacking the wild plants	50
4.1.1. Whitefly species 1	50
4.1.2. Whitefly species 2	52
4.1.3. Whitefly species 3	54
4.2. Parasitoids	56
4.2.1 Parasitoid 1	56