**Oak Treehopper, *Platycotis vittata* (Fabricius) (Insecta: Hemiptera: Membracidae)**

F. W. Mead

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**Introduction**

The oak treehopper is fairly common on deciduous and evergreen oaks, *Quercus* spp., where it is sometimes sufficiently abundant to cause concern to owners of valuable shade trees. In Florida we have reports of professional pest control companies being hired to control this pest. However, damage by a colony of this species of treehopper is minor and essentially confined to small oviposition scars in twigs. This contrasts with the closely related thorn bug, *Umbonia crassicornis* (A. & S.), which can, when abundant, cause considerable dieback or even death of small trees.

**Distribution**

Funkhouser (1951) gives the distribution as Brazil, Mexico, and the United States. This species also has been reported from Vancouver Island, Canada. The recorded distribution in the United States is primarily in the states that form a broad U-shaped curve from Pennsylvania and New Jersey south through the Carolinas and Georgia to Florida, then west to Mississippi, Texas, Arizona, California, and north to Oregon (and Vancouver) where the coastal climate is moderate. Interior records include Ohio, Illinois, Tennessee, and western North Carolina, but in general, there is a scarcity of records from the great heartland areas of the United States. The 40th parallel serves as an approximate northern range limit with few exceptions.

**Description**

Oak treehoppers are large, heavy-bodied, triangularly shaped insects often marked with stripes and usually, but not always, bearing a frontal horn. The length is 8 to 9 mm not counting the horn; with the horn the length varies from 10 to 13 mm. This species is highly variable in color and in the size of the horn. Four of the variations have achieved formal nomenclatural status but three have been relegated to mere varieties or forms by Dozier (1920) and Cook (1955). Dozier observed a caged colony on oak at Gainesville, Florida, change from the striped form to the mottled appearance in two weeks time. Cook found the male genitalia of all four varieties are similar. He concluded, “...though intergrades among the forms exist in many

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localities, all four can frequently be recognized as distinct forms and therefore the names serve a useful purpose; that of designating a certain morphological type.”

**Life History and Behavior**

Dozier (1920) reported that the life history of this species had never been worked out, but that his observations tended to show it is a single-brooded species. Florida records are puzzling, but there is no doubt that the main hatch is in the spring with peak numbers usually occurring from the second half of March through early May. FDACS–DPI has several records showing occurrence in November, December, and January, but none in February nor any from August through October. In the northern part of its range it seems likely that hatching is delayed until late spring since most of the northerly records known to the author are from June to early October. There are five nymphal instars. Behavior-wise, individuals of this species are gregarious. Dozier (1920) found large colonies of from 50 to 100 treehoppers clustered together on oak branches.

Beamer (1930) even observed maternal instinct in females of *P. vittata* on oak in California. Females were observed to “stand sentinel” between their respective colonies of nymphs and the body of the tree. A female would allow herself to be picked up rather than fly away from her perch. Beamer watched one female repel a small vespid wasp approximately a dozen times from her colony of nymphs. After the vespid apparently grew discouraged and flew away, “…the membracid flew to her young, crawled over the spot where the vespid had alighted, apparently examined to see that they were uninjured; then making sure all was well again flew to the twig just below the nest, turned her head toward her young and stood immobile.”

**Cook’s Key to Varieties of *Platycotis vittata***

1. Without anterior pronotal horn . . . . . 2

1’ Anterior pronotal horn present . . . . . 3

2. Pronotum brown to brownish-green, with or without longitudinal vittae . . . . . *vittata* (Fabricius)

2’ Pronotum yellow, with four red longitudinal vittae . . . . . var. *lineata* (Fairmaire)

3. Pronotum brown to brownish-green, with or without longitudinal vittae . . . . . var. *sagittata* (Germar)

3’ Pronotum yellow, with four red longitudinal vittae . . . . . var. *quadrivittata* (Say)

**Hosts**

In Florida, FDACS–DPI files show adults and nymphs reported several times on each of the following oaks: laurel oak, *Quercus laurifolia*; water oak, *Q. nigra*; turkey oak, *Q. laevis*. Other plant species recorded as “hosts” show only adult treehopper present. These specimens most likely were strays temporarily resting on plants near infested oak trees. DPI has over a dozen records of the oak treehopper being caught in Steiner traps hanging in various kinds.
of citrus trees, primarily calamondin, *Citrus mitis*. Other hosts include live oak, *Quercus virginiana*, in Florida and cut-leaved birch, *Betula alba* variety in Ohio as reported by Dozier (1920). McAtee (1921) listed red oak, *Quercus rubra*, at Plummer’s Island, MD, near Washington, DC as a host and Osborn (1940) reported examples taken from river birch, *Betula nigra*, in Ohio. DPI has adult specimens collected in Raleigh, NC, May 10, 1952, on white oak, *Quercus alba* and blackjack oak, *Q. marilandica*, by B.K. Dozier. At Raleigh, Dozier also collected nymphs and adults on *Q. rubra*, October 18, 1951. Essig (1958) reported that he collected a freshly hatched colony from a cultivated chestnut tree (presumably in California).

**Management**

Ordinarily this species does not do enough damage to justify control measures.

**Acknowledgements**

Appreciation is extended to Dr. Dale H. Habeck, Professor (retired), UF/IFAS Department of Entomology and Nematology, Gainesville, who provided records of *Platycotis vittata* from the files of the main experiment station at Gainesville. UF/IFAS Extension entomologist James E. Brogdon was consulted for management recommendations.

**Selected References**


