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## Biological Control with Insects: The *Melaleuca* Psyllid<sup>1</sup>

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(*Boreioglycaspis melaleucae*, Hemiptera:  
Psyllidae)

**Host:** *Melaleuca quinquenervia* (Cav.) S.T.  
Blake (Myrtaceae)

*Boreioglycaspis melaleucae* is an Australian sap-sucking insect in the bug family Psyllidae. It was imported into Florida to help control *Melaleuca* trees that are invading the Everglades and surrounding ecosystems. Initial releases occurred during early Spring 2002, so it is too early to determine whether persistent populations have become established at field sites. Field-reared adults have been recovered, which is encouraging.

The *melaleuca* psyllid has 5 nymphal instars. Early instars crawl about the leaves, but later instars are more sessile unless disturbed. Nymphs produce copious amounts of honeydew and also exude waxy filaments from glands located on their dorsum. These filaments form a dense white covering that may partially conceal later instars and facilitate locating colonies in the field.

When viewing with the naked eye, adult psyllids are unadorned, small insects about 3mm long and pale yellow-orange to white in color. Adults can be observed jumping between leaves and plants. They live about 3 weeks. Females lay an average of 80 eggs during their lifetime. Each egg has a spine-like projection near one end, which the female inserts into the plant tissue. Nymphs begin hatching approximately 18 days after oviposition and there is no evidence that egg development is delayed when conditions are unfavorable. Total developmental time from egg to adult is about 42 days. The entire life cycle of the *melaleuca* psyllid is completed on the tree, which suggests this insect can persist under permanently-flooded conditions, unlike the *melaleuca* weevil, which must complete its life cycle in the soil.

Both adults and nymphs feed on *melaleuca*, but damage is attributed mostly to the nymphs. Tender, expanding buds and leaves as well as mature older leaves are destroyed by nymphs. When populations are large, damage may extend to stems that appear somewhat woody. Saplings under heavy attack in the laboratory eventually wilt and die.

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