

University of Zabol Faculty of Agriculture Department of Plant protection

## The Thesis Submitted for the Degree of Doctor of Philosophy (P.HD.) (in the field of Agricultural Entomology)

## Faunistic study of the leafhoppers (Auchenorrhyncha: Cicadellidae) in Sistan & Baluchestan province

Supervisors: Dr. S. Ravan Dr. F. Mozaffarian

> **By**: M. Khosravi

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## Abstract

According to the described species, Cicadellidae (commonly named leafhoppers) is the largest family in the order Hemiptera with about 25,000 described species. Leafhoppers damage caused plants either directly through feeding or indirectly through transmission of plant pathogens, such as phytoplasmas, viruses and bacteria. The present study is focused on the species belonging to the leafhoppers (Cicadellidae) was conducted in some parts of Sistan & Baluchestan, based on some specimens collected from 2016 to 2019 from Southeast Iran and species that have been previously reported. Collected specimans constitutes four subfamilies: Deltocephalinae, Eurymelinae, Megophthalminae and Typhlocybinae. A total of 34 species of Cicadellidae are updated from the region including 13 species recorded from Sistan & Baluchestan province for the first time and 5 species are new records for the fauna of Iran including Maiestas pruthii (Metcalf, 1967), Orosius aegypticus Ghauri, 1966, Psammotettix emarginata Singh, 1969, Anaceratagallia cuspidata Dlabola, 1957, Austroagallia fagonica Sawai Singh & Gill, 1973. Thirty four species are figured and morphological data with image of adults and their male genitalia are given. In addition, for each species geographical distribution in Iran and the world is mentioned. A list is provided for 117 species; all are updated only with verified species from the literature and the present study. The leafhopper fauna contributed in the present study contains Palaearctic and Oriental elements e.g. from India, together with a species that extends from Pakistan to Africa.

Key word: Taxonomic, Cicadellidae, Leafhopper, Southeast Iran.