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FLORIDA DEPARTMENT OF AGRICULTURE
DIVISION OF PLANT INDUSTRY

AZALEA LEAF MINER (GRACILLARIA AZALEELLA BRANTS)[1]

(LEPIDOPTERA: GRACILLARIIDAE)

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INTRODUCTION: THE AZALEA LEAF MINER IS THE LARVA OF A TINY PURPLE- AND YELLOW-MARKED MOTH. IT IS FOUND IN FLORIDA WHEREVER AZALEAS ARE GROWN. DIVISION OF PLANT INDUSTRY RECORDS FROM 1924 TO 1966 REVEAL THAT LARVAE HAVE BEEN COLLECTED IN EVERY MONTH OF THE YEAR; HOWEVER, INFESTATIONS ARE MOST NOTICEABLE IN NURSERIES FROM EARLY SPRING THROUGH AUGUST. LEAF INJURY BY THE LARVA IS VERY CHARACTERISTIC (FIGS. 1 & 2). THE FOLDING OVER OF THE LEAF TIP OR LEAF MARGIN OCCURS AFTER THE LARVA EMERGES FROM WITHIN THE LEAF.

FIG. 1. UNDER LEAF SURFACE OF AZALEA FOLIAGE DAMAGED BY AZALEA LEAF MINER. EARLY INSTAR INJURY (STRAIGHT ARROWS); LATE INSTAR INJURY (CURVED ARROWS).

FIG. 2. UPPER LEAF SURFACE OF AZALEA FOLIAGE DAMAGED BY AZALEA LEAF MINER.

DESCRIPTION: THE LARVAL STAGE THAT FOLDS THE LEAF IS ABOUT ½ INCH LONG, YELLOWISH, AND WITH THREE PAIRS OF ABDOMINAL PROLEGS WHICH ARE FOUND ON ABDOMINAL SEGMENTS 3, 4, AND 5 (FIG. 3). THE PROLEG HOOKS (CROCHETS) ARE SINGLY ARRANGED IN A U-SHAPED PATTERN (PENELLIPSE), WITH A SERIES OF CROCHETS WITHIN THE PENELLIPSE (FIG. 4).

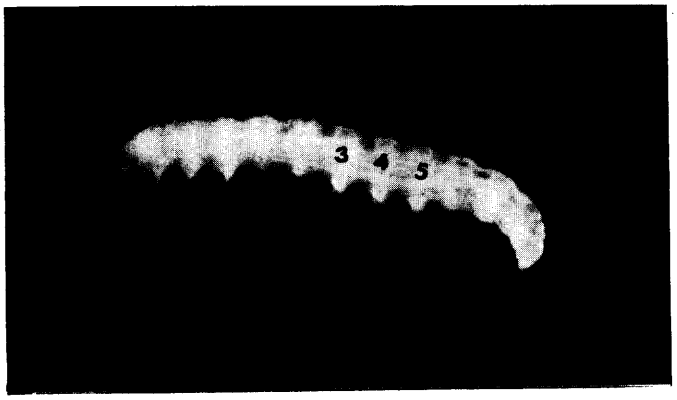

FIG. 3. LARVA OF AZALEA LEAF MINER (X5) WITH ABDOMINAL SEGMENTS BEARING PROLEGS INDICATED BY NUMBER.

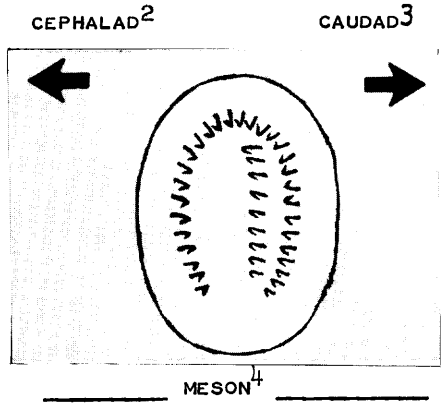

FIG. 4. VENTRAL VIEW OF LEFT PROLEG, FOURTH ABDOMINAL SEGMENT, SHOWING ARRANGEMENT OF CROCHETS.

[1]CONTRIBUTION NO. 90, ENTOMOLOGY SECTION.

[2]CEPHALAD - DIRECTED TOWARD THE HEAD.

[3]CAUDAD - DIRECTED TOWARD THE TAIL END.

[4]MESON - AN IMAGINARY LONGITUDINAL MIDDLE PLANE DIVIDING THE INSECT BODY VERTICALLY INTO RIGHT AND LEFT PARTS; A MESAL LINE.

HOST: AZALEAS (RHODENDRON SPP.) ARE THE ONLY HOSTS RECORDED FOR THIS INSECT BY THE DIVISION OF PLANT INDUSTRY.

ECONOMIC IMPORTANCE: FREQUENTLY, THIS LEAF MINER IS A PEST OF CONTAINER GROWN AZALEAS AND OF AZALEAS GROWN IN BEDS UNDER SLAT SHADE UNLESS A PREVENTATIVE SPRAY PROGRAM IS FOLLOWED. INJURED LEAVES USUALLY TURN YELLOW AND DROP; THUS CAUSING AN UNSIGHTLY PLANT.

DISTRIBUTION: DIVISION OF PLANT INDUSTRY RECORDS INDICATE THE FOLLOWING DISTRIBUTION IN FLORIDA (FIG. 6): APOPKA, BARTOW, BRANDON, CALLOWAY, DELAND, FAIRVILLA, FT. LAUDERDALE, GAINESVILLE, GLEN ST. MARY, HALLANDALE, INDIAN ROCKS, JACKSONVILLE, LAKE CITY, LAKELAND, LAKE WALES, LAND O'LAKES, LEESBURG, LONGWOOD, MACCLENNY, MANDARIN, NEW PORT RICHEY, ONECO, ORLANDO, ORMOND BEACH, OSPREY, PENSACOLA, PIEDMONT, PLYMOUTH, RIVERVIEW, SANFORD, ST. PETERSBURG, SEBRING, SEFFNER, SULPHUR SPRINGS, TALLAHASSEE, AND THONOTOSASSA.

FIG. 5. AZALEA LEAF MINER PUPA X15.

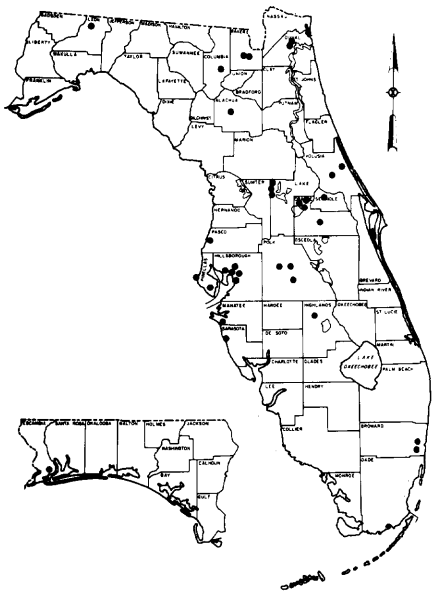

FIG. 6. FLORIDA DISTRIBUTION (GRACILLARIA AZALEELLA BRANTS) AZALEA LEAF MINER.

CONTROL: ENTOMOLOGISTS AT THE FLORIDA AGRICULTURAL EXPERIMENT STATION AND THE AGRICULTURAL EXTENSION SERVICE SUGGEST THE USE OF ONE OF THE FOLLOWING SPRAY MIXTURES FOR CONTROL:

1. MALATHION 25% WETTABLE POWDER AT 4 POUNDS PER 100 GALLONS OF WATER.
2. MALATHION 57% EMULSIFIABLE CONCENTRATE AT 1 QUART PER 100 GALLONS OF WATER.
3. LINDANE 25% WETTABLE POWDER AT 1 POUND PER 100 GALLONS OF WATER.
4. LINDANE 20% EMULSIFIABLE CONCENTRATE AT 1 PINT PER 100 GALLONS OF WATER.

THE SPRAY MIXTURE IS TO BE APPLIED AT THE FIRST SIGN OF THE ADULT MOTH OR WHEN FOLIAR INJURY BY THE LARVAE IS FIRST OBSERVED. REPEAT AS NEEDED.

REFERENCES:

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