Pacific Pests, Pathogens & Weeds - Fact Sheets

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Hibiscus mite (266)

Photo 1. Galls of the Hibiscus mite, *Eriophyes hibisci,* mostly at the edges of the leaves.

Photo 2. Galls of hibiscus mite, *Eriophyes hibisci*, at the margins and also in the middle of the leaf.

Photo 3. More severe deformation of leaves caused by the Hibiscus mite, *Eriophyes hibisci.*

Photo 4. Galls of hibiscus mite, *Eriophyes hibisci*; note that the galls are mostly at the margins of the leaves and on the petioles, and they are in small groups.

Photo 5. Severe distortion of leaves by the Hibiscus mite, *Eriophyes hibisci.* Numerous small hairs can be seen on the deformed leaves at the centre of the photo.

Photo 6. Hibiscus bud deformed by hibiscus mite, *Eriophyes hibisci.*

Common Name

Hibiscus mite, hibiscus erineum mite, hibiscus leaf-crumpling mite. The word "erineum" is a botanical term meaning tuft of hairs. This describes the felt-like appearance of the galls.

Scientific Name

Eriophyes hibisci. Some accounts place the mite in the genus *Aceri*a.

Distribution

Unknown. It is present in the Caribbean and also recorded from Brazil. It occurs in Australia, Fiji and Tonga.

Hosts

Chinese red hibiscus (*Hibiscus rosa-sinensis*), okra (*Abelmoschus esculentus*).

Symptoms & Life Cycle

The mites attack the buds, and the plant reacts by forming rounded, bumpy, light green outgrowths a few millimetres across, at the leaf margins, on the leaf blades, petioles and stems (Photos 1-3). Often, the galls are formed in small groups (Photo 4), and in some parts of Fiji (Mamanuca Islands), symptoms are severe (Photos 5&6). The hardened plant growth is not affected.

Mites lay eggs and the 'worm-like' nymphs go through two stages before they are adult. They are too small to be seen with the unaided eye; a microscope is needed. The life cycle is complete in about 3 weeks.

The mites feed on the young leaves inside the buds and this stimulates the cells to form hairs so that the surface of the distorted, bumpy galls is felt-like. The hairs can be seen with a hand lens (x10) (Photo 5).

Spread of the mites is by the wind, or they are carried by birds or even insects.

Impact

The mites do not kill hibiscus plants, although they can slow their growth. The impact is cosmetic, affecting the appearance of the plant. Flowering can be prevented if the infestation is particularly severe (Photo 5&6).

Detection & inspection

Look for the distinctive galls on the leaves, petioles and stems.

Management

NATURAL ENEMIES

The main natural enemies are predatory mites. These can be seen without the need for a microscope. They enter the buds where the hibiscus mites feed. If these fast-moving predatory mites are present, insecticides should not be used, as they will kill them.

CULTURAL CONTROL

Before planting & during growth:

- Ensure that cuttings taken for potted plants or hedges are only from plants that are free from symptoms. Carefully check plants from home or commercial nurseries before planting them out in the garden.
- Prune severely affected branches and burn the cuttings

RESISTANT VARIETIES

Trials in Hawaii have shown that there are differences between varieties in their tolerance to the hibiscus mite. Test different varieties present locally.

CHEMICAL CONTROL

Miticides are available for the control of broad mite, but these chemicals are seldom available in Pacific island countries. If there is no alternative but to use pesticides, then do the following:

- Prune the most mite-affected branches.
- Test sprays of natural products:
    - Garlic is said to be effective against mites.
    - Derris or sulphur.
    - White oil (petroleum oil) (**see Fact sheet no. 56**).
- Abamectin is a miticide as well as insecticide; it is a relatively new product from a species of *Streptomyces,* a soil bacterium.

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Information from Hara A, Tsuda D, Tavares J, Yogi J, Hensley D (2001) *Hibiscus erineum mite*. Cooperative Extension Service, College of Tropical Agriculture & Human Resources, University of Hawaii at Manoa. Photos 1-3 Richard Markham, ACIAR, Canberra. Photos 4-6 Frank Visser, Key Industries, New Zealand.

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