

## A synopsis of the fleas (Insecta: Siphonaptera) parasitizing New World species of Soricidae (Mammalia: Insectivora)

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### Abstract

A synopsis of the 57 species and 24 genera of New World fleas parasitizing species of Soricidae is provided, with synonymical lists, and distributional and host data. Species analyzed belong to the families Ceratophyllidae (10 genera), Ctenophthalmidae (10 genera), Hystrichopsyllidae (two genera), and Leptopsyllidae (two genera). Three subspecies are elevated to species: *Corrodopsylla lira*, *C. obtusata*, and *Nearctopsylla hygini*. Soricid hosts include 17 species of *Sorex*, four species of *Cryptotis*, two species of *Blarina*, and one species of *Crocidura*. The species hosting the highest number of flea species is *Blarina brevicauda* (19 flea species), followed by *Sorex cinereus* (16), *S. pacificus* (9), *S. trowbridgii* (8), *S. fumeus* (7), *S. palustris* (7), and *Cryptotis parva* (7). Most of the flea species analyzed are polyxenous, and belong mainly to genera associated to small rodents and marginally present on Soricidae. The association with Soricidae seems to be more evident in species of *Corrodopsylla*, *Corypsylla*, *Ctenophthalmus*, *Doratopsylla*, *Hystrichopsylla*, and *Nearctopsylla*. Only *Corrodopsylla lira*, *C. barrerae*, *Ctenophthalmus cryptotis*, *C. expansus*, *C. myodosus*, *Hystrichopsylla cryptotis*, *H. guatemalensis*, *Nearctopsylla georgiana*, *N. pfizeri*, and *N. princei* are apparently stenoxenous or monoxenous. Taxa analyzed belong to the Nearctic biotic element and are specially diversified in the Mexican Transition Zone.

**Key words:** fleas, parasites, Soricidae, Insectivora, Nearctic, Holarctic

### Introduction

Fleas (Insecta: Siphonaptera) are parasites of mammals and birds. They have adapted physiologically to survive as bloodsucking parasites and they have probably also adapted to their specific hosts. The siphonapteran modifications occur generally in response to some physical or behavioral attributes of the hosts, but coevolution does not necessarily imply comparable rates of evolution by fleas and hosts (Traub, 1985). There are currently recognized *ca.* 2,500 species and subspecies of fleas, classified in 220 genera and 15