

BLACK PARLATORIA SCALE, PARLATORIA ZIZIPHI (LUCAS)

(HOMOPTERA: DIASPIDIDAE)^{1/}

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INTRODUCTION: BLACK PARLATORIA SCALE OR EBONY SCALE, PARLATORIA ZIZIPHI (LUCAS), IS ONE OF 5 SPECIES OF PARLATORIA KNOWN TO ATTACK CITRUS. DELUCCHI (1975) REPORTED THIS SCALE AS THE ONLY TRULY MONOPHAGOUS SPECIES ATTACKING CITRUS. THE ARMOR OF THIS SPECIES STICKS SO STRONGLY TO THE SUBSTRATE THAT IT IS PRACTICALLY IMPOSSIBLE TO REMOVE (DELUCCHI, 1975). MASSES OF THIS SCALE MAY SOMETIMES OCCUR ON LEAVES AND FRUIT (ZIMMERMAN, 1948). BLACK PARLATORIA SCALE IS ESTABLISHED ON ALL CONTINENTS WITH A TROPICAL OR SEMI-TROPICAL CLIMATE WITH THE EXCEPTION OF NORTH AMERICA. DURING THE PERIOD 1 JULY 1971 TO 30 JUNE 1972, THIS SCALE WAS INTERCEPTED 375 TIMES AT UNITED STATES PORTS OF ENTRY FROM 36 FOREIGN COUNTRIES (GIRARD, 1974). THE SCALE WAS REPORTED TO BE ESTABLISHED IN PUERTO RICO BY THE ANIMAL AND PLANT HEALTH INSPECTION SERVICE, USDA IN 1975.

DESCRIPTION: FEMALE: THE FEMALE ARMOR APPEARS TO BE FLAT TO SLIGHTLY CONVEX; IT IS CONSPICUOUSLY BLACK, SHIELD-SHAPED, AND ABOUT 1.75 MM LONG. THE FIRST EXUVIAE IS SMALL, OVAL, BLACK, AND TERMINAL. THE SECOND EXUVIAE IS RECTANGULAR IN SHAPE; ABOUT 2/3 THE ARMOR LENGTH, AND IS CARINATE LONGITUDINALLY (FIG. 1). MALE: THE MALE ARMOR IS FLAT, WHITE, AND ABOUT 1/3 THE SIZE OF THE FEMALE. THE MALE EXUVIAE IS TERMINAL AND BROWN TO BLACK.

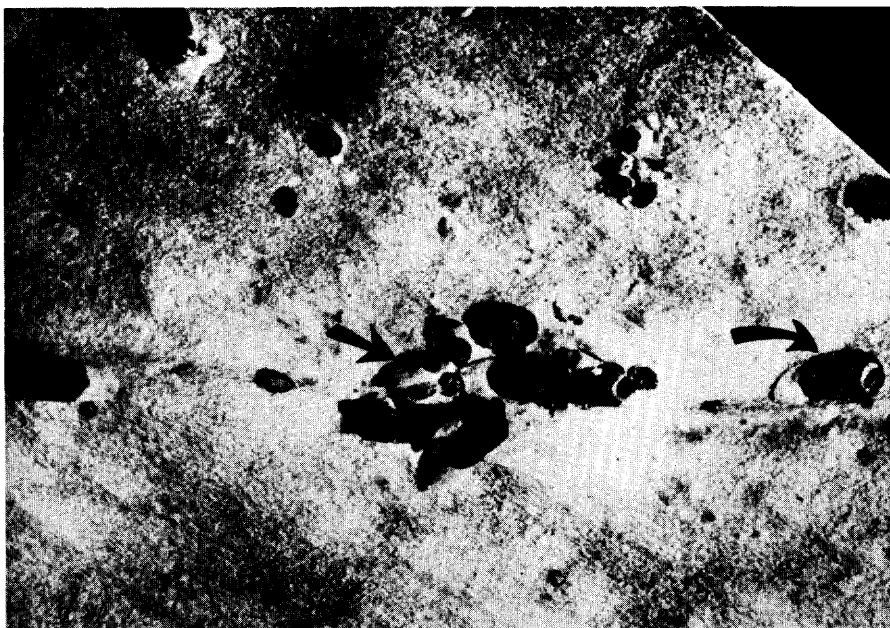


FIG. 1. BLACK PARLATORIA SCALE, PARLATORIA ZIZIPHI (LUCAS) (X8). STRAIGHT ARROW POINTS TO ♂; CURVED ARROW POINTS TO ♀ (AFTER MORRISON).

HOSTS: CITRUS SPP., SEVERINIA BUXIFOLIA (POIR.) TEN. (CHINESE BOXORANGE), MURRAYA PANICULATA (L.) JACKSON (ORANGE JASMINE), CARISSA SP., LIGUSTRUM SP., CODIAEUM SP. (CROTON), CYMBIDIUM ALOEIFOLIUM SW. (ORCHID), PALM, PHOENIX SP. (DATE PALM), ZIZYPHUS SPINA-CRISTI WILLD., ZIZYPHUS SP. (JUJUBE). ALTHOUGH REPORTED ON THE ABOVE HOSTS, P. ZIZIPHI APPARENTLY IS RESTRICTED IN ITS FOOD HABITS TO PLANTS IN THE FAMILY RUTACEAE. THE FIRST 3 HOSTS LISTED ABOVE BELONG TO THIS FAMILY. THE AUTHENTICITY OF HOST RECORDS OTHER THAN RUTACEAE IS QUESTIONED (HOSTS AND COMMENTS DATED 1975 FROM SUEO NAKAHARA, PPQ, APHIS, USDA, ARC WEST, BELTSVILLE, MD. 20705).

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ECONOMIC IMPORTANCE: MCKENZIE (1945) REPORTED P. ZIZIPHI TO BE A VERY SERIOUS PEST OF CITRUS IN VARIOUS PARTS OF THE WORLD. TALHOUK (1975), IN HIS CHART ON THE GEOGRAPHIC DISTRIBUTION AND ECONOMIC IMPORTANCE OF MITES AND INSECTS ON CITRUS, REPORTED THIS SCALE ECONOMICALLY IMPORTANT (CONTROL

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MEASURES REQUIRED OCCASIONALLY) IN ALGERIA, TUNISIA, MOROCCO, AND S. E. ASIA. IN SPAIN, ITALY, GREECE, ISRAEL, EGYPT, INDIA, AND S. AFRICA, HE REPORTED THE PEST PRESENT BUT OF LITTLE ECONOMIC IMPORTANCE. TALHOUK DID NOT REPORT BLACK PARLATORIA SCALE A PEST OF MAJOR IMPORTANCE (CONTROL MEASURES REGULARLY REQUIRED) ANYWHERE IN THE WORLD.

CONTROL: CHEMICALS: OIL SPRAYS @ 1.5%, MALATHION @ 0.05% PLUS OIL @ 1%, DIMETHOATE @ 0.05%, PARATHION @ 0.05%. BIOLOGICAL CONTROL AGENTS: PARASITES: ASPIDIOTIPHAGUS AGILIOR BERLESE, A. LOUNSBURYI (BERLESE AND POOLI), APHYTIS CHRYSOMPHALI MERCET, A. PROCLIA (WALKER). PREDATORS: CHILOCORUS NIGRITUS FABRICUS, LINDORUS LOPHANTAE (BLAISDELL), ORCUS CHALYBEUS (BOISDUVAL)¹. FUNGI: (PATHOGENICITY IN QUESTION) PODONECTRIA COCCICOLA, PSEUDOMICROCERA HENNINGSII, SPHAEROSTILBE AURANTIICOLA. CHEMICAL AND BIOLOGICAL CONTROL AGENTS WERE FURNISHED (IN LITT.) FROM ALLEN G. SELHIME, RESEARCH LEADER, U. S. HORTICULTURAL RESEARCH LABORATORY, ORLANDO, FL 32803.

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1. LETTER DATED 11 FEBRUARY 1976 FROM H. V. AUTRY, CHIEF STAFF OFFICER, NATIONAL PROGRAM PLANNING STAFF, APHIS, USDA, FEDERAL BUILDING, HYATTSVILLE, MD 20782.