

CABBAGE PALM CATERPILLAR (LITOPROSOPUS FUTILIS (G. & R.)) ^{1/}

(NOCTUIDAE: LEPIDOPTERA)

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INTRODUCTION: THE CABBAGE PALM CATERPILLAR, SOMETIMES REFERRED TO AS THE CABBAGE PALM WORM, IS THE LARVA OF AN OWLET MOTH (FIG.3). THE LARVA WAS DESCRIBED BY S. E. CRUMB FROM ONE INFLATED U. S. NATIONAL MUSEUM SPECIMEN COLLECTED ON SAW PALMETTO, SERENOA REPENS (BARTR.), ASTORIA, FLORIDA, BY H. G. DYAR. CRUMB REPORTED THE LARVA PROBABLY FEEDS ON THE OLD DRY LEAF BASES OF CABBAGE PALMETTO (SABAL PALMETTO (WALT. LODD.)). THE AUTHOR HAS COLLECTED LARVAE FEEDING ON THE INFLORESCENCE OF CABBAGE PALMETTO. THE ADULT MOTH WAS DESCRIBED BY A. R. GROTE AND C. T. ROBINSON IN 1868 AS DYOPS FUTILIS G. & R.

DESCRIPTION: THE MATURE LARVA IS ABOUT $1\frac{1}{2}$ INCHES IN LENGTH (FIG.1). THE SKIN IS COVERED WITH VERY SMALL BLACK SPINES WHICH ARE NOT VISIBLE TO THE NAKED EYE. THE BODY APPEARS PINKISH IN COLOR; THE HEAD AND CERVICAL SHIELD ARE SHINY BLACK. WHEN EXAMINED UNDER LOW MAGNIFICATION (X10), THE LARVA IS TAFFY COLORED WITH PINKISH STRIPES EXTENDING FROM THE CERVICAL SHIELD TO THE LAST ABDOMINAL SEGMENT. EXTREMELY LONG, STRONG AND WHITE PRIMARY SETAE ARISE FROM SHINY BLACK CONICAL BODY TUBERCLES. SETIGEROUS TUBERCLES 1A AND 1B ARE FUSED ON THE MESOTHORAX AND METATHORAX. THE BLACK BASES OF SETAE 1A AND 1B ON THE MESOTHORAX ARE RINGED WITH WHITE; THIS IS A VERY USEFUL DIAGNOSTIC CHARACTER OF THE LARVA. THE SPIRACLES ARE ENTIRELY BLACK. PROLEGS WITH CROCHETS IN A MESOSERIES ARE PRESENT ON ABDOMINAL SEGMENTS 3, 4, 5, AND 6 (FIG.1). THE LARVA BECOMES VERY PINK JUST BEFORE PUPATING. THE DARK REDDISH BROWN PUPA IS PROTECTED BY A TOUGH COCOON (FIG.2). THE ADULT MOTH IS FAWN COLORED AND HAS A WING EXPANSE OF ABOUT 2 INCHES. THE BODY IS CONCOLOROUS WITH THE FORE WINGS. A DARK EYESPOT ABOUT $\frac{3}{16}$ INCH IN DIAMETER IS FOUND ON EACH HIND WING. WITHIN EACH SPOT ARE TWO, APPROXIMATELY PARALLEL, WHITE LINEAR DASHES (FIG.3).

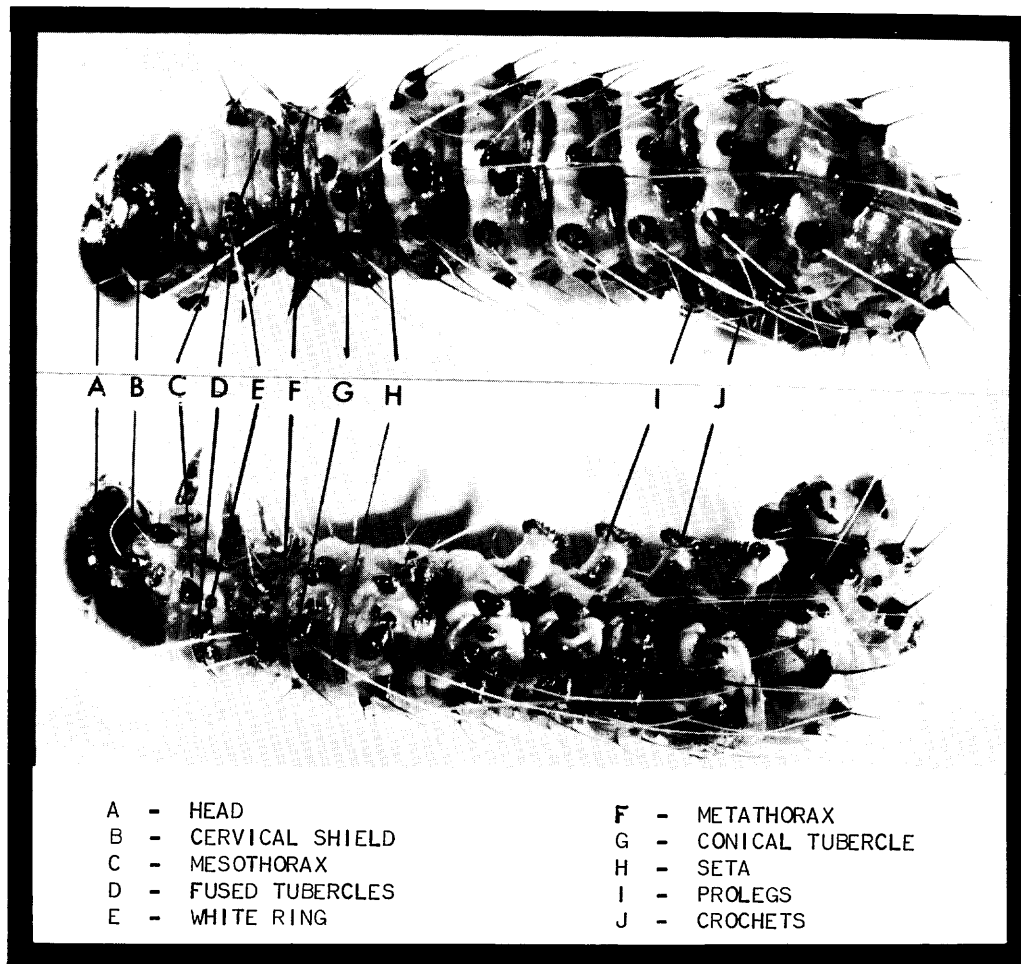


FIG. 1 CABBAGE PALM CATERPILLAR (X4)

HOSTS: THE CABBAGE PALM CATERPILLAR IS RECORDED ON NUMEROUS PLANTS BY THE DIVISION OF PLANT INDUSTRY. IT IS THE OPINION OF THE AUTHOR THAT ALL HOST RECORDS ON PLANTS OTHER THAN PALM ARE ERRONEOUS. ALTHOUGH LARVAE HAVE BEEN COLLECTED ON VARIOUS PLANTS BY DPI PLANT SPECIALISTS, IT IS DOUBTFUL THAT THESE REPRESENT VALID HOST RECORDS. ALL RECORDS FOR LITOPROSOPUS FUTILIS G. & R. FEEDING ON SABAL ARE VALID. ONE RECORD IN THE DPI FILE LISTS PALM, WASHINGTONIA, AS A HOST; THIS HOST IS ACCEPTED BY THE AUTHOR.

FIELD OBSERVATIONS: THE FOLLOWING ACCOUNT IS FROM OBSERVATIONS MADE BY R. W. MASSIE, GENEVA, FLORIDA: THE PALM CATERPILLAR CAN USUALLY BE FOUND ON THE CABBAGE PALM AT THE TIME THE EMBRYONIC BLOOM IS IN THE SMALL GREEN BUD STAGE. TINY LARVAE MAY BE FOUND DEEP IN THE DEVELOPING BLOOM SPIKES. THE LARVAE SOMETIMES GATHER IN THE THOUSANDS ON THE IMMATURE BUDS, ENTIRELY DENUDING THE TREES OF ALL TRACE OF BLOOM AS THEY FEED. THE FULLY MATURE CATERPILLAR MAY THEN DROP TO THE GROUND ON A SILKEN THREAD, AND CRAWL TO A PROTECTED PUPATION SITE OR CRAWL DOWN THE TRUNK AND BENEATH THE BASE OF A DEAD FROND CONSTRUCT A COCOON FROM DRY PALM FIBERS. IN 1960, NEAR GENEVA, FLORIDA, PALMS PUT FORTH A HEAVY BLOOM AND A LATE LARVAL POPULATION COMPLETELY DENUDED THE TREES OF ALL VISIBLE BLOOM.

ECONOMIC IMPORTANCE: HIGH POPULATIONS OF THE CABBAGE PALM CATERPILLAR CAN REDUCE DRASTICALLY THE AMOUNT OF PALMETTO HONEY PRODUCED IN FLORIDA. DURING SUCH PERIODS OF HIGH POPULATION THE MATURE CATERPILLARS HAVE INVADDED HOMES AND HAVE BEEN RESPONSIBLE FOR ECONOMIC LOSS TO HOUSEHOLD FABRICS. IN MAKING THEIR COCOONS, THE CATERPILLARS INCORPORATE ANY AVAILABLE FABRIC, SUCH AS DRAPERIES, RUGS, STUFFED FURNITURE, BEDDING AND CLOTHING. AN OUTBREAK IN MIAMI, FLORIDA, IN 1961 CAUSED SERIOUS ECONOMIC LOSS TO FIBER GLASS CLOTH USED BY THE BOAT BUILDING INDUSTRY.



FIG.2 COCOONS CONSTRUCTED FROM PALM FIBERS. ARROW POINTS TO PUPA. (NATURAL SIZE)

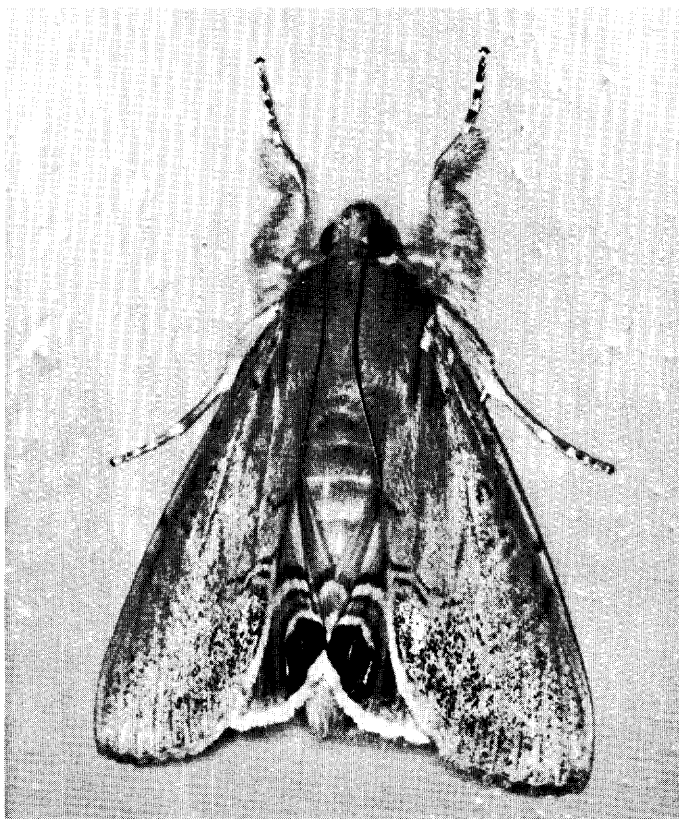


FIG.3 ADULT CABBAGE PALM CATERPILLAR LITOPROSOPUS FUTILIS (G. & R.) (X4)

DISTRIBUTION: CABBAGE PALM CATERPILLAR HAS BEEN REPORTED FROM THE FOLLOWING LOCATIONS IN FLORIDA: ATLANTIC BEACH (NOV.), CASEY KEY (JULY), COCOA (AUG.), CRESTVIEW (MAY), DAYTONA BEACH (NOV.), DELEON SPRINGS (JULY), FLAGLER BEACH (APRIL), FT. PIERCE (AUG.), FROSTPROOF (JULY), GAINESVILLE (APRIL), GENEVA (AUG.), GROVELAND (NOV.), HARBOR OAKS (JULY), HOMESTEAD (JUNE), JACKSONVILLE BEACH (JUNE), KEY WEST (MARCH), LARGO (SEPT.), LEMON BLUFF (JULY), NEW SMYRNA BEACH (AUG.), OAK HILL (AUG.), PALM VALLEY (JULY), PATRICK AFB (SEPT.), RUSKIN (OCT.), ST. AUGUSTINE (AUG.), SANFORD (JUNE), SUN CITY (MARCH), TAMPA (AUG.), TITUSVILLE (AUG.), VERO BEACH (SEPT.), WINTER GARDEN (JUNE), WINTER HAVEN (MAY)

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