TAXONOMIC ASPECTS OF CICADELLID SPECIES INFESTING MEDICINAL AND AROMATIC PLANTS IN EGYPT

By

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B.Sc. Agric. Sc. (Entomology), Ain Shams University, 2007

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ABSTRACT

Heba Essam Ibrahim Abd- El-Aziz: Taxonomic Aspects of Cicadellid Species Infesting Medicinal and Aromatic Plants in Egypt.Unpublished M.Sc. Thesis, Department of Plant Protection, Faculty of Agriculture, Ain Shams University, 2016.

The present work aimed to survey, identify, fingerprint and detect phylogenetic relationships among different leafhopper species infesting medicinal and aromatic plants in Egypt.

Fifteen leafhopper species were collected from medicinal and aromatic plants at different localities and governorates in Egypt using both sweeping net and aspirator throughout 2011 to 2015. The surveyed species were *Aconurella prolix* (Lethierry), *Exitianus pondus* Ross, *Nephotettix modulates* Melichar, *Parabolocratalis* sp. Evans, *Balclutha frontalis* (Ferrari), *Cicadulina bipunctella zeae* China, *Cicadulina chainai* Ghauri, *Macrosteles sexnotatus* (Fallen), *Orosius albicinctus* Distant, *Psammotettix alienus* (Dahlbom), *Neolimnus aegyptiacus* (Matsumura), *Empoasca decipiens* Paoli, *Eupteryx cypria* Ribaut, *Megulopa sahlbergorum* Lindberg and *Austroagallia* sp. Evans.

Morphological diagnostic characters were described for each collected species.

Parabolocratalis sp. is considered as a new record in leafhoppers fauna in Egypt.

An identification key based on morphological characters was designed to identify different surveyed species.

Fingerprinting different leafhopper species was achieved using two trends of DNA based techniques; the first trend, Inter Simple Sequence Repeat Polymerase Chain Reaction technique (ISSR-PCR) was carried out by using seven primers. Those primers were selected to apply with the fifteen leafhopper species. These primers amplified sixty nine bands, fifty-six of them were polymorphic while nine bands were