

# First record of *Tenuipalpus uvae* De Leon, 1962 (Acari: Tenuipalpidae) in Brazil

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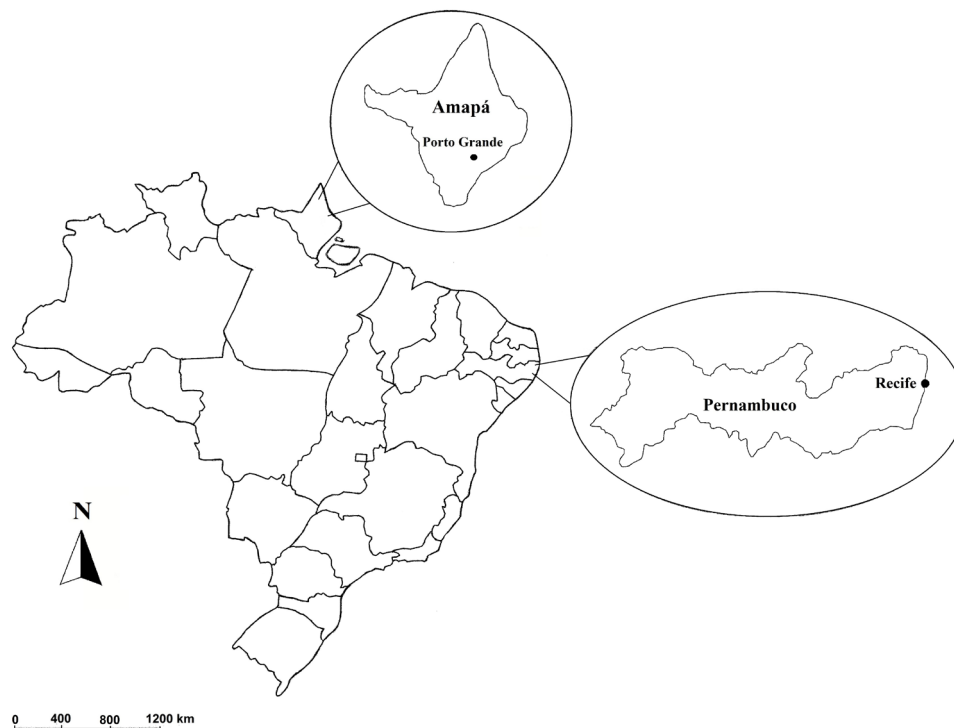
**ABSTRACT:** This is the first record of *Tenuipalpus uvae* De Leon (Tenuipalpidae) in Brazil. Specimens were collected from *Spondias mombin* L. (Anacardiaceae) in the states of Amapá (northern Brazil) and Pernambuco (northeast).

*Spondias mombin* L. is a perennial fruit tree, dispersed across tropical regions of the Americas, Africa and Asia. In Brazil it is found mainly in the northern and northeastern states, where its fruit, the hog plum, is known as taperebá, cajá-mirim or cajá. The hog plum is used in the preparation of fruit pulps, ice creams, nectars, jams, and juices (Sacramento and Souza 2000).

Few phytophagous mites have been reported on *Spondias*, namely: *Diptilomiopus alagarmaliensis* Mohanasundaram, *Tegolophus spondiallus* Mondal & Chakrabarti, *Vasates spondiasii* Boczek & Chandrapatya and *Diptilomiopus cythereae* (Chandrapatya), respectively on the species *Spondias mangifera* Willd., *Spondias bipinnata* Airy-Shaw & Forman, and *Spondias cytherea* Sonn. (Acari: Eriophyoidea) (de Lillo and Amrine 2006). Among the

Tetranychidae, only *Eotetranychus mastichi* De Leon has been reported on *Spondias* sp. (Bolland *et al.* 1998).

In the municipality of Porto Grande (00°36'13.3" N, 51°27'19.5" W), state of Amapá (Figure 1), a preliminary survey of mites associated with the hog plum tree was conducted in a commercial plantation with approximately 1,000 plants. Ten samples were collected, each consisting of three leaves from the middle third of the plant (M.S.M. Sousa, 11/21/2010). The leaves were taken into the laboratory, where the material was screened. The mites were mounted in Hoyer's solution on permanent slides, for subsequent identification. We obtained a total of 15 specimens of *Tenuipalpus uvae* De Leon, 1962 (Acari: Tenuipalpidae) (immatures and female adults) from seven of the samples. Over the same period, at the campus of the Federal Rural



**FIGURE 1.** Map showing the first records of *Tenuipalpus uvae* De Leon, 1962 in Brazil, states of Amapá and Pernambuco.

University of Pernambuco (8°00'59.0" S, 34°56'39.7" W) in Recife, Pernambuco (Figure 1), one female and one immature of *T. uvae* were obtained in a single sampling event on *S. mombin* (D.B. de Lima, 10/07/2010).

*Tenuipalpus uvae* is characterized by the rodlike dorsal setae *Sci* and *Sce* on the propodosoma; dorsal surface rugose, with sculptured polygonal design on dorsalcentral area; hysterosomal setae *c3* and *e3* short, sublanceolate, serrate; ventral surface finely strigate; genital setae slightly shorter than pregenitals.

Voucher specimens (7799 and 7800) are deposited in the "Geraldo Calcagnolo" Reference Collection of Mites at the Acarology Laboratory of the Biological Institute in Campinas, São Paulo, Brazil (ICMBio collection permit 35919-1).

In the family Tenuipalpidae, the genus *Tenuipalpus* presents the highest number of known species (306) (Mesa et al. 2009), of which only nine have been reported in Brazil (Flechtmann 1976; 1994; Feres and Hernandez 2006; Mesa et al. 2009). This report of *T. uvae* in Amapá (northern Brazil) and in Pernambuco (northeast) is the first for this species in Brazil, expanding the number of *Tenuipalpus* species reported to date in the country. This report also expands the known geographic distribution of *T. uvae*, which has already been reported in Mexico and Puerto Rico (De Leon 1962; 1967; Baker and Tuttle 1987; Mesa et al. 2009).

Knowing the distribution of this phytophagous species is vital on account of its relevance to the fields of ecology, zoogeography and pest control, especially in areas of agricultural interest.

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#### LITERATURE CITED

- Baker, E.W. and D.M. Tuttle. 1987. The false spider mites of Mexico (Tenuipalpidae: Acari). U.S. Department of Agriculture. Technical Bulletin 1706: 1-237.
- Bolland, H.R., J. Gutierrez and C.H.W. Flechtmann. 1998. *World catalog of the spider mites family (Acari: Tetranychidae)*. Boston: Brill. 392 pp.
- De Leon, D. 1962. Two new false spider mites from Mexico and a new distribution Record. *Proceedings of the Entomological Society of Washington* 64(3): 203-205.
- De Leon, D. 1967. *Some mites of the Caribbean area. Part I. Acarina on Plants in Trinidad, West Indies*. Lawrence: Allen Press, Inc. 66 pp.
- de Lillo, E. and J.W. Amrine Jr. 2006. *Catalog of the Eriophyoidea. A Working Catalog of the Eriophyoidea of the World*. Accessible at <https://insects.tamu.edu/research/collection/hallan/Acari/Family/Eriophyoidea.htm>. Captured on 15 December 2013.
- Feres, R.J.F. and F.A. Hernandez. 2006. Three new species of *Tenuipalpus* Donnadieu (Acari, Tenuipalpidae) from the State of São Paulo, Brazil. *Zootaxa* 1125: 57-68.
- Flechtmann, C.H.W. 1976. Preliminary report on the false spider mites (Acari: Tenuipalpidae) from Brazil and Paraguay. *Proceedings of the Entomological Society of Washington* 78(1): 58-64.
- Flechtmann, C.H.W. 1994. *Tenuipalpus oliveirai*, a new species (Acari, Prostigmata, Tenuipalpidae) from Brazil. *Scientia Agricola* 51(1): 184-187.
- Mesa, N.C., R. Ochoa, W.C. Welbourn, G.A. Evans and G.J. de Moraes. 2009. A catalog of the Tenuipalpidae (Acari) of the World with a key to genera. *Zootaxa* 2098: 1-185.
- Sacramento, C.K. and F.X. Souza. 2000. *Cajá (Spondias mombin L.)*. Série Frutas Nativas, 4. Jaboticabal: Funep. 42 pp.

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