

LEAFFOOTED BUG, LEPTOGLOSSUS PHYLLOPUS (LINNAEUS)  
(HEMIPTERA: COREIDAE) 1/

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MOST RECENT SYNONYM: THEOGNIS PHYLLOPUS (LINNAEUS)

INTRODUCTION: THE LEAFFOOTED BUG IS A WIDESPREAD AND CONSPICUOUS MINOR PEST OF MANY KINDS OF CROPS, INCLUDING FRUITS, VEGETABLES, GRAINS, NUTS AND ORNAMENTALS. IT HAS BEEN REPORTED AS A MAJOR PEST IN CITRUS GROVES, WHERE ITS FEEDING ON RIPENING FRUIT CAUSES PREMATURE COLOR BREAK AND FRUIT DROP. SERIOUS INFESTATIONS DO NOT OCCUR COMMONLY, BUT A LARGE PROPORTION OF THE CROP MAY BE LOST WHEN THEY DO.

DISTRIBUTION: THE RECENT REVISION OF LEPTOGLOSSUS BY ALLEN (1969) LISTS L. PHYLLOPUS AS A VERY COMMON INSECT IN THE SOUTHERN UNITED STATES. IT HAS BEEN REPORTED AS FAR NORTH AS LONG ISLAND, NEW YORK, AND RANGES SOUTH TO FLORIDA, WEST TO IOWA AND KANSAS, AND SOUTHWEST THROUGH TEXAS TO CALIFORNIA, LOWER CALIFORNIA, AND SOUTH AGAIN INTO MEXICO, GUATEMALA, AND COSTA RICA. ALLEN MENTIONED LITERATURE RECORDS OF IT FOR PANAMA AND BRAZIL. THE USDA COOPERATIVE ECONOMIC INSECT REPORT HAS ISOLATED ENTRIES OF THE LEAFFOOTED BUG IN COLORADO AND UTAH. IN FLORIDA THE DIVISION OF PLANT INDUSTRY HAS NUMEROUS RECORDS THROUGHOUT THE STATE AS FAR SOUTH AS HOMESTEAD.

IDENTIFICATION: SEVEN SPECIES OF LEPTOGLOSSUS HAVE BEEN RECORDED FROM FLORIDA AND THE SOUTHEASTERN STATES. L. PHYLLOPUS CAN ALMOST ALWAYS BE SEPARATED FROM THE OTHER SIX SPECIES BY THE CHARACTER OF THE ELYTRAL CROSSBAR (ON THE CORIUM). L. PHYLLOPUS IS THE ONLY PERTINENT SPECIES HAVING THE BAR STRAIGHT AND ENTIRE. THE BARS OF THE OTHER SPECIES USUALLY VARY FROM ZIGZAG BANDS TO FAINT DOTS OR NO MARKS AT ALL. ONE POSSIBLE EXCEPTION IS THE RARELY COLLECTED LEPTOGLOSSUS ASHMEADI HEIDEMANN, A SPECIES THAT BREEDS IN MISTLETOE. THIS SPECIES HAS AN UNUSUALLY BROAD, ORANGE CROSSBAR, COMPARED TO THE NARROWER WHITE OR PALE YELLOW BAR IN L. PHYLLOPUS. FURTHERMORE, L. ASHMEADI HAS PROMINENT ORANGE-YELLOW MARGINS ON THE PRONOTUM NOT FOUND IN L. PHYLLOPUS. SEVERAL SPECIES OF LEPTOGLOSSUS AND OTHER COREIDS HAVE FOLIACEOUS HIND TIBIAE, WHICH GIVES RISE TO THE COMMON NAME "LEAFFOOTED BUG," BUT ONLY L. PHYLLOPUS HAS THIS AS AN OFFICIAL COMMON NAME. ADULTS OF L. PHYLLOPUS GENERALLY ARE CHESTNUT BROWN, REVEAL VARIOUS AMOUNTS OF ORANGE ON THE DORSAL ABDOMEN WHEN THE WINGS ARE RAISED, AND VARY FROM 5/8 TO 3/4 INCH LONG (FIG. 3). NYMPHS HAVE MUCH THE SAME SHAPE AS ADULTS BUT DO NOT ACQUIRE THE FLATTENED LEAFLIKE HIND TIBIAL EXPANSIONS UNTIL WELL ALONG TOWARD BECOMING ADULTS (FIG. 2). EGGS ARE GOLDEN BROWN AND ARE LAID IN A SINGLE ROW OR CHAIN ALONG A STEM OR LEAF MIDRIB. THEY ARE SOMEWHAT CYLINDRICAL, FLATTENED ON THE UNDERSIDES AND AT THE ENDS AND ARE CLOSELY LAID END TO END, FORMING A STIFF CYLINDRICAL ROD IN WHICH EACH EGG APPEARS AS A JOINT OR CELL (FIG. 1). FOR ADDITIONAL AID ON THE IDENTIFICATION OF LEPTOGLOSSUS CONSULT BLATCHLEY (1926), HUSSEY (1953), OR ALLEN (1969).

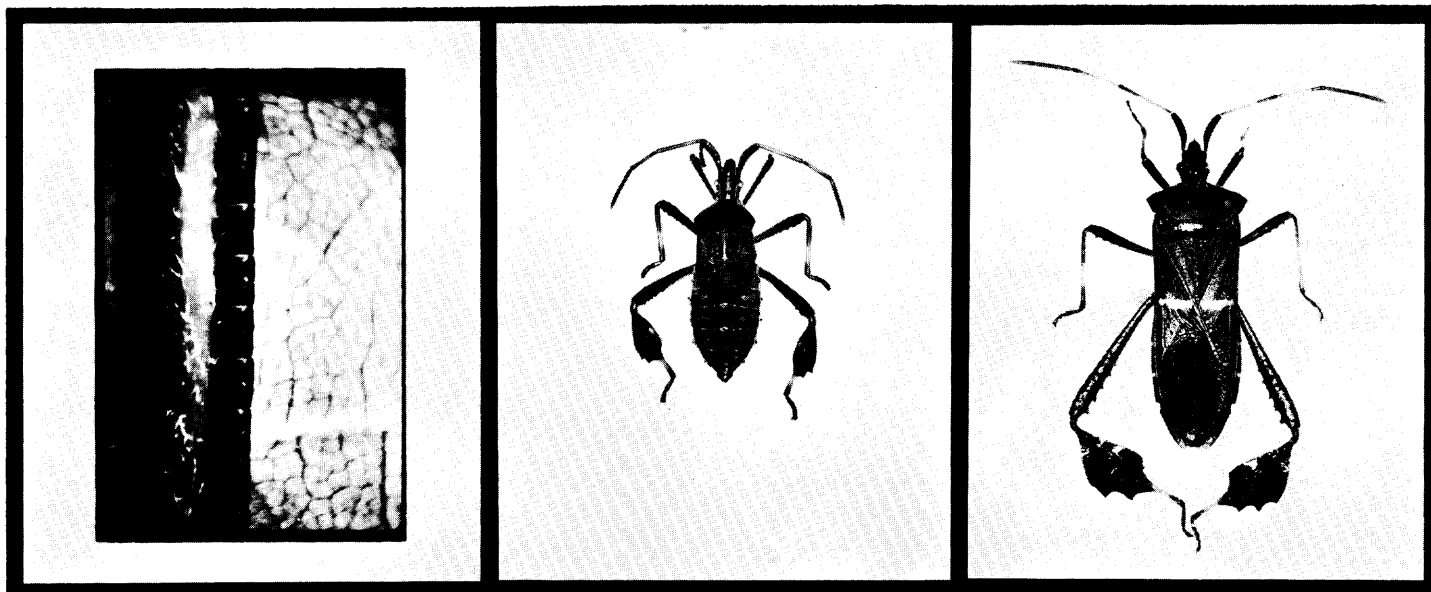


FIG. 1. CHAIN OF EGGS OF LEPTOGLOSSUS ALONG LEAF MIDRIB. PRINT FROM COLOR SLIDE TAKEN BY A. PETERSON.

FIG. 2. NEARLY MATURE NYMPH OF LEPTOGLOSSUS PHYLLOPUS (LINNAEUS)

FIG. 3. ADULT OF LEAFFOOTED BUG, LEPTOGLOSSUS PHYLLOPUS (L.)

BIONOMICS: NORMALLY THE PRINCIPAL HOST PLANTS ARE THISTLES, CIRSIIUM SPP. HUBBARD (1885) WROTE THAT YOUNG LEAFFOOTED BUGS WERE FOUND RARELY IN FLORIDA EXCEPT ON THISTLE OR SIMILAR SUCCULENT PLANTS, BUT THAT THE ADULTS FLEW VERY GREAT DISTANCES AND ENTERED ORANGE GROVES AT THE TIME OF BLOOMING TO SUCK THE OPENING BUDS OR TENDER SHOOTS. LATER THE ADULTS WERE FOUND ATTACKING RIPENING FRUIT, CAUSING IT TO DROP. PUNCTURING THE FRUIT ALLOWS SECONDARY PATHOGENS TO ENTER AND CAUSE ROTTING. MOST OF THE PROBLEM ON CITRUS INVOLVES EARLY AND MIDSEASON ORANGES, TANGERINES, AND SATSUMAS, WITH INJURY USUALLY OCCURRING BETWEEN SEPTEMBER 1 AND LATE NOVEMBER, ACCORDING TO GRIFFITHS AND THOMPSON (1957). THEY ADD THAT THE BUGS MAY START AT ONE MARGIN OF A GROVE AND MOVE ACROSS IT, FEEDING ON AND CAUSING THE FRUIT TO DROP. WATSON AND BERGER (1937) STRESS THAT THE LEAFFOOTED BUG HAS A HABIT OF COLLECTING IN LARGE COLONIES, AND THAT ONE TREE MAY BE SWARMING WITH THEM WHILE A NEIGHBORING TREE IS ENTIRELY FREE.

PECAN IS ONE OF THE OTHER CROPS ATTACKED. L. PHYLLOPUS IS ONE OF THE BUGS THAT CAUSES BLACK PIT AND KERNEL SPOT OF PECAN. EBELING (1959) DESCRIBES BLACK PIT AS A BLACKENING OF THE INSIDE OF THE PECAN. NUTS WITH BLACK PIT FALL PREMATURELY. PUNCTURES MADE BY THE BUGS AFTER THE NUTS HAVE PASSED THE "WATER STAGE" DO NOT CAUSE BLACK PIT, BUT INSTEAD THE CONDITION CALLED "KERNEL SPOT," WHICH CONSISTS OF DARK BROWN OR BLACK SPOTS ON THE KERNELS. OTHER CROPS SOMETIMES HEAVILY INFESTED INCLUDE POTATO, TOMATO, SUNFLOWER, BEAN, COWPEA, EGGPLANT, BELL PEPPER, OKRA, CUCURBITS, GRAIN SORGHUM, BLUEBERRY, BLACKBERRY, PLUM, PEACH, LYCHEE, POMEGRANATE, LOQUAT, PEAR, APPLE, PERSIMMON, OAT, AND TO LESSER EXTENT RYE, WHEAT, BARLEY, AND SOYBEAN.

SOME OF THE ORNAMENTALS ATTACKED INCLUDE BEARGRASS, HIBISCUS, CRAPE MYRTLE, LIGUSTRUM, IXORA, GLADIOLUS, GERBERA DAISY, AND ROSE. WILD HOSTS INCLUDE THISTLE, JIMSONWEED, GOLDENROD, AND ELDERBERRY. PODS OF LEGUMINOUS COVER CROPS SUCH AS BEGGARWEED AND CROTALARIA OFTEN ARE ATTRACTIVE TO THIS BUG. THERE ARE NUMEROUS RECORDS OF L. PHYLLOPUS CAUGHT IN STEINER TRAPS PLACED IN CITRUS TREES. L. PHYLLOPUS IS A MULTIVOLTINE SPECIES. ADULTS HAVE BEEN TAKEN ALL MONTHS OF THE YEAR IN THE DEEP SOUTH, BUT POPULATIONS ATTAIN PEAK NUMBERS DURING THE WARMER MONTHS. MORE LIFE HISTORY INFORMATION IS NEEDED.

CONTROL: THE LEAFFOOTED BUG IS CONTROLLED BY APPLICATION OF INSECTICIDES, CULTURAL PRACTICES, BY SHAKING OF CONCENTRATIONS INTO KEROSENE CONTAINER DURING COOL WEATHER, AND BY HAND PICKING. FOR INSECTICIDE RECOMMENDATIONS CONSULT YOUR LOCAL COUNTY AGENT OR THE LATEST STATE AND FEDERAL CONTROL GUIDES. IN FLORIDA CITRUS GROVES THE LAST SPRAY OF THE SEASON THAT NORMALLY CONTAINS AN INSECTICIDE IS THE SCALICIDE APPLIED IN JUNE OR JULY. THIS DOES NOT PREVENT A BUILD-UP OF LEAFFOOTED BUGS LATER IN SUMMER ON GROVE COVER CROPS. SEVERAL AUTHORITIES HAVE MENTIONED THE IMPORTANCE OF COVER CROP MANAGEMENT AND ELIMINATION OF NEARBY MISCELLANEOUS HOSTS. GRIFFITHS AND THOMPSON (1957) AND ZIEGLER AND WOLFE (1961) MENTIONED THAT IF LEAFFOOTED BUGS ARE EXPECTED TO BE A PROBLEM, THE COVER CROPS SHOULD BE CHOPPED AND DISKED IN SEPTEMBER BEFORE GREEN CITRUS FRUITS HAVE BECOME ATTRACTIVE TO THE ADULTS OR WHILE THE BUGS ARE STILL IN AN IMMATURE, WINGLESS STAGE. FIELDS CONTAINING WATERMELONS, CITRONS, HAIRY INDIGO, CROTALARIA, VELVET BEANS, THISTLES, ETC., SHOULD BE EXAMINED, AND IF INFESTATIONS OF BUGS ARE FOUND IN SEPTEMBER IN FIELDS ADJACENT TO EARLY RIPENING CITRUS VARIETIES, THESE FIELDS SHOULD BE THOROUGHLY CULTIVATED. CAUTION MUST BE EXERCISED TO MAKE SURE CITRUS IS NOT IN AN ATTRACTIVE CONDITION TO THE BUGS; OTHERWISE IF WINGED FORMS ARE PRESENT THEY MAY CONCENTRATE ON THE CITRUS AFTER OTHER NEARBY HOSTS ARE DESTROYED. THE CITRUS BUG, LEPTOGLOSSUS GONAGRA (FABRICIUS), IS ANOTHER COREID KNOWN TO DAMAGE CITRUS AFTER BUILDING UP ON MELON-LIKE CITRONS.

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