

Asiatic and African citrus psyllids

What are Asiatic and African citrus psyllids?

The Asiatic citrus psyllid (*Diaphorina citri*) and African citrus psyllid (*Trioza erytreae*) are sap-sucking bugs that are serious pests of citrus. Their feeding causes direct damage to citrus plants, however it is their ability to transmit the bacterial disease huanglongbing that is most damaging. All commercially grown citrus are hosts, as well as some Australian native citrus and citrus relatives that are distributed widely in native or naturalised vegetation, home gardens and parks (e.g. *Murraya* – native and ornamental varieties of orange jasmine and curry tree). Neither of these psyllids nor huanglongbing are present in Australia, however they would present a major economic threat to citrus growers if they became established. The Asiatic citrus psyllid has previously entered Australia and was eradicated.



Asiatic citrus psyllid eggs, nymphs and white waxy secretions



African citrus psyllid adult and eggs

What do they look like?

Adult Asiatic citrus psyllids are about 3-4 mm long with a mottled brown body and a light brown head. The forewing is mottled and has a brown band extending around the periphery of the outer half of the wing. Antennae have black tips with two small light brown spots on the middle segments. Adult African citrus psyllids are about 4 mm long with a light brown-grey body and a black head. They have large transparent forewings with clearly outlined veins. Antennae are almost entirely black. The psyllids may be covered with a whitish, waxy secretion making them appear dusty.

What can they be confused with?

Psyllids can be confused with aphids, however psyllids are more active and jump at the slightest disturbance compared to aphids which are more sluggish. Psyllid nymphs (immature stages) can also be confused with soft scale insects, such as soft brown scale (*Coccus hesperidum*), a common pest of citrus throughout Australia, although on close examination the psyllid nymphs have clear body parts compared with scale.

What should I look for?

Any psyllid found on citrus should be considered suspect as there are no psyllids found on citrus in Australia. When present, Asiatic and African citrus psyllids are commonly found aggregated on young, tender flush. When young flush is not available, psyllid adults can usually be found on the underside of leaves feeding in the area of the midvein. They have a distinctive feeding stance with their head down and body raised from the surface at a 45 degree angle.

New leaf growth is most severely damaged, and may show curling, notching and deformation, as well as leaf drop and sometimes death of shoots. For Asian citrus psyllids, long, white, waxy secretions are a clear indicator of this species. For both species, honeydew



may also be present that can lead to black sooty mould development. African citrus psyllid nymphs also produce characteristic cup-shaped, open galls on the under surface of young leaves. Also look for signs of huanglongbing infection which include yellowing of shoots, chlorosis and mottling that crosses leaf veins, out of phase flushing, branch dieback, lopsided, hard, bitter-tasting fruit and excessive fruit drop.

Look for eggs of *D. citri* which are bright yellow/orange, about 0.3 mm long and laid in groups on buds and young flush, on the tips of growing shoots, and on and between unfurling leaves, with the long axis vertical to the surface. Eggs of *T. erythrae* are yellow or orange, about 0.5 mm long, cylindrical shaped with an upturned sharp point. Eggs are laid mostly along the edges or midribs of young, tender, actively growing flush, with the long axis horizontal to the surface, as well as occasionally being laid on flower buds and young fruit.

How do they spread?

Psyllids are spread locally by flight and over longer distances via the movement of plant material infested with eggs or nymphs. Strong winds, such as those associated with storms and cyclones can also lead to long distance spread.



African citrus psyllid nymphs and galls

Peter Stephen, Citrus Research International, Bugwood.org



Asiatic citrus psyllid adults

David Hall, USDA Agricultural Research Service, Bugwood.org

Where are they now?

The Asiatic citrus psyllid occurs widely throughout Asia, in parts of South America, Central America, the Caribbean, Mexico, southern USA and the islands of Mauritius and Reunion. Regions closer to Australia where it is found include Indonesia, East Timor and Papua New Guinea. The African citrus psyllid has a more restricted distribution, occurring widely throughout sub-Saharan Africa, on some islands in the Atlantic and Indian Oceans, in Saudi Arabia, Yemen, Portugal and Spain.

How can I protect my orchard from the Asiatic and African citrus psyllids?

Check your orchard frequently for the presence of new pests and unusual symptoms. Make sure you are familiar with common citrus pests so you can tell if you see something different.

If you see anything unusual, call the Exotic Plant Pest Hotline



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