

ERIOPHYES CHRYSOPHYLLI COOK IN FLORIDA

(ACARINA: ERIOPHYIDAE)¹

H. A. DENMARK

INTRODUCTION: COOK (1906) DESCRIBED THIS MITE ON THE BASIS OF THE HOST AND INJURY FROM A CUBAN PLANT SPECIMEN OF CHRYSOPHYLLUM SP. THE CODE ACCEPTS THIS AND COOK'S NAME FOR THIS MITE IS VALID. KEIFER (IN LITT.) HAS DESCRIBED THIS MITE AS GIVEN BELOW.

DISTRIBUTION: THIS MITE WAS ORIGINALLY DESCRIBED FROM CUBA. IT IS PROBABLY FOUND WHEREVER CHRYSOPHYLLUM SPP. EXISTS, WHICH IS IN THE WEST INDIES, CENTRAL AMERICA AND OCCASIONALLY THE NORTHERN TIP OF SOUTH AMERICA. IN FLORIDA IT HAS BEEN REPORTED AS FAR NORTH AS FT. MYERS, LEE COUNTY, ON THE WEST COAST AND LAKE WORTH, PALM BEACH COUNTY, ON THE EAST COAST.

DESCRIPTION: A SMALL ERIOPHYID, THE FEMALE BEING 130 μ -135 μ LONG, 30 μ THICK; BODY WORMLIKE, COLOR LIGHT YELLOWISH. ROSTRUM 15 μ LONG, PROJECTING DIAGONALLY DOWN; ANTAPICAL SETA 3 μ LONG. SHIELD 15 μ LONG, 26 μ WIDE, SUBTRIANGULAR IN OUTLINE, WITH SIDES SOMEWHAT CONVEX, AND WITH SHORT ACUMINATE ANTERIOR LOBE OVER ROSTRUM. SHIELD DESIGN OF LINES OF GRANULES: MEDIAN LINE DISCONTINUOUS, PRESENT PRINCIPALLY TO REAR; ADMEDIAN LINES COMPLETE FROM BASE OF SMALL ANTERIOR LOBE, EXTENDING BACK MODERATELY CLOSE TO EACH OTHER AND SUBPARALLEL TO 2/3, THEN DESCRIBING A CONVEX FIGURE WHICH RECURVES TO REAR SHIELD MARGIN. SURFACE ON EACH SIDE OF ADMEDIANS AND ON SIDES OF SHIELD OF CONFUSED GRANULES, WITH PARTIAL RINGS BELOW DORSAL TUBERCLES. DORSAL TUBERCLES 15 μ APART; DORSAL SETAE 16 μ -20 μ LONG, PROJECTING DIVERGENTLY TO REAR (FIG. 1). FORELEG 23 μ LONG; TIBIA 4 μ LONG, WITH 5 μ SETA AT ABOUT 1/2; TARSUS 5 μ LONG; CLAW 7 μ LONG; FEATHERCLAW 6-RAYED (FIG. 2). HINDLEG 22 μ LONG, TIBIA 3.5 μ LONG, TARSUS 5 μ LONG, CLAW 7 μ LONG (FIG. 3). COXAE ORNAMENTED WITH GRANULES AND SHORT CURVED LINES; STERNAL LINE OF MODERATE LENGTH, EXTENDING BACK BEYOND SECOND SETIFEROUS TUBERCLES, NOT FORKED TO REAR. FIRST SETIFEROUS COXAL TUBERCLES AHEAD OF SECOND AND OPPOSITE ANTERIOR END OF STERNAL LINE; SECOND SETIFEROUS COXAL TUBERCLES WELL AHEAD OF THIRD TUBERCLES. THANOSOME WITH ABOUT 58 RINGS, THE MICROTUBERCLES TOUCHING RING MARGINS AND BEAD-LIKE OR SLIGHTLY ELONGATE. LATERAL SETA 8 μ LONG, ON RING 11; FIRST VENTRAL SETA 40 μ LONG, ON RING 24; SECOND VENTRAL 8 μ -10 μ LONG, ON RING 37. TELOSOME WITH FAINTER MICROTUBERCLES, WHICH ARE THINNER AND SOMEWHAT ELONGATE. SIX TELOSOMAL RINGS. TELOSOMAL SETA 17 μ LONG. ACCESSORY SETA ABSENT. FEMALE GENITALIA 17 μ WIDE, 10 μ LONG; COVERFLAP WITH ABOUT 12 CURVED AND LONGITUDINAL RIBS, WITH BASAL GRANULES, AND WITH RATHER DEEP CENTRAL EMARGINATION AT REAR EDGE (FIG. 4). GENITAL SETA 5 μ LONG. INTERNAL APODEME ACUMINATE ANTERIORLY (FIG. 5). PARTICULAR FEATURES OF THIS MITE: 1. SIX-RAYED FEATHERCLAW; 2. SMALL ACUMINATE ANTERIOR SHIELD LOBE OVER ROSTRUM; 3. HEAVY GRANULAR SHIELD PATTERN; 4. FEMALE GENITAL COVERFLAP WITH CURVED RIBS; 5. INTERNAL FEMALE APODEME ACUMINATE ANTERIORLY; 6. DEEPLY EMARGINATE COVERFLAP. (DEFINITIONS: THANOSOME IS THE ABDOMEN FROM REAR SHIELD MARGIN TO LAST OR THIRD VENTRAL SETA; THE LAST VENTRAL SETA THEN BECOMES THE TELOSOMAL SETA. TELOSOME IS THE TERMINAL SECTION OF THE ABDOMEN, BEGINNING WITH THE LAST VENTRAL SETA.)

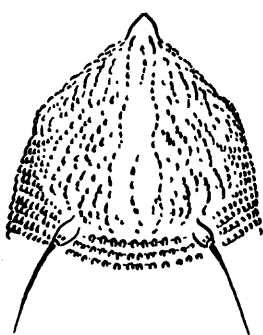


FIG. 1. DORSAL
DIAGRAM OF AN-
TERIOR SECTION
(AFTER KEIFER).



FIG. 2.
FEATHERCLAW
(AFTER KEIFER).

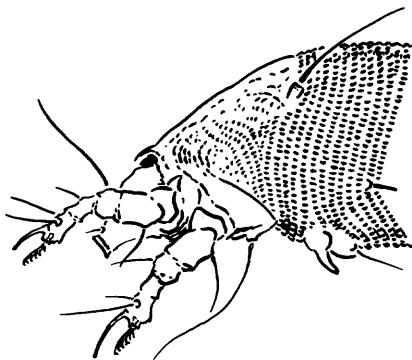


FIG. 3. ANTERIOR VIEW OF
SIDE OF MITE (AFTER KEIFER).

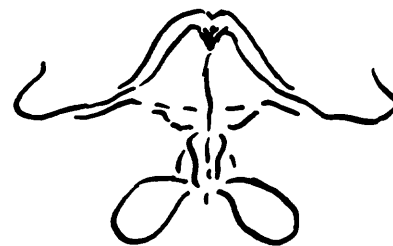


FIG. 4. INTERNAL FEMALE
GENITALIA STRUCTURES
(AFTER KEIFER).

HOSTS: IT WAS COLLECTED FROM CHRYSOPHYLLUM CAINITO L. THIS SPECIES HAS BEEN INTRODUCED INTO FLORIDA AND IS CALLED STAR APPLE WHICH BEARS EDIBLE FRUIT. THE NATIVE SPECIES, C. OLIVIFORME L., IS THE PLANT COMMONLY FOUND INFESTED. C. MEXICANUS AND C. TEPICENSE ARE BOTH FOUND IN MEXICO BUT I HAVE NO RECORD ON THIS MITE INFESTING THESE SPECIES.

¹CONTRIBUTION No. 222, BUREAU OF ENTOMOLOGY

ECONOMIC IMPORTANCE: MITES MAKE UPPER SURFACE ERINEUM PATCHES WHICH PRODUCE EVAGINATIONS ON THE UNDERSIDE OF THE LEAF (FIG. 6). THE EVAGINATIONS OCCUR MAINLY SUBMARGINAL BEING DISTRIBUTED IN A LINE SUBPARALLEL TO THE OUTER MARGIN OF THE LEAF. SOME EVAGINATIONS OCCUR ON THE MARGIN OF THE LEAF.

ECONOMIC CONTROLS: THE UNIVERSITY OF FLORIDA, IFAS, DEPARTMENT OF ENTOMOLOGY AND NEMATOLOGY, RECOMMENDS KELTHANE. FOLLOW THE DIRECTIONS ON THE LABEL.

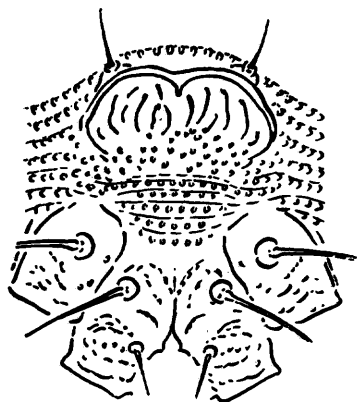


FIG. 5. EXTERNAL FEMALE GENITALIA AND COXAE FROM BELOW (AFTER KEIFER).



FIG. 6. ERIOPHYIDAE MITE DAMAGE TO SATIN LEAF, CHRYSOPHYLLUM OLIVIFORME

LITERATURE CITED:

COOK, MEL T. 1906. ALGUNAS AGALLAS DE CUBA PRODUCIDAS POR INSECTOS. PRIMER INFORME ANUAL DE LA ESTACION CENTRAL AGRONOMICA DE CUBA, P. 247-253.