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Aceria cephalanthi (Cook)[1]

(ACARINA:ERIOPHYIDAE)

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INTRODUCTION: Cook (1909) described this mite on the basis of the host and injury from a Cuban plant specimen of Cephalanthus occidentalis L. as Eriophyes cephalanthi. This mite makes irregular bead galls on the upper leaf surface along the veins (fig. 1a). Galls (fig. 1b) are in profile and enlarged. The leaves become deformed in heavy infestations. The galls open on the under side of the leaf (fig. 1c). Keifer (1973) described this mite as Eriophyes newkirki from specimens collected at Washington, D.C. by R. A. Newkirk. The International Commission on Zoological Nomenclature rejected the name Eriophyes for this and other species and accepted Aceria (1979) for those species with dorsal setae extending over the abdomen.

DISTRIBUTION: Originally described from Cuba, this gall mite is apparently found throughout the range of the plant host (i.e., Florida, Texas, Oklahoma, to Arizona, south to Mexico, north to eastern Canada, and west to California).

DIAGNOSIS: Aceria cephalanthi is characterized by the 4-rayed featherclaw, the turning in of the median lines a short distance before the rear shield margin so that they meet centrally, and especially the fine, rather elongate thanosomal microtubercles.

SURVEY AND DETECTION: Look for leaf galls that tend to be hairy, colored green to red on C. occidentalis.

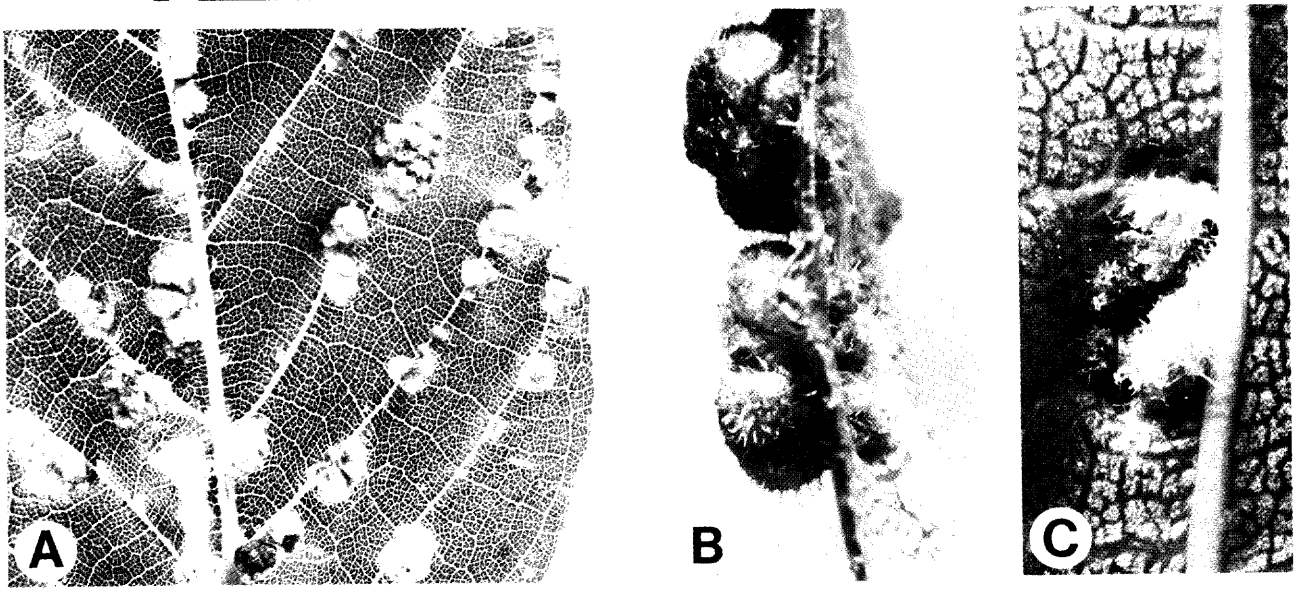

Fig. 1. Cephalanthus occidentalis leaf infested with Aceria cephalanthi. a) Bead galls on upper leaf surface; b) Profile of enlarged gall; c) Gall opening on the underside.

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DESCRIPTION: Female robust, worm-like, light yellowish-white in life. Female length 163-232. (All measurements herein are in micrometers.) Rostrum 20 long, curving down (fig. 2). Shield 28 long, 36 wide (fig. 3). Shield design of longitudinal lines: median line present on rear 3/4; admedian lines complete from chelicrea base, gradually diverging to 4/5 and then branching (fig. 3). The shield laterally with converging lines somewhat in front of and below dorsal tubercles; a broad band of granules above coxae ending against 4 partial rings below dorsal tubercles (fig. 3). Dorsal tubercles 25 apart; dorsal setae 25 long, divergent to rear (fig. 3). Featherclaw 4-rayed (fig. 4). First leg from trochanter base 29 long; tibia 7.5 long; tarsus 6 long; claw 6.5 long, knobbed (fig. 5). Abdominal thanosome with about 65 rings, completely microtuberculate, the microtubercles fine, tending to be elongate and slightly acuminate above (fig. 6). Female genitalia 18 long, 20 wide (fig. 7). Coverflap with 8 to 10 rather weak and short ribs; seta 20 long (fig. 8). Abdominal telosome with 6 to 7 rings (fig. 9).

CONTROLS: Since this mite appears to be associated only with Cephalanthus occidentalis, which is not considered economically important, no controls have been developed.

LITERATURE CITED:

Cook, M. T. 1909. Some insect galls of Cuba. Cuba Sec. Agric. Com. and Trabl. Est. Cent. Agric., 2nd Rept. (1905-1909) Pt. II:143-146.

Keifer, H. H. 1973. Eriophyid studies. California Dept. Agric. C-8:1-24.

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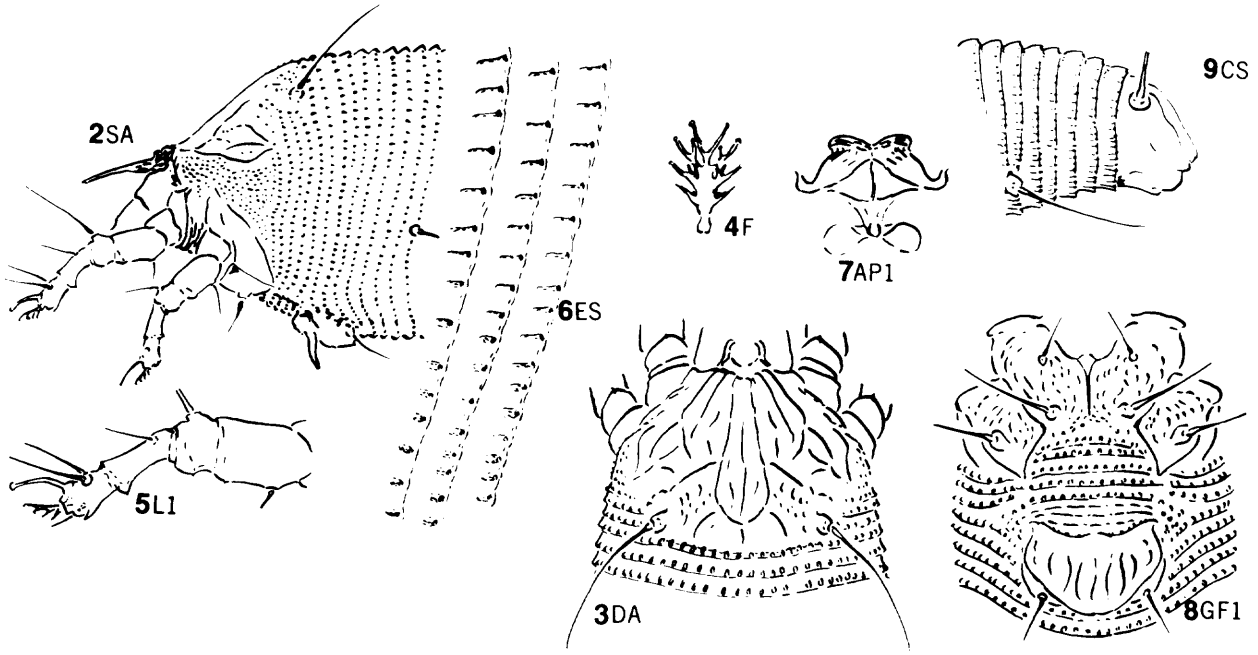

Figs. 2-9. Aceria cephalanthi (Cook), adult female. Fig. 2SA. Side of anterior section. Fig. 3DA. Delineation of cephalothoracic shield. Fig. 4F. Featherclaw. Fig. 5L1. Left foreleg. Fig. 6ES. Lateral rings and microtubercles on thanosome. Fig. 7AP1. Internal female genital structures. Fig. 8GF1. Female genital structures and coxae. Fig. 9CS. Side view of caudal section of mite.