

NICENTRUS SACCHARINUS MARSHALL, A POTENTIAL
SUGARCANE PEST RECENTLY INTRODUCED INTO FLORIDA
(COLEOPTERA: CURCULIONIDAE)¹

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INTRODUCTION: MARSHALL (1951) DESCRIBED NICENTRUS SACCHARINUS FROM SPECIMENS COLLECTED AT AGUADULCE, PANAMA IN SUGARCANE. THE ONLY SUBSEQUENT LITERATURE RECORD I HAVE FOUND IS THE LISTING OF IT (FRANK & BENNETT, 1970) ON SUGARCANE IN JAMAICA.

ON APRIL 15, 1972, DURING THE COURSE OF REARING ANOTHER RECENTLY INTRODUCED WEEVIL (MICROLARINUS LYPRI-FORMIS WOLLASTON) FROM PUNCTURE VINE (TRIBULUS CISTOIDES L.), C. E. STEGMAIER, JR. COLLECTED A SINGLE NICENTRUS. SUBSEQUENTLY R. E. WARNER IDENTIFIED THIS SPECIMEN AS N. SACCHARINUS. IT WAS TAKEN FROM PLANTS COLLECTED AT THE MIAMI INTERNATIONAL AIRPORT. SUBSEQUENT SURVEYS BY USDA AND FLORIDA DEPARTMENT OF AGRICULTURE PERSONNEL HAVE REVEALED THAT N. SACCHARINUS IS ESTABLISHED IN SOUTH FLORIDA IN SEVERAL COMMON GRASSES.

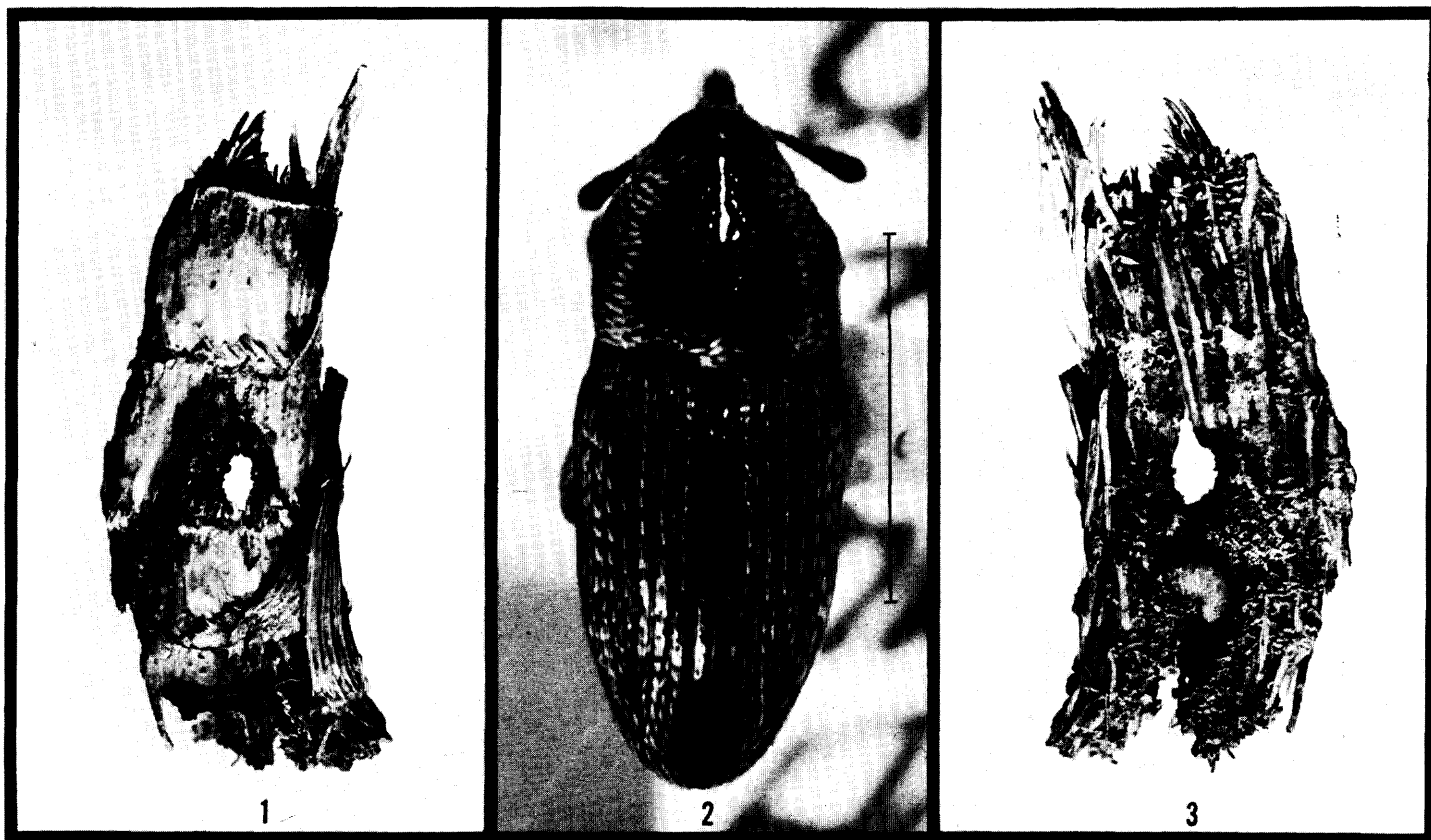


FIG. 1-3. NICENTRUS SACCHARINUS MARSHALL: 1) BASE OF ELEPHANT GRASS WITH EXTERNAL LARVAL DAMAGE AFTER SHEATHS REMOVED; 2) DORSAL VIEW OF ADULT (LINE = 1.5 MM); 3) INTERNAL VIEW OF FIG. 1 WITH LARVA IN SITU.

ECONOMIC IMPORTANCE: TWO INCRIMINATING STATEMENTS APPEAR IN THE ORIGINAL DESCRIPTION: "...LARVAE KILLING NEW SHOOTS OF SUGARCANE AND ...A POTENTIALLY SERIOUS PEST." SUBSEQUENT RECORDS HAVE BEEN SO FEW THAT ITS SERIOUSNESS CANNOT BE DETERMINED. J. H. FRANK (PERSONAL COMMUNICATION) DID NOT ENCOUNTER IT IN 3 YEARS OF EXTENSIVE WORK ON SUGARCANE INSECTS IN JAMAICA, ALTHOUGH IT WAS FOUND THERE PREVIOUSLY BY F. D. BENNETT (FRANK & BENNETT, 1970). A. C. SCHAAF (PERSONAL COMMUNICATION) SPECULATES THAT IT IS (AT MOST) A MINOR PEST IN JAMAICA. HOWEVER, HE RECENTLY COLLECTED LARVAE (PRESUMED TO BE THIS SPECIES) IN NATIVE JAMAICAN GRASSES, AFTER LEARNING OF THE FLORIDA COLLECTIONS. SUGARCANE HAS BEEN PLANTED IN AND AROUND THE MIAMI AIRPORT TO DETERMINE THE EXTENT WEEVILS MIGHT DAMAGE THAT HOST. TYPICAL DAMAGE TO ELEPHANT GRASS AND GOOSE GRASS IS SHOWN IN FIG. 1, 3, 4, 6. A CLOSE SURVEILLANCE WILL BE MADE OF THIS INFESTATION BECAUSE OF ITS POTENTIAL THREAT TO THE 300,000 ACRES OF SUGARCANE IN THE LAKE OKEECHOBEE REGION.

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DISTRIBUTION: THE FOLLOWING RECORDS ARE FROM SPECIMENS IN THE U.S. NATIONAL MUSEUM WHICH WERE SUPPLIED BY R. E. WARNER: ARGENTINA; EL SALVADOR (APOPA), IN SUGARCANE PLANTINGS CAUSING DAMAGE TO THE FRUITS ONLY; NICARAGUA (MONTELIMA), IN SUGARCANE STEMS; JAMAICA (MONYMUSK ESTATES), LARVAE IN YOUNG CANE; PUERTO RICO (AGUADILLA), SWEEPED FROM BRUSH; HAITI (R. FROIDE VALLEY, 1925); AND PANAMA (AGUADULCE).

SURVEYS ARE STILL UNDER WAY IN FLORIDA TO DETERMINE THE EXTENT OF ITS DISTRIBUTION HERE. PRESENTLY, SPECIMENS HAVE BEEN TAKEN IN NORTHERN DADE AND SOUTHERN BROWARD COUNTIES.

TAXONOMY: THE GENUS NICENTRUS BELONGS TO THE SUBFAMILY BARIDINAE (OR BARINAE) WHICH CONTAINS NUMEROUS SPECIES OF SMALL WEEVILS SIMILAR IN APPEARANCE. NICENTRUS CONTAINS APPROXIMATELY 22 UNITED STATES SPECIES (KISSINGER, 1964). THE SIMILARITY OF THE SPECIES AND CASEY'S WORK (1920) CONFUSED THE TAXONOMY, AND NO SUBSEQUENT REVISION IS AVAILABLE. BLACKWELDER (1947:900-901) LISTED 45 SPECIES FROM LATIN AMERICA. THE GENERA ANACENTRINUS AND CENTRINASPIS ARE CLOSE RELATIVES IN THE TRIBE CENTRININI (KISSINGER, 1964). A SUPERFICIALLY SIMILAR SPECIES, ANACENTRINUS LIMBIFER (CASEY) (DET. C. W. O'BRIEN), WAS FOUND IN THE SAME AREAS DURING CURRENT FLORIDA SURVEYS. IT IS SO SIMILAR THAT FIELD IDENTIFICATION OF ADULTS IS NOT POSSIBLE, AND NO CHARACTERS HAVE BEEN FOUND TO DISTINGUISH THE LARVAE.

HOSTS: IN ADDITION TO SUGARCANE SHOOTS, AS LISTED IN THE ORIGINAL DESCRIPTION, THE FOLLOWING HOSTS WERE FOUND IN FLORIDA SURVEYS: GOOSE GRASS (ELEUSINE INDICA (L.) GAERTN.); ELEPHANT GRASS (PENNISETUM PURPUREUM? SCHUMACH); GUINEA GRASS (PANICUM MAXIMUM JACQ.); AND FINGER GRASS (CHLORIS SP.). SIMILAR DAMAGE WAS FOUND IN AN UNIDENTIFIED SEDGE AT MIAMI, BUT NO WEEVILS WERE RECOVERED. THE ORIGINAL FIND IN MIAMI ON PUNCTURE VINE (TRIBULUS CISTOIDES) APPEARS TO BE FORTUITOUS, THESE PLANTS GROWING TOGETHER WITH GOOSE GRASS AT THE COLLECTING SITE.

ACKNOWLEDGMENTS: I WISH TO THANK ROSE ELLA WARNER FOR HER ASSISTANCE, INCLUDING THE INITIAL IDENTIFICATION AND DATA ON NATIONAL MUSEUM SPECIMENS. CARL E. STEGMAIER AND BYRD DOZIER (USDA, PLANT QUARANTINE) ASSISTED IN THE INITIAL SURVEY WORK AND WILLIAM PIERCE (FLA. DEPT. AGR.) CONTINUES TO PROVIDE VALUABLE DATA AND SPECIMENS. THE FOLLOWING INDIVIDUALS ALSO ASSISTED IN MANY WAYS: G. AVERY, E. M. COLLINS, JR., C. F. DOWLING, JR., J. H. FRANK, J. C. HALEY, R. G. JOHNSON, J. H. KNOWLES, K. E. LANGDON, C. W. O'BRIEN, AND A. C. SCHAAF.

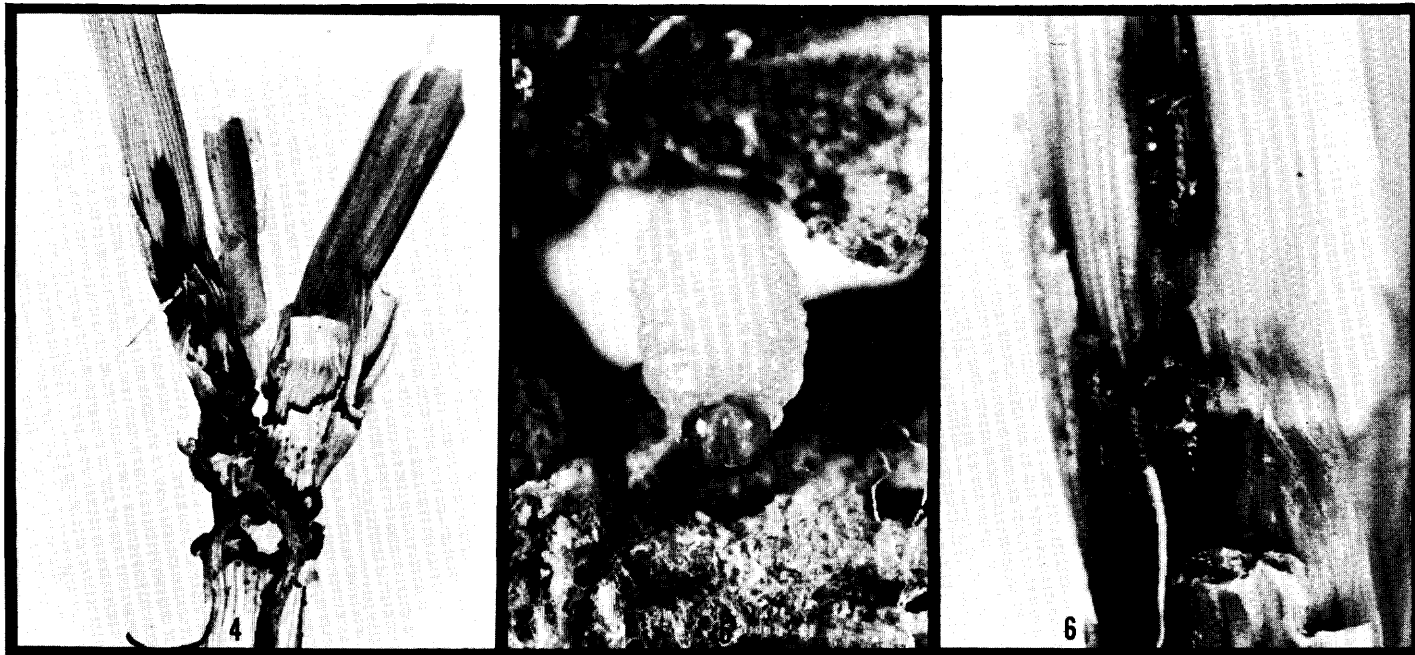


FIG. 4-6. NICENTRUS SACCHARINUS MARSHALL: 4) LARVAL DAMAGE IN GOOSE GRASS (SHEATHS REMOVED); 5) LARVA; 6) ENLARGEMENT OF DAMAGE IN FIG. 4.

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