

A new species of *Hystrichopsylla* Taschenberg (Siphonaptera: Hystrichopsyllidae) from the Mexican transition zone

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Abstract

A new flea species, *Hystrichopsylla cryptotis*, is described from the Sierra Madre Oriental and Sierra Madre del Sur, Mexico. The host of this new species is the shrew *Cryptotis mexicana* (Coues, 1877) (Mammalia: Soricidae). This flea species is easily recognized by its large size, seven genal combs, and the slender sternum IX, with 13 pairs of thick spiniform setae of different sizes. A key to the Mexican and Guatemalan species of *Hystrichopsylla* is given. The cladistic analysis indicates that Mexican species of *Hystrichopsylla* may be arranged in two different species groups: the *H. orophila* species group (*H. orophila* Barrera 1952 and *H. cryptotis*) and the *H. dippiei* species group (*H. dippiei* Rothschild 1902, *H. llorentei* Ayala and Morales 1990, and *H. kris* Traub and Johnson 1952). The resolved area cladogram based on their phylogenetic relationships indicates the following relationships: (Sierra Madre Oriental, (Sierra Madre del Sur, Transmexican Volcanic Belt)).

Key words: fleas, *Cryptotis*, cladistics, biogeography, Mexico

Introduction

The flea genus *Hystrichopsylla* Taschenberg (Siphonaptera: Hystrichopsyllidae) is basically distributed in the Holarctic kingdom. Some authors (Barrera 1952, Holland 1957, Hopkins & Rothschild 1962) postulated that it is basically Nearctic, with two species having recently dispersed into the Palearctic region. There are 13 known species of *Hystrichopsylla* in the New World (Barrera 1952, Holland 1957, Traub & Johnson 1957, Ayala-Barajas & Morales 1990, Lewis & Lewis 1994, Lewis & Eckerlin 2004), which show little host specificity, regularly infesting small rodents and insectivores (Lewis & Lewis 1994). New World species of *Hystrichopsylla* are rare in collections, probably because they are basically nest-dwellers, seldomly travelling on their hosts (Holland 1957). The four known Mexican species, *H. orophila* Barrera, *H. kris* Traub & Johnson, *H. dippiei* Rothschild, and