

## Extension Fact Sheet 40: Red pumpkin beetle



**Common name:** Plain or Red pumpkin beetle

**Scientific name:** *Aulacophora indica*.

**Hosts:** It occurs on many crops in the pumpkin family: cucumber, melon, watermelon and gourds. Similar species are pests of these plants in India, the Philippines, Japan and Australia.

### Damage

Adults (photo, right) feed on leaves, chewing large holes (photo, left). Seedlings are particularly susceptible, and so are young plants after planting out. The damage to young plants can delay crop maturity. Damage also occurs on flowers and small fruit.

The larvae damage roots, stems and fruits, but evidence of this has not been looked for in Solomon Islands. Such damage allows entry of other organisms, for example, fungi.

### Biology and Life Cycle

The life cycle has been studied under the old name *Aulacophora similis*. Females lay yellow, oval eggs singly or in batches in soil around the base of the host. After 5-15 days, they hatch, and the cream-white young (called larvae) burrow into the soil to feed primarily on the roots. Four moults occur over 14-25 days, and then the larvae enter the pupal stage in an earth chamber; this lasts another 7-20 days before the adults emerge.

Females lay up to 500 eggs, and live as long as 10 months. This means there are several overlapping generations each year.

## **Detection and Inspection**

Look for red oval beetles, about 8 mm long, on the leaves and flying between them. They are often in groups on both young and old leaves. Look for the circles eaten by the beetles, and the large holes in the leaves between the veins. Often, the groups of beetles will attack the same leaf, leaving only the veins, before moving to other leaves. Adults are strong fliers, and quickly take to the wing when disturbed.

A similarly coloured leaf beetle, *Monolepta*, has a dark area on the triangular piece at the base of the wing cases. It also has smooth thorax - the part behind the head. By contrast, *Aulacophora* has a groove across the thorax (this can be seen in photo, right).

## **Management**

There is little known about the natural control of these beetles. The beetles contain chemicals that visual predators do not like, and are avoided by them. The bright colours of this beetle warn predators that they are distasteful.

### **Resistant varieties:**

- Fast growing varieties are more likely to outgrow the damage caused by the beetles.

### **Cultural control:**

- Avoid planting new crops next to those already infested with the beetles;
- Provide conditions for healthy plant growth, especially for seedlings; that may include manures and/or commercial fertilizers, and adequate water;
- The beetles tend to group together feeding on some plants, leaving others; plant extra seed to compensate for this;
- In the early morning or evening, it is possible to catch the beetles in flight; this is a useful control method in small gardens. Perhaps a game for children!
- Clean up old fruit and plant stems.

### **Chemical control:**

- Use synthetic pyrethroid insecticides, such as lambda cyhalothrin or permethrin. The choice of chemical is important: use those that are least persistent in the environment, and have low toxicity against bees. **READ THE INSTRUCTIONS BEFORE USING ANY PESTICIDE.**
- Try wood ash: Add ½ cup of wood ash and ½ cup of lime in 4 liters water; leave to stand for some hours; strain; test on few infested plants first to make adjustment of the strength before going into large-scale spraying.