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Taxonomic revision of the spider genus *Ixchela* Huber, 2000 (Araneae: Pholcidae), with description of ten new species from Mexico and Central America

ALEJANDRO VALDEZ-MONDRAGÓN

Colección Nacional de Arácnidos (CNAN), Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México. Ser. Circuito exterior s/n. Apartado Postal 70-153, C.P. 04510, Ciudad Universitaria, Coyoacán, Ciudad de México, Distrito Federal, México. E-mail: lat_mactans@yahoo.com.mx

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Abstract

A taxonomic revision of the genus *Ixchela* Huber, 2000 is presented. The previously described five species are redescribed with new taxonomic information and new distribution records. The males of *Ixchela placida* (Gertsch, 1971) and *Ixchela simoni* (O. Pickard-Cambridge, 1898) are described for the first time. Ten new species are described, nine from Mexico and one from Honduras: *Ixchela mixe* new species, *Ixchela huberi* new species, *Ixchela juarezi* new species, *Ixchela grix* new species, *Ixchela taxco* new species, *Ixchela franckei* new species, *Ixchela tzotzil* new species, *Ixchela santibanezi* new species, *Ixchela huasteca* new species, and *Ixchela viquezi* new species. Identification keys for males and females are presented.

Key words: Pholcidae, *Ixchela*, taxonomy, identification keys

Resumen

Se realizó la revisión taxonómica del género *Ixchela* Huber, 2000. Las cinco especies previamente descritas son redescritas con nueva información taxonómica y nuevos registros de distribución. Los machos de *Ixchela placida* (Gertsch, 1971) e *Ixchela simoni* (O. Pickard-Cambridge, 1898) son descritos por primera vez. Se describen 10 especies nuevas, nueve de México y una de Honduras: *Ixchela mixe* sp. nov., *Ixchela huberi* sp. nov., *Ixchela juarezi* sp. nov., *Ixchela grix* sp. nov., *Ixchela taxco* sp. nov., *Ixchela franckei* sp. nov., *Ixchela tzotzil* sp. nov., *Ixchela santibanezi* sp. nov., *Ixchela huasteca* sp. nov., e *Ixchela viquezi* sp. nov. Claves de identificación para machos y hembras son presentadas.

Palabras clave: Pholcidae, *Ixchela*, taxonomía, claves taxonómicas

Introduction

The spider family Pholcidae is currently composed of 90 genera and 1288 species (Platnick 2012). Pholcids are among the most diverse and abundant web-building spiders around the world, principally in tropical and subtropical forests, with a high number of synanthropic species, plus from areas and habitats that are severely threatened by human impact (Huber 2000, 2011b). There are many examples of the diversity and abundance of pholcid spiders; for example in a study to estimate species richness of spiders in a mountain forest of Uzungwa in East Africa (Sorensen *et al.* 2002, Sorensen 2003), 4319 of a total of 14329 adult specimens of all spiders recorded were pholcids (Huber 2003). In another faunistic study in northern Peru, Silva (1996) reported over two dozen morphospecies of pholcids from a restricted rainforest area, whereas previously only four species were recorded from all of Peru. Gertsch (1982) described 44 new species of *Anopsicus* Chamberlin and Ivie, 1938 across the North, Central America and Caribbean regions, whereas only 19 were previously known. Huber (1998b) described 10 new species of *Modisimus* Simon, 1893 in Costa Rica, where only one was previously recorded. Huber (2011b) reports 254 species to the genus *Pholcus* which is the genus with the highest diversity in the family. Huber and Rheims (2011) described from Brazil 39 species (22 new species) from the Atlantic Forest. Pholcidae is one of the spider families with the highest number of species associated to caves, including some clearly troglomorphic or troglophile species (Schiner 1854, Racovitza 1907), that can live or not in the caves. In Mexico, the family Pholcidae has the highest number of species associated to caves, including nine genera and 107 species, with 19 of those being highly troglomorphic species (Reddell 1981, Hoffmann 2003). The pholcids besides, in caves of tropical and subtropical forest are one of the spider families with highest abundances; for example Valdez-Mondragón (2006) in a study of the diversity and richness of spiders from Juxtlahuaca caves in Guerrero, Mexico; from both the dry and rainy seasons, found that the pholcid spider *Physocyclus bicornis* Gertsch, 1971 was the most abundant with a total of 1380 recorded specimens.

The diversity of pholcids is expected to be high, with many still unknown, mainly in the tropics and subtropics in the New World (Huber 2000). This is certainly the case of Mexico, with a high diversity of pholcid spiders expected, and apparently just a small percentage currently known: with 13 genera and 152 species of the five subfamilies of Pholcidae (Huber 2011a). Although there were several taxonomic contributions made by Gertsch (1971, 1973, 1982, 1986), Gertsch and Davis (1937, 1942), Gertsch and Mulaik (1940), Slowik (2009), Valdez-Mondragón and Francke (2009), and Valdez-Mondragón (2010) on Mexican pholcids, more intensive field work in tropical and subtropical forests in Mexico is still necessary, principally for additional sampling of poorly known and/or poorly collected genera for the redescription and description of new species. For example the genera poorly known as *Chisosa* Huber, 2000; *Pholcophora* Banks, 1896; *Tolteca* Huber, 2000; with one, three and one described species respectively. Besides, the re-examination of existing biological collections is very important because there remain many undetermined specimens of Mexican pholcids deposited in some important collections, such as The American Museum of Natural History, New York, U. S. A.; The Field Museum of Natural History, Chicago, U. S. A.; and The Colección Nacional de Arácnidos, Instituto de Biología, Universidad Nacional Autónoma de México, Mexico.

The genus *Ixchela* Huber, 2000 is until now poorly known, and is composed of relatively large pholcid spiders with a distribution in Mexico and Central America. Prior to this work, the genus had been composed of just five species: *Ixchela abernathyi* (Gertsch, 1971), *Ixchela furcula* (F. O. Pickard-Cambridge, 1902), *Ixchela pecki* (Gertsch, 1971), *Ixchela placida* (Gertsch, 1971) and *Ixchela simoni* (O. Pickard-Cambridge, 1898). These species