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A checklist of sucking lice (Insecta: Phthiraptera: Anoplura) associated with Mexican wild mammals, including geographical records and a host-parasite list

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Abstract

A checklist of 44 species of sucking lice (Insecta: Phthiraptera: Anoplura) recorded in Mexico, belonging to nine genera in six families is given, together with a list of the 63 species of Mexican wild mammal hosts with which they are associated. Summaries of the known geographical records and host relationships for each louse species are presented for each Mexican state. Data were compiled from published and original records, including three new locality records from the states of Oaxaca and Guerrero.

Key words: sucking lice, Anoplura, Mexico, checklists, hosts, mammals, geographical records

Introduction

Sucking lice (Insecta: Phthiraptera: Anoplura) are obligate hematophagous ectoparasites of eutherian mammals. They are small, wingless, dorsoventrally flattened hemimetabolous insects, with a conical head that is narrower than the thorax, and with mouthparts that are modified for sucking blood (solenophagous). Additional anopluran adaptations for ectoparasitic living include reduction or absence of eyes (in most species), reduction of antennal segments (3–5), and the development of grasping tibio-tarsal claws. The suborder Anoplura comprises approximately 550 species classified in 16 families and 49 genera (Durden & Lloyd 2009; Light *et al*. 2010).

Sucking lice are important vectors of microorganisms that cause a variety of diseases, including tularemia, epidemic typhus, louse-borne relapsing fever, trench fever, and murine mycoplasmosis (Durden & Lloyd 2009).

A number of papers published between 1919 and 1986 include important records of Mexican Anoplura (Ferris 1919–1923; Mooser *et al*. 1931; Rubin 1946; Werneck 1948; Ferris 1951; Werneck 1952; Morlan & Hoff 1957; Johnson 1962; Kim 1965, 1966; Emerson 1971; Kim & Adler 1982; Kim *et al*. 1986). Whitaker & Morales-Malacara (2005) compiled a catalogue of ectoparasites associated with Mexican mammals, in which they listed 40 species of Anoplura, representing three families (Enderleinellidae, Hoplopleuridae and Polyplacidae) and 6 genera (*Enderleinellus*, *Fahrenholzia*, *Hoplopleura*, *Linognathoides*, *Neohaematopinus* and *Polyplax*) from 50 species of mammals. Recently, Light & Hafner (2007) analyzed the phylogenetics and host associations of members of the genus *Fahrenholzia*, providing new species records and localities for Mexico, as well as important molecular data from the specimens they studied. Because the anopluran literature is diffuse and often difficult to access, the objective of this study has been to compile all host and distribution records of Anoplura known from Mexico, in order to further elucidate host-parasite relationships and map the geographical distribution of each louse species in Mexico.

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