



#### **University of Zabol**

#### **Graduate School**

# **Faculty of Agriculture**

# **Department of Plant Protection**

# The Thesis Submitted for the Degree of M.Sc

(in the field of Plant Entomology)

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#### **Abstract:**

During this research, the foretic mites related to the order coleoptera were investigated in Saravan and Sistan region during 1400-1401. The samples of insects containing phoretic mites were collected from different areas of Saravan (Saravan, Mehrestan, Sib and Soran and Jalek/Golshan) and Sistan (Nimroz, Zahak, Zabol, Hamon and Hirmand) in different methods and separated by host and transferred into special containers. 75% alcohol and the label containing sampling information was installed on them. In the laboratory, first, the insect samples were examined under binoculars, and if ticks were attached to their bodies, photographs were taken, and then the mites attached to the insects were separated and permanent microscopic slides were prepared from them using clear relativity solution and Heuer's solution according to common methods. and were identified with the help of reliable scientific sources. In this research, a total of 22 species of 18 genera belonging to 12 families and three sub-orders have been identified by the strict examination of the winged members of the families Scarabaeidae, Carabaeidae, Scolytidae, Buprestidae, Curculioninae, and Elateridae. The report of 22 species is new for Sistan and Baluchistan province. In this study, mites belonging to the Europodina group were the most abundant, and the Macrochelidae and Laelapdae families were the second and third, respectively. The names of the species are as follows:

Trigynaspida: Celaenopsidae: Pleuronectocelaeno austriaca Vitzthum, 1926

Sejida: Sejidae: Sejus sp.

Monogynaspida: **Uropodina:** Cillibidae: Cilliba erlangensis; Polvaspidae: Polyaspispatavinus Berlese, 1881; Trachytidae: Trachytes baloghi Hirschmann & Zirngiebl-Nicol, 1964; Uropodidae: Uropoda fumicola (Schweizer, 1961); Uropoda orbicularis (Müller, 1776): Trematuridae: Nenteria stylifera (Berlese, 1904): Urodinychidae: Uroobovella marginata (Koch, 1839); Uroobovella fimicola (Berlese, 1903); Macrochelidae: Macrocheles muscadomestica Vitzthum, 1930; Macrocheles insignitus Berlese, 1918; Macrocheles robustulus (Berlese, 1904); Macrocheles glaber (Müller, 1860); Macrocheles mammifer Berlese, 1918; Nothrholaspis montanus Willmann, 1951; Lealapidae: Androlaelaps shealsi(Costa, 1968); Androlaelaps casalis (Berlese, 1887); Gaeolaelaps nolli (Karg, 1962); Hypoaspis elegans Joharchi, Ostovan & Babaeian, 2014; Ascidae: Antennoseius masoviae Sellnick, 1943; Melicharidae: Proctolaelaps pygmaeus Muller 1859; Eviphididae: Evimirus uropodinus (Berlese, 1903).

Keywords: Coleoptera, Phoresy, Saravan, Sistan and Baluchistan