

Acacia whitefly

Tetraleurodes acaciae (Quaintance, 1900)
(Hemiptera: Aleyrodidae)

FIRST DETECTION

An extremely heavy infestation of whiteflies was collected and tentatively identified from Waikīkī, O‘ahu in October 2021. Subsequent surveys found this new whitefly at additional sites throughout Honolulu. Additional reports suggest this pest is widespread across the island.

CONFIRMATION

Ian C. Stocks, United States Department of Agriculture-National Identification Services, confirmed the identity of this new invasive whitefly in Hawai‘i as *Tetraleurodes acaciae*, the acacia whitefly.

THIS IS A NEW STATE RECORD FOR HAWAI‘I.

DESCRIPTION

The acacia whitefly nymphs and pupae are shiny black with a white wax fringe and range in size from about .1mm to .7mm (Fig. 2).

DAMAGE AND SYMPTOMS

Whitefly feeding decreases plant vigor. Infestations may result in leaf yellowing, wilting, and defoliation. Infestations of whiteflies also produce copious amounts of honeydew excretions and may lead to excessive sooty mold growth.

DISTRIBUTION

O‘ahu [as of November 2021]

CONCERN

Preferred hosts include common urban and landscape trees in Hawai‘i such as *Cassia* (shower trees) and *Bauhinia* (orchid trees). Endemic trees such as *Erythrina sandwicensis* (wiliwili), *Acacia koa* (koa), and *Mezoneuron (=Caesalpinia) kawaiensis* (uhiuhi) are also at risk of infestation by this new pest.

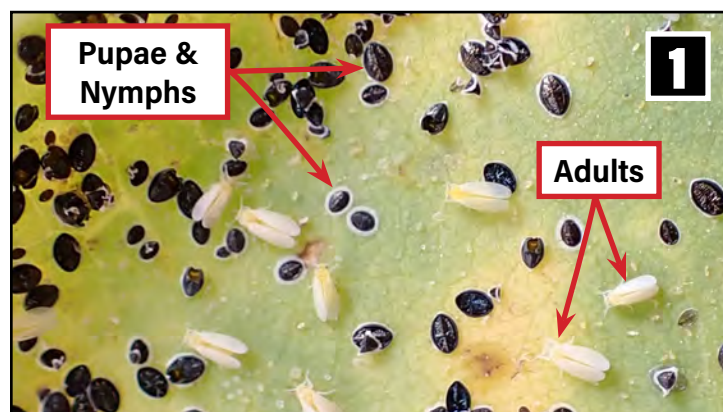


Fig. 1. Various life stages of *T. acaciae* on lower leaf surface.

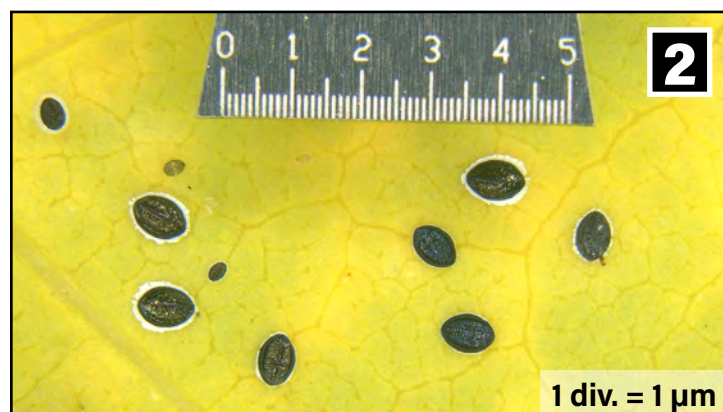


Fig. 2. Pupae and nymphs on lower leaf surface.



Fig. 3. Pupae with white wax fringe on lower leaf surface.

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Fig. 4. Upper leaf surface of *Erythrina variegata* leaf infested by *T. acaciae*.

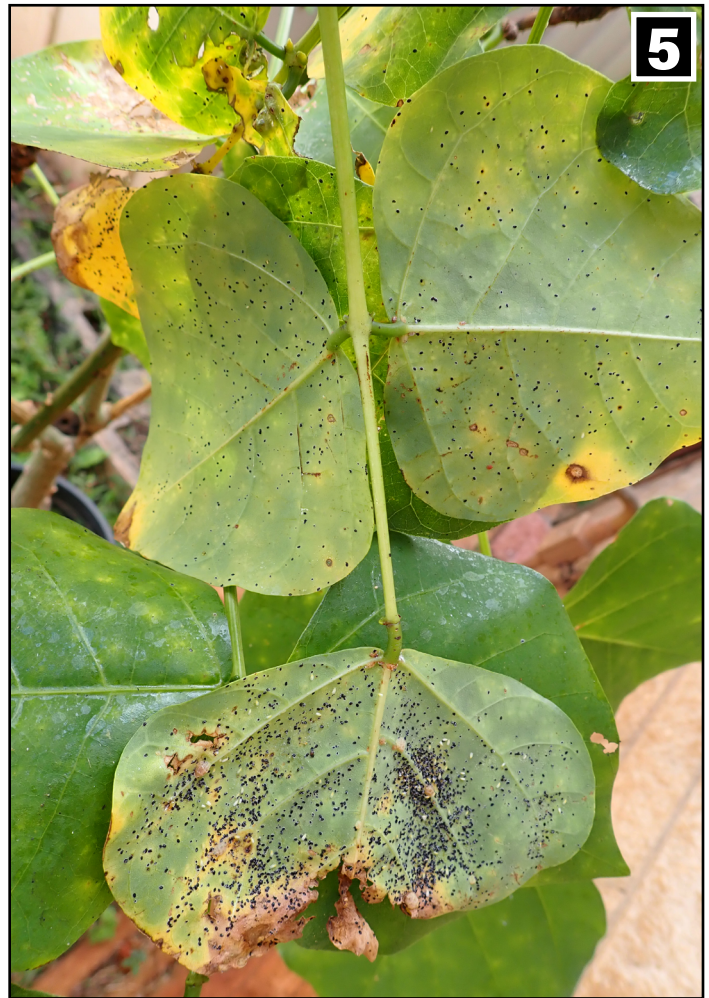


Fig. 5. Lower leaf surface of *Erythrina variegata* leaf infested by *T. acaciae*.



Fig. 6. Upper leaf surface of *Erythrina variegata* leaf infested by *T. acaciae*.

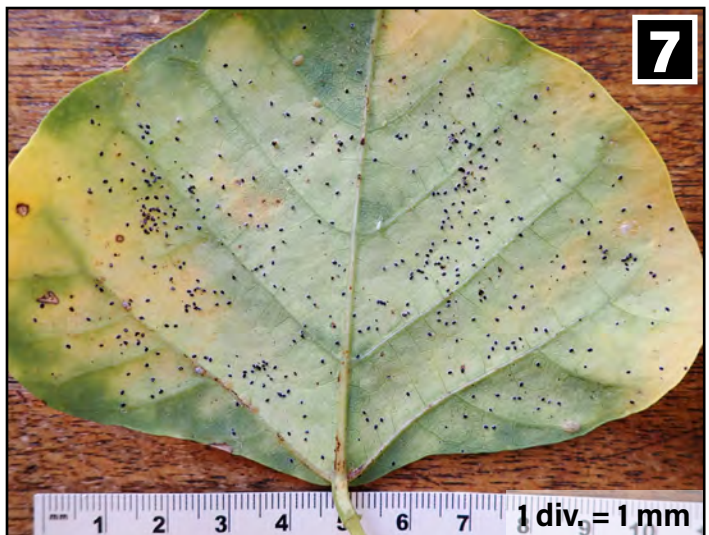


Fig. 7. Lower leaf surface of *Erythrina variegata* leaf infested by *T. acaciae*.

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Fig. 8. Infestation of *T. acaciae* on *Cassia x nealiae* (rainbow shower tree) showing leaf yellowing.



Fig. 9. Infestation of *T. acaciae* on *Cassia x nealiae* (rainbow shower tree) showing wilting.

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HOSTS

Major hosts are plants within the **Fabaceae** family including species in the genera:

Acacia, *Bauhinia*, *Bolusanthus*, *Caesalpinia*, *Calliandra*, *Cassia*, *Centrosema*, *Cercis*, *Chamaecrista*, *Cladrastis*, *Coursetia*, *Cytisus*, *Dalbergia*, *Desmodium*, *Diphysa*, *Erythrina*, *Gliricidia*, *Gymnocladus*, *Hardenbergia*, *Indigofera*, *Inga*, *Kennedia*, *Maackia*, *Millettia*, *Pachyrhizus*, *Parkia*, *Phaseolus*, *Piscidia*, *Pithecellobium*, *Prosopis*, *Robinia*, *Sophora*, *Templetonia*, *Tephrosia*, and *Wisteria* (Dooley 2011).

Other hosts outside of the Fabaceae family are reported (Table 1).

On O'ahu *Tetraleurodes acaciae* has been collected from:

Cassia x nealiae (rainbow shower)

Erythrina sandwicensis (wiliwili; endemic species)

Erythrina variegata (Indian coral tree)

NATURAL ENEMIES COLLECTED IN HAWAII

Signiphora sp. (Hymenoptera: Signiphoridae);

Bothrocalvia pupillata, *Diomus roseicollis*, *Delphastus catalinae*, and *Nephaspis bicolor* (Coleoptera: Coccinellidae).

REFERENCE

Dooley, J.W. Whitefly pupa of the world: compendium and key to the genera of the Aleurodicinae & the Aleyrodinae. USDA, APHIS, PPQ, 2011. <https://keys.lucidcentral.org/keys/v3/whitefly/index.htm>. Accessed 10 November 2021.

Table 1. Hosts of *T. acaciae* outside of the Fabaceae family (Dooley 2011).

Family	Genus
Anacardiaceae	<i>Spondias</i>
Arecaceae	<i>Chamaedorea</i>
Bombacaceae	<i>Pseudobombax</i>
Burseraceae	<i>Bursera</i>
Caprifoliaceae	<i>Symphoricarpos</i>
Euphorbiaceae	<i>Jatropha</i>
Geraniaceae	<i>Pelargonium</i>
Malvaceae	<i>Pachira</i>
Moraceae	<i>Morus</i>
Myrtaceae	<i>Melaleuca</i>
Nyctaginaceae	<i>Bougainvillea</i>
Rhamnaceae	<i>Rhamnus</i>
Rosaceae	<i>Cotoneaster</i>
Rosaceae	<i>Rosa</i>
Salicaceae	<i>Populus</i>
Solanaceae	<i>Capsicum</i>
Urticaceae	<i>Parietaria</i>



Fig. 10. Nymphs and pupae on rainbow shower lower leaf surfaces.