

A tarsonemid mite, Steneotarsonemus furcatus De Leon
on Maranta spp. (ACARINA:TARSONEMIDAE)¹
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INTRODUCTION: Steneotarsonemus furcatus was described by De Leon (1956) who observed the tarsonemid mites feeding on Paspalum sp. Specimens were collected on 5 October 1955 in Coral Gables, Florida. Beer (1958) of the University of Kansas received specimens from A. E. Pritchard (University of California) with a notation that a severe infestation had been discovered in greenhouse-grown maranta plants and was causing leaf distortion and stunting of the plants (fig. 1). The specimens had come from Buena Park (Los Angeles County), California and were intercepted in Los Angeles on 26 August 1953. This mite has recently been found on Maranta and Calathea in greenhouses in Florida.

DISTRIBUTION: S. furcatus has been reported from California and Florida. In Florida, it is known only from Coral Gables and Apopka.

ECONOMIC IMPORTANCE: Before the leaves of Maranta sp. and Calathea sp. unfold, the mites begin feeding at the tip of the leaves which is the first area to exhibit plant damage (fig. 2). Large numbers of mites feed in close proximity beginning at the tip and moving toward the base. Early injury gives the leaf a water-soaked appearance in bands 5 to 10 mm wide (fig. 3). This type of feeding takes place along the midrib and between the midrib and the lateral edges (fig. 4). Leaves unfold from left to right when viewed from the upper surface. The mites gather under the right unfolded area or near the base. Feeding symptoms in this area are similar to the tip injury in that the leaf turns brown. The water-soaked areas are the last to turn brown, and eventually the entire leaf dies (fig. 5). There may be variations in the feeding patterns, but the injury renders the plants unfit for marketing.

HOSTS: Calathea spp., Maranta spp., and Paspalum spp. are the known hosts.

SURVEY AND DETECTION: Look for tip necrosis of terminal, unfolded leaves and/or water-soaked areas along the midrib on newly unfolded leaves.



Fig. 1. Maranta infested with Steneotarsonemus furcatus De Leon.



Fig. 2. Maranta showing tip and lateral injury by Steneotarsonemus furcatus De Leon.

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DESCRIPTION: Male--body brownish; length from anterior end of capitulum (including palpi) to posterior end of genital papilla 166 and 76 wide at coxae III; capitulum 22 long (including palpi) and 23 wide, widest at basal third, base not emarginate; genital papilla cordate in outline, 24 long, and 23 wide. Leg IV femur 22 long with a coarse bifurcate seta or process at about mid-length of posterior face (fig. 6). The posterior ramus is longer and thicker, length of process 7; ventral seta of femur 10 long, dorsal seta 4 long; tibia 11 long and 6 wide with a ventral seta 27 long and a dorsal rod-like sensilla anterior to it; tarsus 3 long and 5 wide; claw 7 long. Female--body somewhat lighter than male; length from anterior end of capitulum (including palpi) to end of body 235, width 112. Eggs are off-white, elliptical and are usually laid along the midvein and also on unfolded leaves. All measurements are microns.

CONTROLS: Repeated applications of Pentac on a 4-day schedule appears to give some control in tests being conducted. Vydate and Kelthane are not effective.

LITERATURE CITED:

- Beer, R. E. 1958. A new species of Steneotarsonemus and additional information on the plant-feeding habits of Steneotarsonemus furcatus De Leon (Acarina). J. New York Ent. Soc. 66:153-159.
- De Leon, D. 1956. Four new acarina in the family Tarsonemidae. Florida Ent. 39(3):105-112.

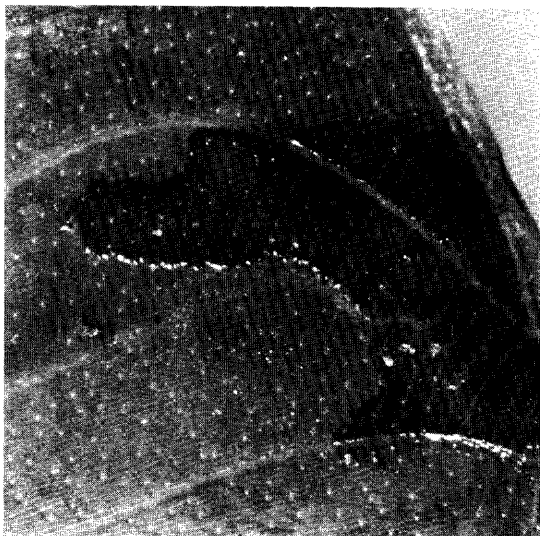


Fig. 3. Steneotarsonemus furcatus damage to maranta before the leaf unfurls.

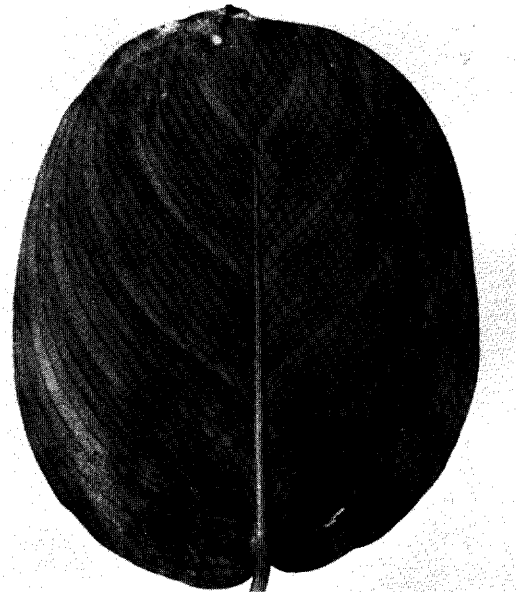


Fig. 4. Maranta leaf soon after it has unfurled showing water soaked area.



Fig. 5. Dead maranta leaf.

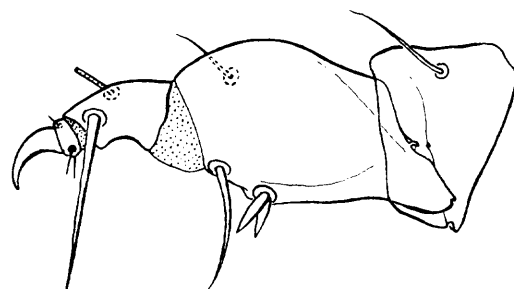


Fig. 6. Leg IV of male Steneotarsonemus furcatus De Leon.