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Hawaii Institute of Tropical Agriculture and Human Resources
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BLACK TWIG BORER ON ANTHURIUM

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Common Name: Black twig borer
Scientific Name: *Xylosandrus compactus* (Eichhoff)
Order: Coleoptera
Family: Scolytidae

Damage

The beetle bores a tiny hole (Fig. 1) into the older leaf petiole and causes yellowing and eventually the death of the leaf. The leaf petiole appears discolored or wilted from the beetle entry hole distally to the terminal of the petiole (Fig. 2). The stem cane or "gobo" may also be attacked, causing the death of the plant. The black twig borer can attack plants in fairly good health, while other members of the family Scolytidae commonly attack only dead or dying plants.

Other Hosts

The black twig borer is known to attack over 100 species of plants in 44 families, including avocado, citrus, cacao, coffee, hibiscus, litchi, macadamia, orchids, pikake, and red ginger.

Figure 1. A tiny hole is bored in the older leaf petiole, causing yellowing and eventually the death of the leaf.

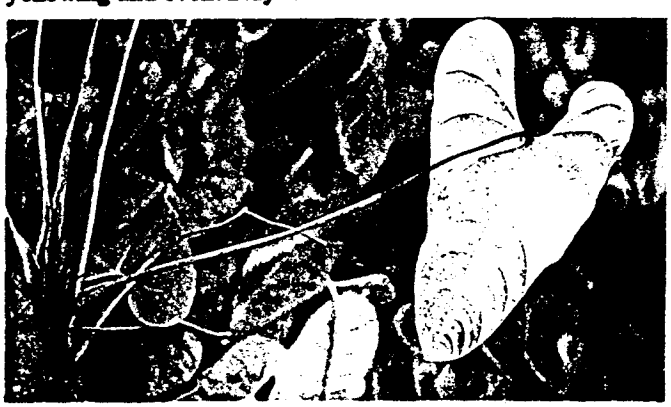

Figure 2. Leaf petiole appears discolored or wilted from the beetle entry hole distally to the terminal of the petiole.

Figure 3. White, legless grubs feeding on ambrosia fungus inside the gallery or petiole.

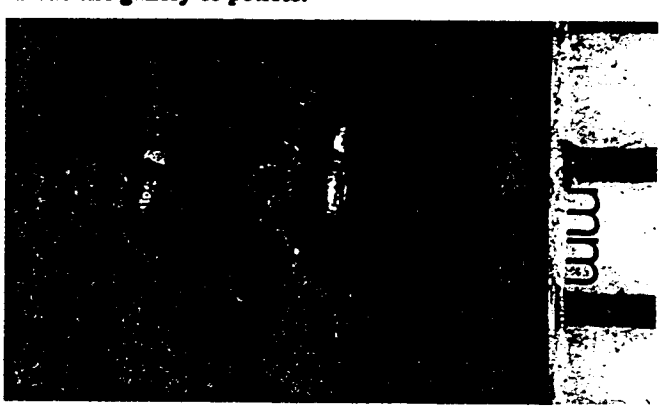

Figure 4. The adult female (right) is shiny black and has a body length of about 1/16 inch. The adult male (left) is reddish brown, has a body length of about 1/32 inch, and cannot fly.

Distribution

Found in Hawaii in 1961, the black twig borer also occurs in Japan, Indonesia, Vietnam, Malaysia, Sri Lanka, India, Madagascar, Mauritius, Seychelles, tropical Africa, Fiji, and in Florida, Georgia, Alabama, and Louisiana.

Description and Life Cycle

Egg. Oval, white eggs with a smooth surface are laid in a cluster on the ambrosia fungus inside the gallery. They hatch in three to five days.

Larva. The larvae are white, legless grubs with a distinct head capsule (Fig. 3). The grubs feed on the ambrosia fungus for a minimum of seven days and pupate within the gallery.

Pupa. The newly formed pupa is white and changes to light brown with black wings as it approaches maturity. The pupal stage has a minimum duration of six days.

Adult. The newly emerged adult female is light brown and turns a shiny black in three to four days. It has a body length of about 1/16 inch. The newly emerged adult male is light brown and turns reddish brown in three to four days. The male has a body length of about 1/32 inch and is incapable of flying (Fig. 4). The beetles remain in the gallery for seven to nine days; mating apparently occurs during this time. Afterwards, the females emerge from the gallery and bore into a new host petiole. Then, over a period of five to nine days, a gallery is constructed, the ambrosia fungus *Fusarium solani* (Mart.) Synd. & Hans. is introduced and cultivated by the female, and eggs are laid on the ambrosia fungus. The mother beetle remains in the entry tunnel throughout the period of brood development. The female progeny leave the gallery after an average of 29 days.

Pest Management

Monitoring. Observe plants for premature yellowing of leaves associated with wilted or discolored petioles and pinholes 1/32 inch in diameter.

Control. Remove infested petioles or plants from field and destroy them by burning, burying, or removing them from the farm. Infestations in petioles can remain active after the petioles have wilted and fallen off the plant. After removing the infested petioles, make two to three applications of a recommended insecticide to the remaining plants at two-week intervals.

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