

New Report of *Tetranychus merganser* Boudreaux and *Oligonychus punicae* Hirst¹ on *Moringa oleifera* Lam.

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Phytophagous mites are a phytosanitary issue for agricultural and forestry production in the world (Gerson and Weintraub 2012). Damage can be complex, especially when mites are affected by plant endogenous condition, environment, physiological response, and genetic plasticity (Dermauw et al. 2013, Tehri et al. 2014). This explains complexity and diversity of mite species that potentially can attack the same host grown in different places of the world. Species of *Tetranychus*, including *Tetranychus urticae* (Koch) and *T. neocaledonicus* (Andre), have been reported on *Moringa oleifera* Lam. in several countries (Ramani 2008, Yousuf and Chouhan 2009, Dube et al. 2015). *M. oleifera* is an arborescent species used for food, medicine, forage, and biofuel (Ferreira et al. 2008, da Silva et al. 2010, Moyo et al. 2013). Because of the recent importance of *M. oleifera* for biofuel in Mexico, it is fundamental to determine ecological interaction of the plant with mite species that potentially could affect production under dominant conditions. Holistic understanding of agronomic, physiological, and ecological aspects of the species is necessary for integrated crop management, particularly phytosanitary issues.

This study reports for the first time the incidence of two mite species of the genera *Tetranychus* and *Oligonychus* on *M. oleifera* grown under greenhouse and field conditions, respectively, at Ciudad Victoria, Tamaulipas, Mexico. The first mite species was in a greenhouse (UTM Easting 483449.61, UTM Northing 2628673.64, UTM Zone 14Q) and the second near an urban area (UTM Easting 481309.94, UTM Northing 2626669.94, UTM Zone 14Q). Taxonomic keys by Krantz and Walter (2009) were used to identify the mites to family; taxonomic keys of Barker and Tuttle (1994) were used to determine genera and species, with the species identified by comparison of the aedeagus. *Tetranychus merganser* Boudreaux was identified by the empodium with proximoventral hairs (Fig. 1A), pair of para-anal setae, and goose head-shaped male aedeagus (Fig. 1B). *Oligonychus punicae* Hirst was identified by a clawlike empodium (Fig. 1C), one pair of para-anal setae, and the male aedeagus (Fig. 1D). Infestation by *T. merganser* was recurrent from June to September at 35-40°C, with 20 to 30 individuals observed per leaflet. Injuries were more frequent on mature leaflets that showed dispersed chlorotic spots and occasionally white webbing. *O. punicae* was detected only in the field,

¹(Acari: Tetranychidae)

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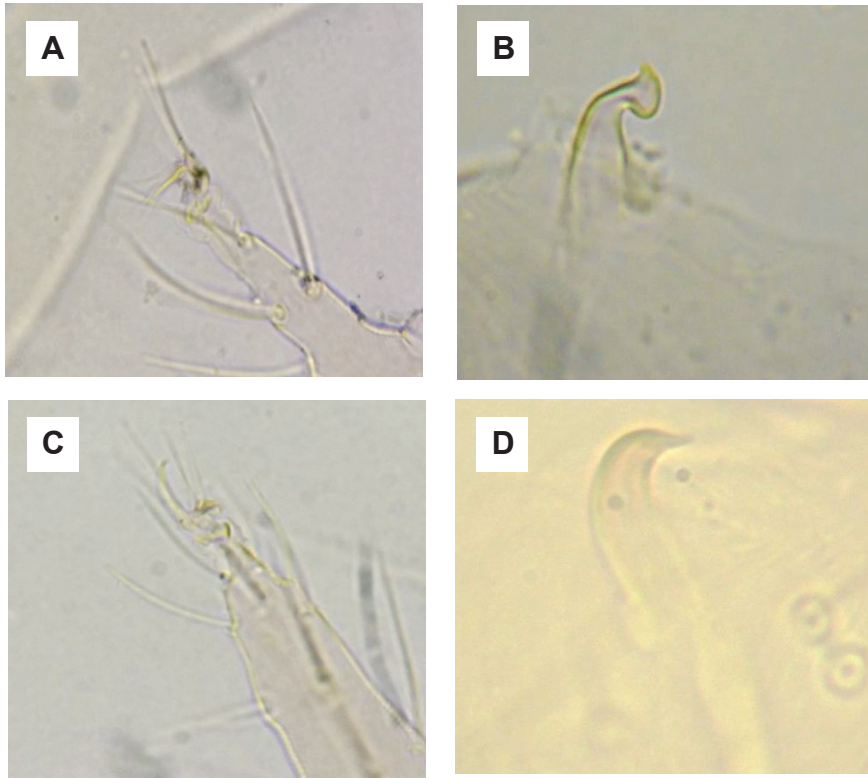


Fig. 1. Characteristics of mites: *Tetranychus merganser*, A) empodium with proximoventral hairs (female) and B) aedeagus (male). *Oligonychus punicae*, C) clawlike empodium and D) aedeagus (male).

Fig. 1. Características de los ácaros: *Tetranychus merganser*, A) empodium con pelos proximoventrales (hembra) y B) aedeagus (macho). *Oligonychus punicae*, C) empodium como garra y D) aedeagus (macho).

causing stippling on mature leaves, with no white webbing. Infestation was observed from May to July, with two or three individuals observed per leaflet. Detection and identification of the mite species, together with the previously reported species, indicate potential to infest one or several hosts under different environmental conditions. Correct identification of species will allow development of adequate strategies to manage the crop and pests.

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