EXOTIC PEST - FOR SUSPECT DETECTIONS CALL THE HOTLINE ON 1800 084 881

Citrus blackfly (*Aleurocanthus woglumi*)

EXOTIC PEST DETECTION & SAMPLING GUIDE

This resource has been developed as part of the collaborative program 'Boosting diagnostic capacity for plant industries'. Funding for this project is from the Rural R&D for Profit Program, Federal Department of Agriculture and Water, and the Grains Research and Development Corporation, with funds from other RDC's – Sugar RDC, Wine Australia, Cotton RDC, Forestry RDC, and Hort Innovation.

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Background

Citrus blackfly is a serious pest that can infest over 300 host plants including citrus (preferred host), avocado, banana, coffee, ginger, grape, and papaya. It is native to India and is now commonly found throughout the United States and South America, Africa, and throughout the Asia Pacific. While this species is exotic to Australia it is found in neighbouring Papua New Guinea.

How would I identify citrus blackfly?

Identification by morphology

Adults are dark grey to black, measuring 1.3-1.7 mm in length with a pale yellow head, white or clear legs and red-brown eyes. They have noticeable clear spots on the forewings that are arranged in a banding pattern. Within one day of emerging from pupal cases, the red-coloured body of the adult turns a slate-grey colour as it becomes covered by a fine wax powder.

Pupae are glossy black and oval-shaped with a white fringe and distinct black spines or bristles depending on the developmental stage. They range between 0.9-1.3 mm long and 0.6-0.7 mm wide, with females being generally larger than males. There are four nymphal developmental stages ranging from brown, dark brown to black as they progress through each stage. Nymphs have a similar appearance to scale and are found on the underside of leaves. Eggs are banana shaped, are 0.2 mm in size, and are laid in a distinctive spiral pattern in batches of 30-50 eggs. Egg batches are frequently found on the underside of leaves.

Identification by damage

Adults are sap feeders and extensive feeding deprives plants of nutrients and water. Citrus blackfly commonly feed on young fruit and leaves in the lower canopy, and as they feed, they secrete honeydew – a sugary substance that promotes sooty mould growth. This fungal growth on fruits and leaves can negatively affect photosynthesis and significantly reduce fruit set. In addition, leaves can become distorted from feeding.

How do I scout for citrus blackfly?

Young plants and leaves are preferred by the Citrus blackfly. Carefully inspect these parts of the plant (particularly the underside of leaves) for juveniles and eggs, and also look for evidence of ants, which are attracted to honeydew and sooty mould.

Distorted leaves may be an indicator of sap feeding. Try to inspect the underside of leaves when good light is available, or the features of adults and nymphs will be difficult to view amidst the sooty mould. A flashlight may be useful for low light surveillance.

For ongoing surveillance, deploy yellow sticky traps or cards, which are attractive to whitefly species, in areas where ants, honeydew and sooty mould are detected. Applying Tanglefoot Insect Barrier to the attachment point of the trap will limit by-catch from ants.

Could it be confused with an endemic species?

Citrus blackfly larvae can be confused with other species of blackfly and whitefly, most notably the orange spiny whitefly (*Aleurocanthus spiniferus*), a species present in Australia that has morphologically similar pupae and adult life stages. This similarity will make confident field identification difficult. A trained entomologist is required to make an accurate identification, which may require examining juvenile stages on slides under a microscope to make out specific morphological details.

Figure 1. Citrus blackfly (*Aleurocanthus woglumi*) damage

Cover image: Florida Division of Plant Industry , Florida Department of Agriculture and Consumer Services, Bugwood.org
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What should I do if I suspect citrus blackfly?

Citrus blackfly is a priority plant pest, exotic to Australia. If you notice an unusual blackfly or whitefly species call the **Exotic Plant Pest hotline on 1800 084 881**. The hotline will divert you to the appropriate state biosecurity agency, which will investigate the suspect detection further. To support an investigation you should take note of:

- The detection location (take a GPS coordinate using your phone);
- The host plant on which the suspect detection has been made;
- Damage symptoms (e.g. distorted leaves, sooty mould); and
- A photo of all life stages observed (taking close-up photos of the same specimen from multiple angles is most useful for identification).

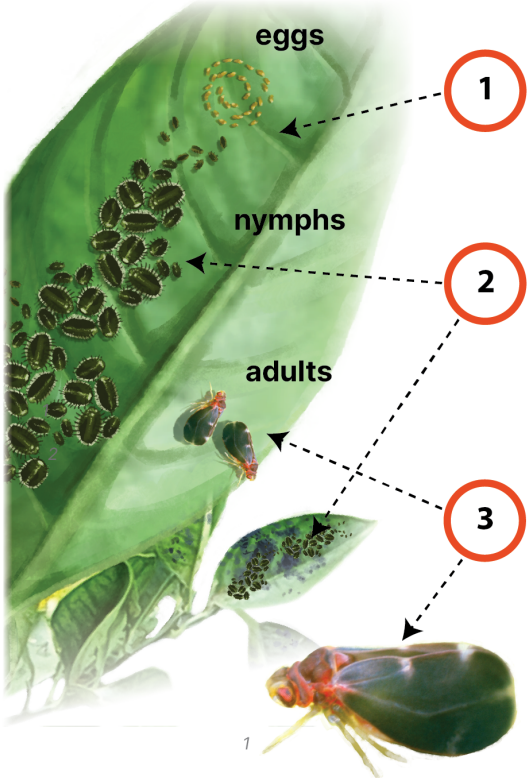
Taking a sample

Taking a sample will also assist in a biosecurity investigation. Collect nymphs on the plant part on which they are found (e.g. young leaves) and place in a ziplock bag – double bagging of specimens is ideal. Label the bag with the date and collection location and keep in the fridge in case a sample is needed by the biosecurity agency. If suspect adult Citrus blackfly are collected from pest monitoring traps, place in a jar or vial with 80-95% isopropyl alcohol (rubbing alcohol) or methylated spirit.

Figure 2. Reporting decision making for Citrus blackfly (*Aleurocanthus woglumi*)

You have detected sooty mould, high ant activity, and/or distorted leaves in your citrus trees. **Should you report it?**

If you answer yes to ANY of the following questions, it could be the **exotic citrus blackfly** (*Aleurocanthus woglumi*). Report it!



1. Do you find clumps of 30 to 50 light coloured eggs laid in distinctive spiral patterns on leaves? **Yes** ☑
2. Do you find brown to black coloured immobile "scales" on leaves, no more than 1 to 2 mm in length, some of which may have a white fringe? **Yes** ☑
3. Do you find small insects, up to 2mm long, with red brown eyes and dark grey to black wings with white bands? **Yes** ☑

Exotic citrus blackfly can be easily confused with other species like the orange spiny whitefly, but it cannot be reliably distinguished in the field, so always take a sample and report!

[1] *Florida Division of Plant Industry , Florida Department of Agriculture and Consumer Services, Bugwood.org*
Figure design and all other illustrated components: Elia Pirtle, eliapirtle.com

More information
CABI, Citrus blackfly (*Aleurocanthus woglumi*)

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