

Pest Alert

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Asian citrus psyllid - A serious exotic pest of FL citrus

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The Asian citrus psyllid, *Diaphorina citri* Kuwayama and the African citrus psyllid, *Trioza erytreae* (del Guercio) are two of the most serious citrus pests in the world. The Asian citrus psyllid is particularly important to Florida because it is established in Florida.

The Asian citrus psyllid causes damage to the crop primarily by transmission of the pathogens that cause greening, or huanglongbing, which means “yellow dragon disease” in Chinese. Huanglongbing, the official name of the disease, has been loosely translated as yellow shoot disease in English language publications because the disease causes characteristic yellow shoots. In addition to yellow shoots, the disease causes chlorosis resembling zinc deficiency, twig dieback and reduced fruit size and quality. Fruit do not color up properly, leading to the name greening. The disease complex may be the most devastating citrus disease in the world. The pathogen, *Liberibacter* spp., are phloem-limited bacteria. In surveys conducted in Miami-Dade County in August 2005, the disease was found to be established in Florida.

The interaction between the vector and the pathogen is poorly known. Acquisition times of 30 minutes for Asian psyllids (Roistacher 1991) and 24 hours for African psyllids (Buitendag and von Broembsen 1993) have been reported. The pathogens are thought to multiply in the vectors (Aubert 1987). Adults and fourth and fifth instar Asian citrus psyllid nymphs are able to transmit the pathogen after 8 - 12 days (Roistacher 1991). A considerably shorter latent period of 24 hours has been reported for African greening (Buitendag and von Broembsen 1993). There are conflicting reports as to whether *Liberobacter* spp. are transmitted transovarially (Buitendag and von Broembsen 1993; Roistacher 1991; van den Berg *et al* 1992).

Adult Asian citrus psyllids are small (3-4 mm). They have mottled brown wings (Fig. 1). Characteristically, they sit at an angle to the shoot or leaf on which they feed. Adults are very active jumping insects. Eggs are bright yellow and deposited on newly emerging “feather flush”. Nymphs are green or dull orange. They feed on leaves and stems and can be very difficult to see. Asian citrus psyllids are most likely to be found on new shoots, and population increase occurs during periods of active plant growth.

Asian citrus psyllids evidently are restricted to citrus and closely related Rutaceae. A preferred host is *Murraya paniculata*, an ornamental that is widely grown in southern Florida. Populations on this plant can be extremely high (Fig. 2). Inspection of this plant may be the best way to survey for Asian citrus psyllids. Citrus psyllids may be sent to the Division of Plant Industry offices in Gainesville for identification and sent for citrus greening pathogens testing.

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Fig. 1. Asian citrus psyllid adult.



Fig. 2. Asian citrus psyllids on *Murraya paniculata*.

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