

THE CLICK BEETLE GENUS ALAUS IN FLORIDA ^{1/}
(COLEOPTERA: ELATERIDAE)

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INTRODUCTION: BECAUSE OF THEIR STRIKING APPEARANCE AND THEIR LARGE SIZE, BEETLES OF THE GENUS ALAUS ARE COMMONLY BROUGHT TO THE ATTENTION OF NURSERY INSPECTORS. TWO SPECIES, A. MYOPS (FABR.) AND A. OCULATUS (LINN.), ARE FOUND IN FLORIDA.

DESCRIPTION: LENGTH: 24 TO 45 MM. FIG. 1 AND 2 ADEQUATELY ILLUSTRATE WHY THESE BEETLES ARE SO STRIKING. THE LARGE "FALSE EYES" ON THE PRONOTUM OF ADULTS ARE CHARACTERISTIC OF THIS GENUS. PRESUMABLY THESE SPOTS HAVE SOME SELECTIVE VALUE IN FRIGHTENING A WOULD-BE PREDATOR. THE TRUE EYES ARE MUCH SMALLER, LOCATED ON THE HEAD ANTERIOR TO THE "FALSE EYES." BOTH FLORIDA SPECIES HAVE A MOTTLED PATTERN ON THE DORSAL SURFACE CREATED BY MINUTE SCALES. THESE PATTERNS ARE VARIABLE BUT SIMILAR TO THOSE SHOWN IN FIG. 1 AND 2 AND ARE EFFECTIVE IN CONCEALMENT AS SHOWN IN FIG. 3.

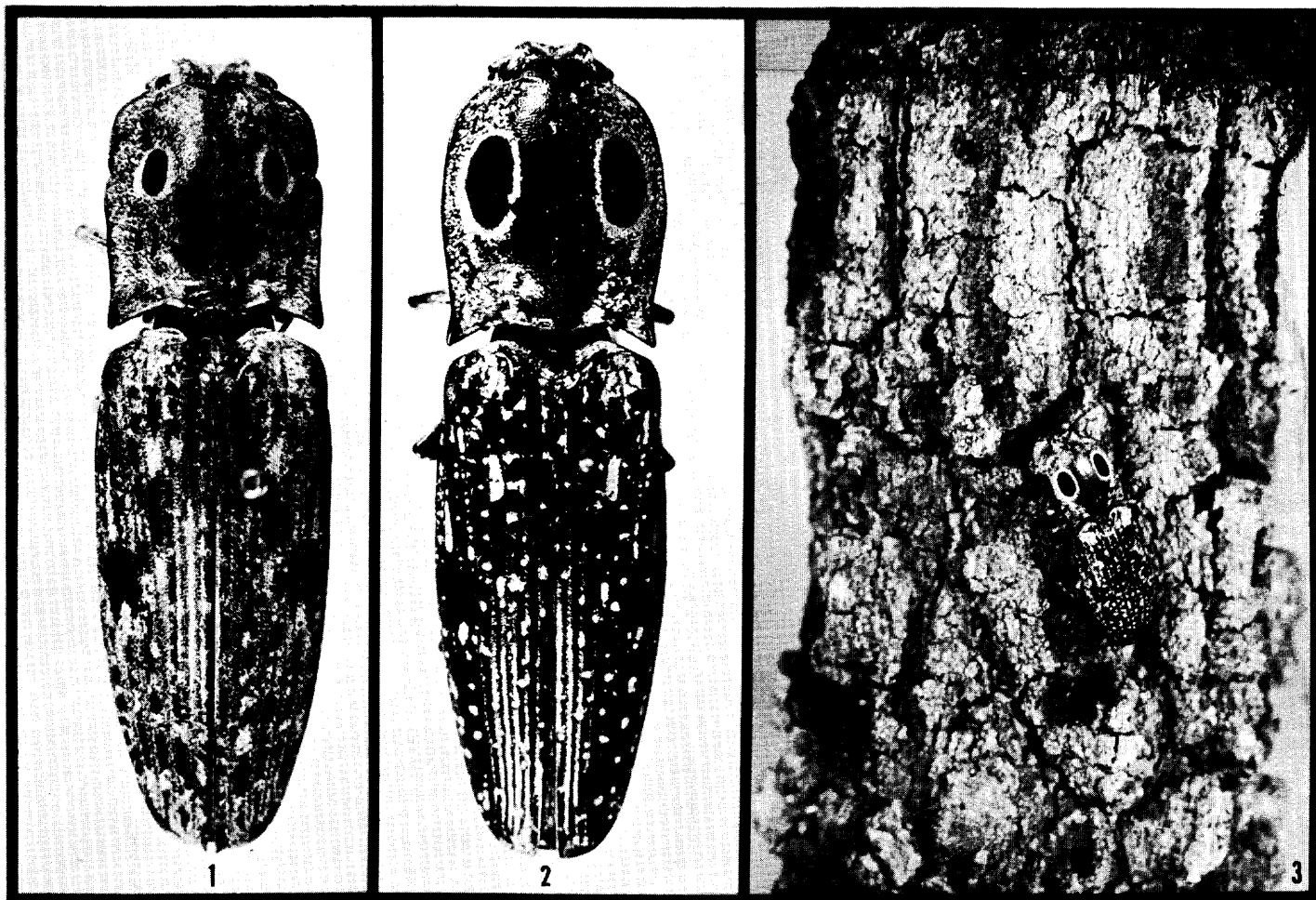


FIG. 1--ALAUS MYOPS (FABR.); FIG. 2--ALAUS OCULATUS (LINN.) (ACTUAL LENGTH = APPROX. 1 ³/₈ INCHES). FIG. 3--ALAUS OCULATUS ON OAK BARK. (PHOTOS BY E. M. COLLINS, JR., DIV. PLANT INDUSTRY)

THE LARVAE (FIG. 4-5) ARE LARGE (UP TO 2 ¹/₂ INCHES), HEAVILY SCLEROTIZED, SMOOTH, STOUT, AND YELLOWISH TO DARK BROWN. THAT OF A. OCULATUS IS DESCRIBED TECHNICALLY BY JEWETT (1946:16, FIG. 53-55) AND PETERSON (1951:176, FIG. C46, K, L, M). THE HEAD IS NEARLY BLACK AND THE LAST 4 ABDOMINAL SEGMENTS ARE DARK BROWN. THE LAST DORSAL ABDOMINAL SEGMENT (9TH) IS ARMED WITH MANY CONICAL TUBERCLES AND TERMINATES IN A PAIR OF FORKED TEETH (UROGAMPHI). THE 10TH SEGMENT HAS 2 ANAL HOOKS AND 10 TO 12 SPINES AND SETAE ANTERIOR TO THE ANUS. THE SPIRACLES ARE BIFOROUS, LOCATED ON THE VENTRAL SIDE OF THE MESOTHORAX AND ON THE DORSO-LATERAL PART OF THE FIRST THROUGH EIGHTH ABDOMINAL SEGMENTS. I HAVE NOT FOUND A DESCRIPTION OR ILLUSTRATION OF THE LARVA OF A. MYOPS.

BIOLOGY: THE FEROCIOUS LOOKING LARVA AND THE LARGE BEETLE MIGHT BE EXPECTED TO BE A SERIOUS PEST. HOWEVER, THE ADULTS PROBABLY FEED LITTLE AND THE LARVAE ARE EFFECTIVE PREDATORS ON MANY WOOD-BORING BEETLE LARVAE. CRAIGHEAD (1950:185) STATED THAT LARVAE OF OCULATUS WERE VORACIOUS ON WOOD BORERS, AND THAT DURING THEIR DEVELOPMENT CAGED SPECIMENS EACH DEVoured MORE THAN 200 CERAMBYCID LARVAE. THEY ARE MOST OFTEN ENCOUNTERED IN ROTTING STUMPS OF OAK, CHERRY, AND APPLE, WHEREAS MYOPS IS USUALLY FOUND IN PINE

STUMPS AND LOGS. ROHWER (1920:443) LISTED XORIDES CATOMUS DAVIS (ICHNEUMONIDAE) AS A PARASITE OF THE LARVAE.

DISTRIBUTION: A. OCULATUS IS WIDESPREAD IN THE EASTERN U.S., BEING RECORDED BY LENG (1920:167) FROM "INDIANA, ATLANTIC STATES--TEXAS, FLORIDA." BLATCHLEY (1910:717) LISTED IT FROM THROUGHOUT INDIANA; FATTIG (1951:5) LISTED 19 LOCALITIES SCATTERED OVER GEORGIA; AND DIETRICH (1945:9) LISTED IT AS BEING FOUND THROUGHOUT THE STATE OF NEW YORK. THE FLORIDA STATE COLLECTION OF ARTHROPODS [FSCA] CONTAINS RECORDS FROM THE FOLLOWING FLORIDA COUNTIES: ALACHUA, COLUMBIA, DADE, DUVAL, GULF, HARDEE, HILLSBOROUGH, ORANGE, PALM BEACH, SEMINOLE, AND ST. LUCIE. A. MYOPS IS MORE COMMON IN THE SOUTHEASTERN U.S. ALTHOUGH OCCASIONALLY FOUND IN THE NORTH; RECORDED BY LENG (1920:167) FROM "INDIANA, MIDDLE AND SOUTHERN STATES, FLORIDA." BLATCHLEY (1910:719) LISTED ONE RECORD FOR INDIANA AND STATED "RARE NORTH OF THE OHIO RIVER"; FATTIG (1951:5) LISTED 20 LOCALITIES SCATTERED OVER GEORGIA; DIETRICH (1945:10) LISTED 9 LOCALITIES IN NEW YORK. THE FSCA CONTAINS RECORDS FROM THE FOLLOWING FLORIDA COUNTIES: ALACHUA, BAKER, BREVARD, DADE, HARDEE, HIGHLANDS, LIBERTY, MONROE, ORANGE, POLK, AND SEMINOLE.

KEY TO FLORIDA SPECIES OF ALAUS

1. "EYE SPOTS" LESS THAN ONE-FOURTH THE LENGTH OF PRONOTUM; BASE COLOR OF DORSUM BROWNISH, THE SCALES MOSTLY GREY AND COVERING MORE THAN HALF THE SURFACE; ASSOCIATED WITH PINES.....MYOPS (FABR.)
- 1'. "EYE SPOTS" ABOUT ONE-THIRD THE LENGTH OF THE PRONOTUM; BASE COLOR OF DORSUM BLACK, THE SCALES MOSTLY WHITE AND COVERING LESS THAN HALF THE SURFACE; ASSOCIATED WITH HARDWOODS.....OCULATUS (LINN.)

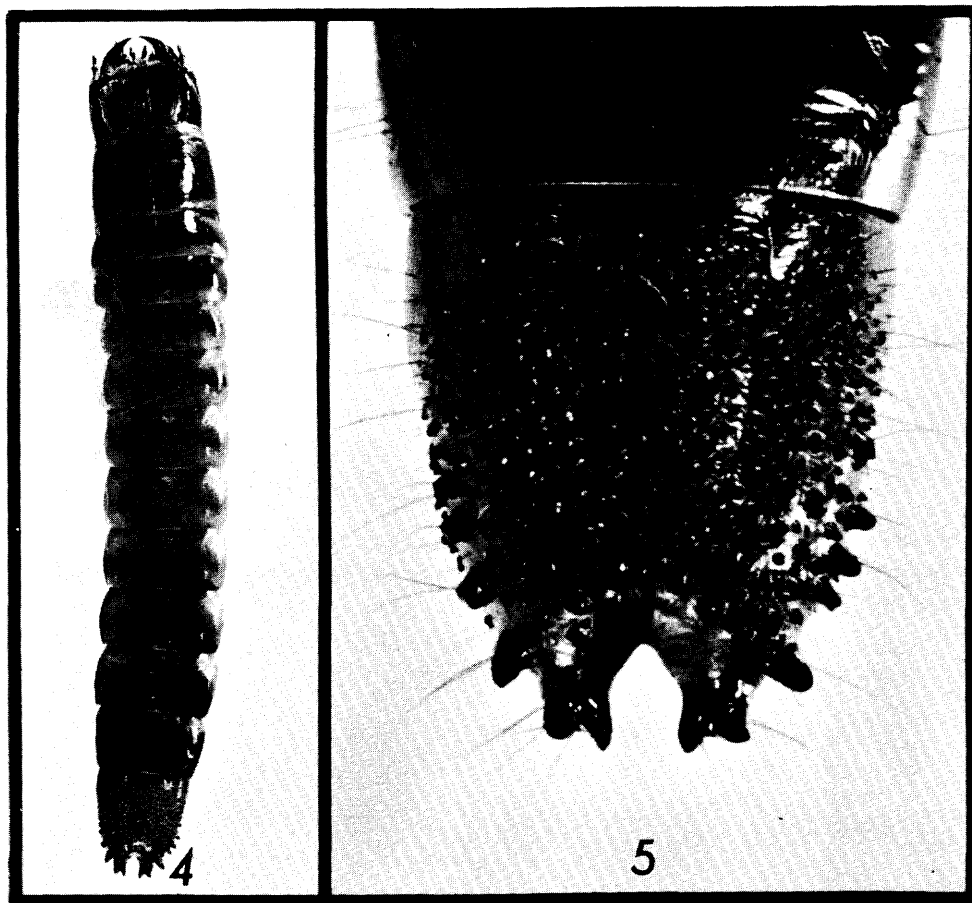


FIG. 4-5: MATURE LARVA OF ALAUS OCULATUS.

4--DORSAL VIEW OF ENTIRE LARVA (LENGTH $2\frac{1}{4}$ INCHES).

5--DORSAL VIEW OF LAST (9TH) ABDOMINAL SEGMENT (NOTE HOOKS OR UROGOMPHI AT TIP AND NUMEROUS TUBERCLES OVER MOST OF THE SURFACE).

THESE LARVAE ARE BENEFICIAL SINCE THEY EAT WOOD-BORING LARVAE OF OTHER BEETLES.

(PHOTOS BY E. M. COLLINS, JR., DIV. PLANT INDUSTRY)

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