

**IDENTIFICATION OF PLANTHOPPERS AND
LEAFHOPPERS ON COCONUT PALMS AFFECTED
BY WELIGAMA COCONUT LEAF WILT DISEASE
(WCLWD) IN MATARA DISTRICT**

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ABSTRACT

Weligama Coconut Leaf Wilt disease (WCLWD) is a phytoplasma-borne disease that has spread in Matara, Galle and Hambantota districts in the Southern province of Sri Lanka. WCLWD is expected to be spread by the phloem feeding insect vectors as it is a phytoplasma-borne disease. In a preliminary survey, several species of Order Hemiptera have been collected and nine out of them have been identified as putative vectors of WCLWD. However, a more detailed study is necessary to identify the complete fauna of Order Hemiptera in the diseased area. Therefore, this study was conducted to explore, collect and taxonomically identify the insect fauna with special reference to Order Hemiptera and document the leafhoppers and planthoppers on coconut palms in WCLWD affected areas. Insects were collected from four WCLWD affected Divisional secretariats (D/S) using two types of traps, yellow sticky traps and yellow water pan traps. Only the individuals of Order Hemiptera were collected using the aspirator. A total of 323 insects were collected from yellow sticky traps, out of which 107 belonged to the Order Hemiptera with the abundance of Dickwella (36), Matara (28), Weligama (22) and Welipitiya (21). Next to Order Hemiptera, Order Coleoptera showed higher abundance (100) and they were more abundant in the Matara D/S (40) followed by Dickwella (35), Weligama (18) and Welipitiya (7). The highest abundance of Orders Diptera and Hymenoptera were observed in Dickwella D/S. A total of 39 Hemipterans were collected from aspirator and their abundance were: Weligama (12), Matara (11), Wellipitiya (9) and Dickwella (7). Within identified Hemipterans, leafhopper abundance (15) is higher compared to that of planthoppers (10). Leafhoppers were belonged to Family Cicadellidae, Aphrophoridae and Membracidae. Within the Family Cicadellidae, two Sub Families were identified as Signoretiinae and Typhlocybiinae, one individual in Tribe Phlogisini was identified under Sub Family Signoretiinae and two individuals in Tribe Alebrini were identified under Sub Family Typhlocybiinae. Within the Family Aphrophoridae, three individuals in Genera *Poophilus* and one individual in Genera *Mandesa* were identified. Within Family Membracidae, one individual in Genera *Protinotus* and one individual in Genera *Eufairmairia* were identified. Within planthoppers, Families Delphacidae, Lophopidae, Derbidae and Tingidae were identified. Family Delphaciade was classified until Tribe Deltocephalini. *Proutista moesta* and *Stephanitis typica* of Families Derbidae and Tingidae respectively were identified up to Species level.

Key words: Weligama coconut leaf wilt disease, Hemiptera, Insect fauna, Leafhopper