

A LACE BUG, CORYTHUCHA FLORIDANA HEIDEMANN

(HEMIPTERA: TINGIDAE)^{1/}

F. W. MEAD

INTRODUCTION: THE LACE BUG, CORYTHUCHA FLORIDANA HEIDEMANN, IS KNOWN AS A MINOR PEST OF OAKS, QUERCUS SPP. HEAVY LEAF FEEDING RESULTS IN DISCOLORATION AND LEAFDROPP, BUT GENERALLY THE INJURY SUSTAINED IS NOT OF ECONOMIC SIGNIFICANCE. RECORDS OF THIS LACE BUG ARE LIMITED TO FLORIDA.

DESCRIPTION AND IDENTIFICATION: ADULTS (FIG. 1) 2.3-2.6 MM LONG, 1.4-1.6 MM WIDE. ELYTRA NEARLY QUAD-

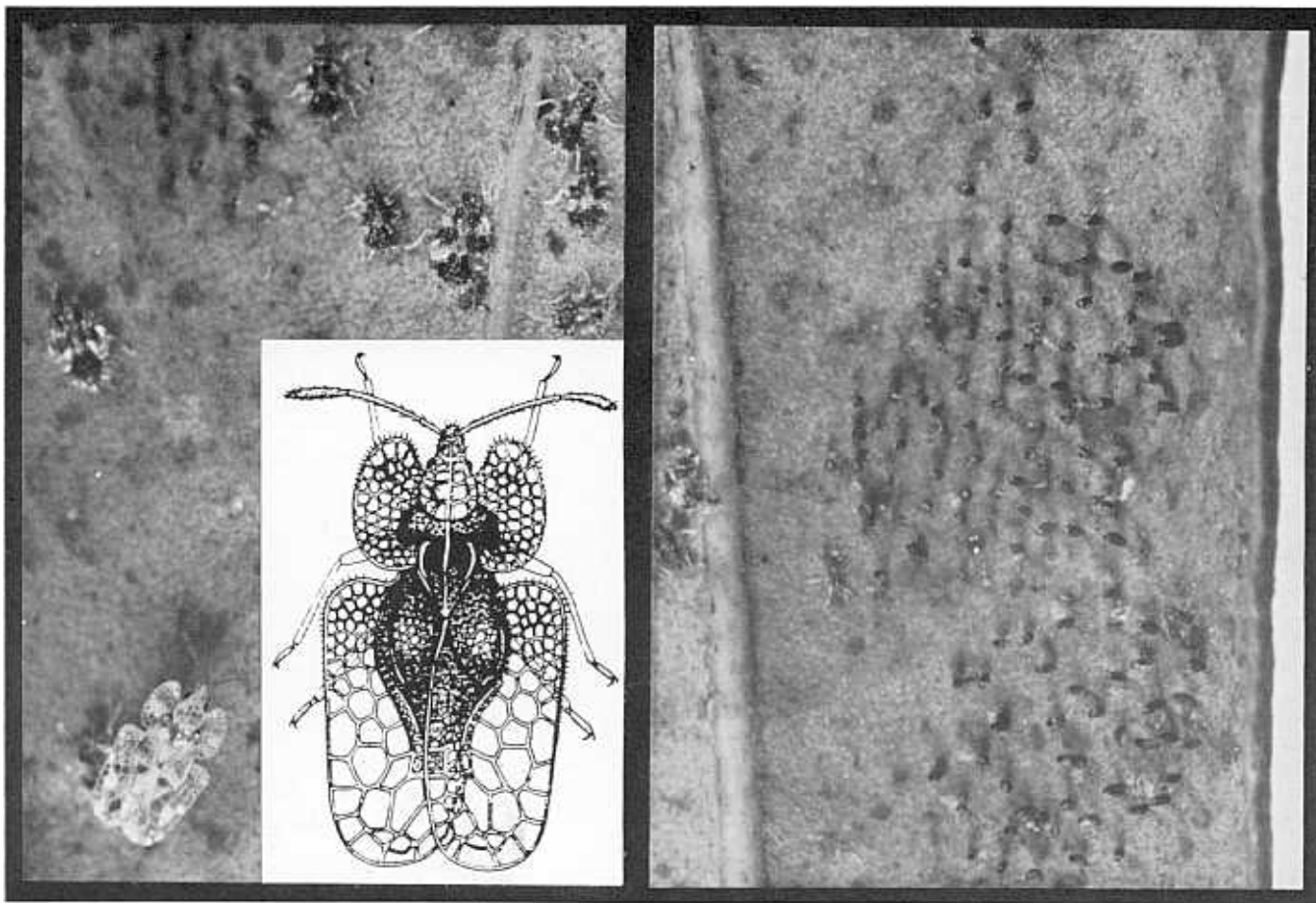


FIG. 1. CORYTHUCHA FLORIDANA HEID.

ADULT, NYMPHS, CAST SKINS, AND EGGS ON
UNDERSIDE OF OAK LEAF. INSET: ADULT
(AFTER HEIDEMANN, 1909).

FIG. 2. CORYTHUCHA FLORIDANA HEID.

EGGS ON UNDERSIDE OF OAK LEAF.

RATE, WITHOUT CROSSBARS, ALTHOUGH FAINT TRACES OF BASAL CROSSBAR OFTEN PRESENT; ELEVATION OF EACH ELYTRON WITH BROWN SPOT; CELLS OF APICAL HALF OF COSTAL AND SUBCOSTAL AREAS OF ELYTRA MUCH LARGER THAN THOSE OF BASE; A FEW BROWN SPOTS ON HOOD, A FAINT SPOT ON EACH PARANOTUM.

GIBSON (1918) WROTE THAT THE SMALLEST SPECIES IN THE GENUS, C. FLORIDANA, IS EASILY RECOGNIZED BY ITS MINUTE SIZE. BLATCHLEY (1926) INCLUDED C. FLORIDANA IN HIS "GROUP B" OF CORYTHUCHA, CONSISTING OF 4 SPECIES HAVING CREST OF HOOD NEVER MORE THAN TWICE THE MEDIAN CARINA HEIGHT, AND ELYTRA EITHER WHOLLY DEVOID OF OR WITH ONLY FAINT TRACES OF APICAL CROSSBARS. ONLY 1 OF THESE SPECIES, CORYTHUCHA PALLIDA OSBORN AND DRAKE, LACKS FUSCIOUS MARKS ON THE ELYTRA; FURTHERMORE, IT HAS NEVER BEEN REPORTED FROM FLORIDA, ALTHOUGH ITS RANGE INCLUDES MOST OF THE OTHER SOUTHEASTERN STATES. ITS REPORTED HOSTS INCLUDE BASSWOOD, MULBERRY, AND MAY-APPLE. ANOTHER "GROUP B" SPECIES IS THE SYCAMORE LACE BUG, CORYTHUCHA CILIATA (SAY). IT IS LONGER THAN C. FLORIDANA, USUALLY BEING MORE THAN 3.5 MM IN LENGTH. C. CILIATA IS MILKY-WHITE EXCEPT FOR A BROWN SPOT ON EACH ELYTRAL ELEVATION. C. FLORIDANA ALSO HAS THE BROWN SPOT BUT DIFFERS IN HAVING ADDITIONAL LIGHT BROWN MARKS ON THE HOOD, PARANOTA, AND BASE OF ELYTRA. THE REMAINING "GROUP B" SPECIES IS THE COTTON LACE BUG, CORYTHUCHA GOSSYPII (FABRICIUS). IT IS A SMALL SPECIES, 2.5-3.2 MM LONG, WITH SHORT SPECIMENS SIMILAR IN SIZE TO LARGE INDIVIDUALS OF C. FLORIDANA; THEREFORE,

SIZE ALONE IS NOT DIAGNOSTIC.

C. GOSSYPII IS READILY DISTINGUISHED AS FOLLOWS: THE CELLS OF THE GLOBOSE PORTION OF THE HOOD ARE THE SAME SIZE AS THOSE OF THE PARANOTA, WHEREAS THOSE OF THE OTHER "GROUP B" SPECIES ARE LARGER. SECONDLY, C. GOSSYPII HAS SEVERAL CLUSTERS OF SPINES ON THE DORSAL SURFACE OF THE PARANOTA AND ELYTRA. THE MOST CONSPICUOUS OF THESE CLUSTERS IS ON THE DISCAL AREA OF EACH PARANOTUM. THIRDLY, THE COTTON LACE BUG HAS A CURVED, DARK BROWN MARK ON THE MEDIAN CARINA (NOT USUALLY PRESENT ON THE OTHER "GROUP B" SPECIES). DRAKE & RUHOFF (1965) LISTED A WIDE VARIETY OF HOST PLANTS FOR C. GOSSYPII, BUT QUERCUS AND CEPHALANTHUS WERE NOT INCLUDED. HOST PLANT INFORMATION FREQUENTLY OFFERS SUPPORTING EVIDENCE FOR DIFFERENTIATING SPECIES OF LACE BUGS.

PROVISIONAL COLOR KEY TO LATE INSTAR NYMPHS OF CORYTHUCHA CILIATA, FLORIDANA, & GOSSYPII:

1. ABDOMEN ENTIRELY BROWN OR NEARLY SO; BASAL HALF OF WING PADS DARK BROWN-----C. CILIATA
- 1'. ABDOMEN NOT ENTIRELY BROWN, PALE AROUND MARGINS, BASAL HALF OF WING PADS MAY OR MAY NOT BE BROWN--2
2. PARANOTA PALE; APEX OF WING PAD NOT OR BUT FAINTLY BROWNISH; WING PAD BROWN FOR MOST OF BASAL HALF (FIG. 2)-----C. FLORIDANA
- 2'. PARANOTA WITH DARK BROWN MARK AT POSTERIOR MARGIN; APEX OF WING PAD DISTINCTLY BROWNISH; WING PAD BROWN AT APPROXIMATE BASAL FOURTH ONLY, THE COLOR DIRECTED OBLIQUELY FORWARD AND OUTWARD FROM BASE-----C. GOSSYPII

EGGS: THE EGGS OF C. FLORIDANA ARE BLACK, SEMICYLINDRICAL, AND INSERTED INDIVIDUALLY AT A RIGHT ANGLE INTO THE LOWER LEAF SURFACE (FIG. 2). EGGS ARE USUALLY GROUPED TOGETHER AND TEND TO BE EVENLY SPACED. THE OUTER END OF EACH EGG CONSISTS OF A FLAT CAP. SOMETIMES THESE EGGS ARE MISTAKEN FOR SPORANGIA.

DISCUSSION: OSBORN & DRAKE (1917) INDICATED THAT C. FLORIDANA WAS THE LACE BUG ". . . . REPORTED BY DR. BERGER AS DOING A CONSIDERABLE AMOUNT OF DAMAGE TO THE OAK TREES AT KISSIMMEE, FLORIDA." GIBSON (1918) AND BLATCHLEY (1926) ALSO INDICATED THAT C. FLORIDANA HAS BEEN COLLECTED FROM BOTH QUERCUS SPP. AND CEPHALANTHUS OCCIDENTALIS LINNAEUS. IN VIEW OF THE TENDENCY OF MOST SPECIES OF CORYTHUCHA TO BE RESTRICTED TO A SINGLE HOST PLANT OR GROUP OF CLOSELY RELATED SPECIES WITHIN A SINGLE PLANT FAMILY, R. I. SAILER (PERSONAL COMMUNICATION, 1973) REGARDS THE RECORDS OF C. FLORIDANA FROM QUERCUS AS SUSPECT. IN HIS OPINION, A CAREFUL STUDY OF HOST-ASSOCIATED SPECIMENS WILL PROBABLY SHOW THE PREVIOUS RECORDS FROM QUERCUS ARE INCORRECT AND PROPERLY REFER TO THE OAK LACE BUG, CORYTHUCHA ARCUATA (SAY). ALTHOUGH WIDELY DISTRIBUTED IN NORTH AMERICA, C. ARCUATA IS NOT LISTED AS OCCURRING IN FLORIDA. WITHIN ITS RANGE, HOWEVER, RECORDS SHOW IT TO BE APPARENTLY RESTRICTED TO OAKS. ALSO THESE REPORTS REVEAL THAT C. ARCUATA EXHIBITS CONSIDERABLE COLOR AND SIZE VARIATION. THE PALER AND SMALLER FORMS COMMONLY ENCOUNTERED ON OAKS IN FLORIDA COULD EASILY BE CONFUSED WITH THE SPECIES (C. FLORIDANA) DESCRIBED BY HEIDEMANN FROM CEPHALANTHUS. IF THIS VIEW IS CONFIRMED, THEN THE NAME OF THE SPECIES OF LACE BUG COMMONLY ENCOUNTERED IN FLORIDA ON OAKS SHOULD BE C. ARCUATA. FURTHERMORE, THE INFORMATION PRESENTED IN THIS CIRCULAR UNDER C. FLORIDANA SHOULD THEN BE REFERRED TO AS C. ARCUATA.

CONTROL: ORDINARILY, CONTROL MEASURES ARE NEITHER REQUIRED NOR PRACTICAL. WHEN HEAVY INFESTATIONS OCCUR ON PARTICULARLY VALUABLE TREES, A PEST CONTROL OPERATOR SHOULD BE CONSULTED

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