



Two new species of fleas of the genus *Kohlsia* Traub, 1950 (Siphonaptera: Ceratophyllidae) from Mexico

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Abstract

Two new species of the genus *Kohlsia* Traub, 1950 from Mexico are described and illustrated, *K. zyanya* and *K. ahuacatlan*. A key to the species of *Kohlsia* known to occur in Mexico is provided.

Key words: *Kohlsia*, new species, rodents, bat

Introduction

The genus *Kohlsia* Traub, 1950 (Siphonaptera: Ceratophyllidae) is essentially a montane Mexican–Central American taxon. There are 20 known species and subspecies of *Kohlsia* (Traub *et al.*, 1983). They show little host specificity, though usually infesting small rodents (Rodentia: Cricetidae). There are nine species known from Mexico: *Kohlsia cora* Traub 1950, *K. fournieri* Vargas, 1951a, *K. keenani* Tipton and Méndez, 1961, *K. linni* Hubbard, 1958, *K. martini* Holland, 1971, *K. mojica* Tipton and Méndez, 1961, *K. ortizi* (Vargas, 1951b), *K. pelaezi* Barrera, 1956 and *K. whartoni* Traub & Johnson, 1952 (Salceda & Hastriter, 2006). All are found in high mountane areas of the Mexican Transition Zone (Ponce and Llorente, 1996), Sierra Madre Oriental and Sierra Madre del Sur; in the states of Chiapas, Queretaro, Oaxaca, Guerrero, Hidalgo and Veracruz (Salceda & Hastriter, 2006). We found two new species on three different hosts, *K. zyanya* was collected on the white-footed mouse *Peromyscus melanocarpus* Osgood and on the mexican deer mouse *P. mexicanus* Saussure in the Sierra Juarez, Oaxaca; and *K. ahuacatlan* was found on bats of the genus *Sturnira* in Queretaro.

Material and methods

The specimens are deposited in the collection of the Museo de Zoología “Alfonso L. Herrera”, Facultad de Ciencias, UNAM (MZFC), and the Colección de Artrópodos con Importancia Médica (CAIM, Indre, SS). Specimens of all known species of *Kohlsia* from Mexico were examined. A key to species of *Kohlsia* in Mexico was prepared based on characters of external morphology and male genitalia. Line drawing were prepared with the aid of microscope. Digital photographs were taken with a Canon camera (Canon, Inc., Tokyo, Japan) in an Olympus Vanox-T microscope and digitalized images were prepared with Adobe Photoshop 8.0.1 (Adobe Systems Inc.).