New Wild Host of *Brevipalpus californicus* Banks in Northeastern Mexico

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New Wild Host of *Brevipalpus californicus* Banks[1] in Northeastern Mexico

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The Tenuipalpidae also called false spider mites, are an acarine family of economic importance during the past five decades (Childers and Rodrigues 2011). The genus *Brevipalpus* is a plant pest with five species of economic importance recognized: *B. californicus* Banks, *B. chilensis* Baker, *B. lewisi* McGregor, *B. obovatus* Donnadieu, and *B. phoenicis* Geijskes.

Generally, the Tenuipalpidae inject toxic saliva into fruit, stem, and bud tissues of *Citrus* spp. and other host plants. Damage to the fruit usually occurs in the lowest 2 m of the tree canopy (Childers and Rodrigues 2011). Fruit lesions initially appear as small yellowish circular areas in depressions on the fruit surfaces of grapefruit, *Citrus paradisi* Macfad, or oranges, *Citrus sinencis* Osbeck (Dean and Maxwell 1967, French and Rakha 1994). The lesions gradually develop a central brown necrotic spot and ultimately become darker with a corky texture.

Species of *Brevipalpus* transmit *Citrus leprosis* virus, a disease quarantined in Mexico to limit national mobilization and export of fruit, which affects the economy of growers. In addition, citrus production decreases as a consequence of extensive defoliation, fruit drop, and dieback of branches (SENASICA 2016).

B. californicus is reported as the vector of *Citrus leprosis* virus around the world (Childers et al. 2001, Mesa et al. 2009, Denmark 2015). Damage caused by *Brevipalpus* feeding in several plants including citrus was documented by Childers et al. (2003a). *B. californicus* feeds on 316 plant species (Childers et al. 2003b) including in Ribiaceae and Rutaceae families of economic importance (Childers y Rodrigues 2011).

This note reports a new host association between *Casimiroa pubescens* Ramirez (Rutaceae) and *B. californicus* in Tamaulipas state, northeastern Mexico. Populations of *C. pubescens* also known as “chapotillo” were observed in the semi-arid highlands of Sierra Madre Oriental (González 2012).

In October 2015, 67 leaves of *C. pubescens* were collected at 23° 27' 38'' N and 99° 44' 15'' W (1,967 m above sea level) on the road between the municipal capitals of Miquihuana and Bustamante. Leaves of *C. pubescens* injured by mites were observed with a 30 x loupe. Samples were taken to a laboratory of Instituto de Ecología Aplicada at Ciudad Victoria, Tamaulipas. About 21 mites were collected and preserved. The mites were identified according to Baker and Tuttle (1987) and

[1](Acari: Tenuipalpidae)

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De Leon (1961). Identified was *Brevipalpus californicus* characterized by two solenidia on tarsus I (Fig. 1A), hysterosoma with seven pairs of setae (Fig. 1B), propodosoma fossulate-rugose (Fig.1C), and smooth setae (Fig.1D).

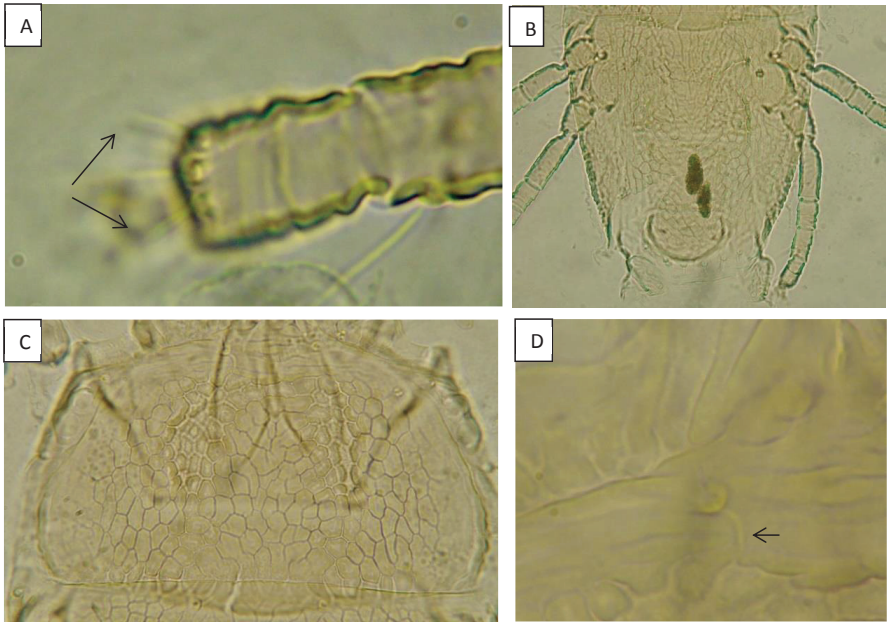

Fig. 1. *Brevipalpus californicus*: A) two solenidia on tarsus I, B) hysterosoma with seven pairs of setae, C) propodosoma with fossulate-rugose, and D) smooth setae of propodosoma.

From an ecological point of view, the semi-arid highlands of the Sierra Madre Oriental are a biogeographical province higher than 1,500 m above sea level (Morrone et al. 2002) where *C. pubescens* is part of the shrub stratum (González 2012, Vanoye-Eligio et al. 2015). Findings in wild areas could indicate reservoirs of natural enemies, as well as new ecological data on this pest in northeastern Mexico.

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