

ACTIVITY AND DISPERSAL OF FIRST INSTAR
LARVAE OF THE CITRUS BLACKFLY¹

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Abstract.—We found that a small portion (0.2–0.3%) of first instar *Aleurocanthus woglumi* Ashby are mobile for 2–4 h and will crawl up to 25–30 mm. When leaves overlap these highly mobile individuals can crawl from one plant to another.

The citrus blackfly (*Aleurocanthus woglumi* Ashby)² is a major pest of citrus that was discovered in the Ft. Lauderdale area of Florida in January, 1976. It is currently the target of an eradication effort by the Division of Plant Industries (Florida Department of Agriculture) and the Animal and Plant Health Inspection Service (USDA). A quarantine on the movement of all plants that have been shown to support full *A. woglumi* development is included in the eradication effort. However, there are many plants upon which females will oviposit, but which will not support complete development of the immature stages (e.g. orange jasmine, *Murraya paniculata* (L.) Jack) (Howard, F. W., and P. L. Neel, 1977. Host plant preferences of citrus blackfly (*Aleurocanthus woglumi* Ashby) (Homoptera: Aleyrodidae) in Florida. Proc. Int. Soc. Citriculture 1977 (in press)). This study was initiated to determine if first instar larvae of *A. woglumi* are capable of crawling from the leaves of one plant to those of another.

We field-infested 4 orange jasmine plants (*M. paniculata*) with *A. woglumi*. After 3–4 egg spirals were oviposited on each leaf, the plants were returned to the laboratory and uninfested citrus rootstock plants were put into contact with them. In addition, 5 uninfested citrus leaves were stapled to 5 of the infested orange jasmine leaves, harboring a total of 300 *A. woglumi* eggs, to provide a dispersal opportunity for first instar larvae. The length of time the first instar larvae are mobile after hatching was also observed.

After hatching, first instar larvae are mobile and seek feeding sites for up to 3–5 hours ($n = 3$) before becoming immobile. Although no larvae were found on the citrus plants in contact with the orange jasmine, one larva was found on the citrus leaves stapled to the orange jasmine leaves. This individual represented $\frac{1}{300}$ (0.3%) of the population and it had crawled a distance of 28 mm. It was previously observed that first instar *A. woglumi* are mobile for 2–4 hours and that 0.2% ($\frac{1}{500}$) of the population are able to crawl up to 38 mm from the egg spiral (Dietz, H. F., and J. Zetek, 1920. The blackfly of citrus and other subtropical plants. USDA Agric. Bull. #885, 55 pp). The presence of these highly mobile individ-

uals in populations of *A. woglumi* presents the possibility that larvae may crawl from an unsuitable host to a suitable one if contact between the plants occurs.

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Footnotes

¹ Florida Agricultural Experiment Station Journal Series No. 520.

² Homoptera: Aleyrodidae.



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