

# Pacific Pests, Pathogens and Weeds - Online edition

## Sweetpotato flea beetle (096)

### Common Name

Sweetpotato flea beetle

### Scientific Name

*Chaetocnema* species. The species known as the sweetpotato flea beetle is *Chaetocnema confinis*, especially in the USA. There may be other species.

### Distribution

Asia, North, South (Brazil) and Central America, Europe (restricted), Oceania. *Chaetocnema confinis* is reported from French Polynesia, Guam, Marshall Islands, Palau, and Papua New Guinea. *Chaetocnema* species are present in Fiji, and Solomon Islands.

### Hosts

Sweetpotato, most probably water spinach (kangkong), and wild *Ipomoea* species in the Convolvulaceae family, of which there are many in the Pacific islands. It is also recorded from bean, cabbage, and cucumber.

### Symptoms & Life Cycle

The adult beetle does the damage. The beetles (Photo 1&2) are about 1.5 mm long. They feed on the top of the leaves, scraping off the surface and creating light green, pencil thin, irregular feeding marks (Photo 3). Occasionally, when symptoms are severe, rots develop from the feeding marks (Photo 4).

The sweetpotato flea beetle has not been studied in the Pacific islands, so this account is adapted from the life history of other species elsewhere.

The females lay eggs in the soil at the base of sweetpotato or other plants that are hosts. The eggs hatch in 7-14 days, and the larvae, small, white worm-like bodies, feed on the roots. In some species, this causes serious damage, e.g., the larvae of *Chaetocnema confinis* in the US etch shallow, winding, sunken trails over the storage roots, which enlarge, darken and split. Afterwards, the larvae develop into pupae, and about a week later, into adults.

### Impact

It is unlikely that the damage caused by the adult beetle affects the yield of sweetpotato storage roots. Sweetpotatoes can lose about one third of their leaves before yields are affected. However, there has been no assessment of the damage done to the feeding roots by the larvae when populations of the beetle are high.

### Detection & inspection

Look for the feeding marks on the top surface of the leaf: they are very distinctive.

### Management

#### CULTURAL CONTROL

- Select vines from plants without the feeding marks, ensuring that the cuttings do not contain adult beetles.
- Do not replant sweetpotatoes in the same plots where beetle damaged occurred in the previous crop; plant them as far away as possible.

#### RESISTANT VARIETIES

No resistant varieties are known.

#### CHEMICAL CONTROL

No pesticides are recommended; the damage caused by the beetle is unlikely to affect storage root yields.



Photo 1. Adult sweetpotato flea beetle, *Chaetocnema confinis*.



Photo 2. Irregular feeding marks on the upper surface of sweetpotato made by the sweetpotato flea beetle, *Chaetocnema confinis*.

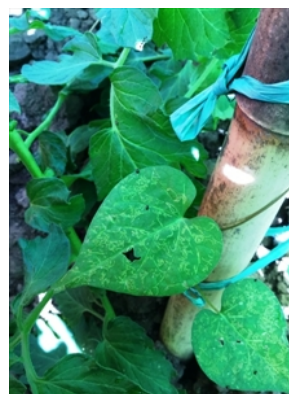


Photo 3. Sweetpotato flea beetles, *Chaetocnema confinis*, on leaf of *Ipomoea* (weed) species.



Photo 4. Rots developing from feeding marks of sweetpotato flea beetle, *Chaetocnema confinis*, on sweetpotato.

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Information from Chris Reid (pers. comm.) Australian Museum, Sydney, Australia; and from CABI (2019) *Chaetocnema confinis* (flea beetle). Invasive Species Compendium. (<https://www.cabi.org/isc/datasheet/12530>). Photo 1 Mike Quinn, TexasEnto.net. (<http://bugguide.net/node/view/559582>). Photos 3&4 Mani Mua, SPC, Sigatoka Research Station, Fiji.

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