



Pumpkin Beetle

Aulacophora indica

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Agriculture & Natural Resources Program

Fact Sheet EXT-01-2026

Introduction

The pumpkin beetle (Fig. 1), also known as the cucumber or cucurbit beetle/orange pumpkin beetle (*Aulacophora indica* (Gmelin), formerly referred to as *Aulacophora similis*) (Coleoptera: Chrysomelidae: Galerucinae), is a major insect pest of cucurbit crops, which include cucumber, watermelon, squash, and pumpkin. Cucurbits are the most commonly grown group of vegetables and some of the most important commercial crops in Guam (Schreiner & Nafus, 1994).

This beetle is widely distributed across many regions, including Bhutan, Cambodia, China, Fiji, Guam, India, Indonesia, Japan, Korea, Laos, Malaysia, Micronesia, Myanmar, the Northern Mariana Islands, Nepal, Papua New Guinea, the Philippines, Russia, Samoa, Sri Lanka, Taiwan, Thailand, and Vietnam (Abe & Matsuda, 2005).

Accurate identification of *Aulacophora* species requires taxonomic expertise, as species within this genus are very similar in appearance and often misidentified (Das et al., 2020). In particular, there is frequent confusion among *A. indica*, *A. abdominalis*, and *A. foveicollis*.

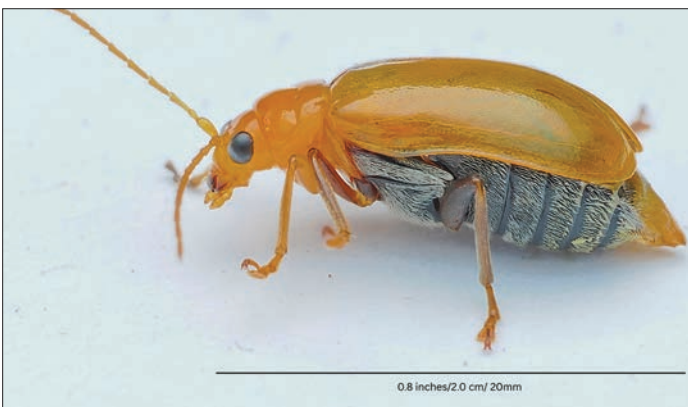


Figure 1. An adult pumpkin beetle.

QUICK FACTS

Common names: Pumpkin beetle, cucumber beetle, cucurbit beetle

Genus/Species: *Aulacophora indica*

Order: Coleoptera **Family:** Chrysomelidae

Host crop: Cucurbits: Pumpkin, squash, cucumber, melon, bottle gourd, bitter melon, ridge gourd, watermelon

Visual identifiers: Adults: Small- to medium-sized beetles, bright orange-red to reddish brown; **Larvae:** Creamy white, elongate, soft-bodied grubs found in soil.

Visible damage: Adults scrape and chew leaf tissue, flowers, and fruits, causing characteristic shot holes and skeletonization. **Larvae** feed on roots, stems, and fruits in contact with soil, leading to wilting and reduced plant vigor.

Peak activity: Warm, dry seasons. Damage is severe during early crop stages.

Natural enemies: Banana spider, praying mantis

Recommended control measures:

- **Cultural:** Early planting, deep ploughing to expose larvae and pupae.
- **Mechanical:** Hand picking of adults during early morning; use of light traps.
- **Chemical (if needed):** Targeted application of recommended insecticides at seedling stage, following extension guidelines.



Figure 2. An adult pumpkin beetle feeding along the leaf margin.



Figure 3. An adult pumpkin beetle feeding on the flower of a pumpkin vine.



Figure 4. An adult pumpkin beetle feeding on the skin of a developing fruit, causing blemishes and scarring.

Damage

The pumpkin beetle causes damage to cucurbit crops in two main ways (Nguyen, 2022):

1. Feeding by adults:

Adult beetles feed on leaves, usually starting from the leaf margins (Fig. 2), as well as on flowers (Fig. 3) and even fruits (Fig. 4). When present in high numbers, they can kill young plants. Feeding damage appears as irregular holes in the leaves (Fig. 5), often accompanied by frass on the leaf surface, which is a typical sign of beetle activity. In some cases, beetles skeletonize leaves by consuming only the green tissue, leaving behind the veins (Fig. 6).



Figure 5. Pumpkin beetle damage appears as irregular holes in a plant's leaves.



Figure 6. Skeletonization of cucurbit leaves due to the consumption of chlorophyll-rich tissues by the beetle.



Figure 7. Pumpkin beetle larvae burrow into the soil to feed on the plant's roots.

2. Feeding by larvae:

After mating, females lay eggs in the soil near the plant base. The emerging larvae (grubs) burrow into the soil and feed on the roots (Fig. 7). If beetle numbers are high early in the season, larval feeding can kill the vines before fruits mature. Larvae may also feed on the underside of fruits resting on the soil, causing scarring and blemishes that lower market quality.

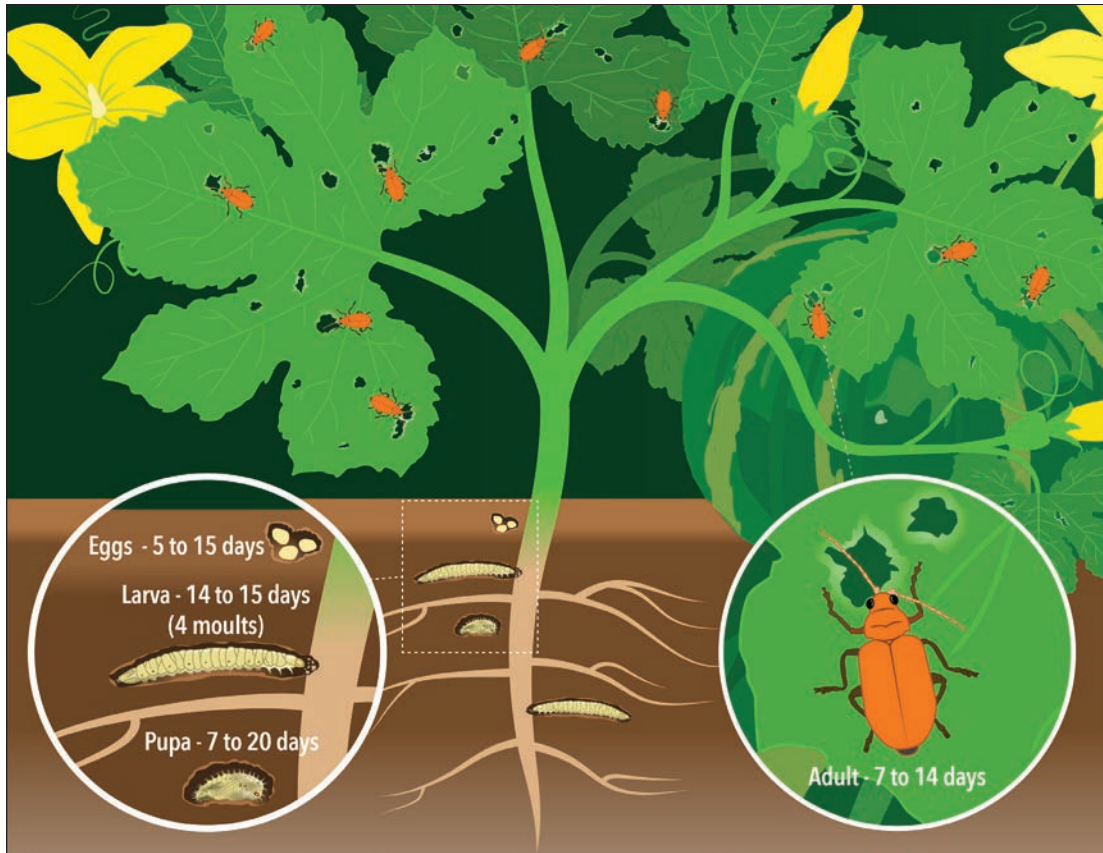


Figure 8. The life cycle of pumpkin beetles, from egg to adult. Illustration by Conrad Calma.



Figure 9. Pumpkin beetles mating.



Figure 10. Sponge gourd, or *Luffa*, which is among the top four invasive vines in Guam, can serve as a wild alternative host for pumpkin beetle. It is recommended to remove this vine from the area before planting cucurbit crops. (Beetle on bottom right is *A. quadrimaculata*.)

Life Cycle (Fig. 8)

1. **Egg:** Eggs hatch in 5-15 days.
2. **Larva:** Larvae feed on roots, passing through four instars, or developmental stages. They are creamy white initially and turn yellowish-orange before pupating in the soil.
3. **Pupa:** Pupation occurs in soil chambers.
4. **Adult:** Adults emerge 1 to 2 weeks later. Upon emergence they mate immediately to continue their life cycle (Fig. 9). They are strong fliers and can quickly move to nearby plants. Adults can be seen tapping their antennae, a behavior believed to help them sense their surroundings.

Monitoring

Because the larvae feed underground, damage is often hidden until it becomes severe. This makes adult beetle monitoring essential, especially when plants are young and vulnerable. Controlling the adults early can prevent larval damage later.

Yudin and Schlub (2014) recommend randomly selecting three adjacent plants and carefully inspecting them for the presence of pumpkin beetles. If six or more adult beetles are found before the flowering stage, or 11 or more are observed after flowering, control measures should be taken.



Figure 11. Banana spiders have been found to predate on pumpkin beetles in Guam.



Figure 12. The Giant Asian Mantis has also been found to predate on the pumpkin beetle in Guam.



Figure 13. A cucumber plant with a heavy infestation of pumpkin beetle.

Management options

Although there are several similar-looking *Aulacophora* species, their biology and management strategies are largely the same. *Luffa aegyptiaca* (sponge gourd) can serve as a wild alternative host for this pest (Fig. 10). Sponge gourd is very prevalent in Guam and is among the top four invasive vines on the island. Therefore, it is recommended to remove sponge gourd plants from an area before planting cucurbit crops to reduce pest buildup and spread.

Predators and natural enemies of pumpkin beetles are not well-documented. The beetle's bright coloration likely acts as a warning signal to predators, indicating they are unpalatable and may contain chemical deterrents. Generalist predators like *Argiope appensa* (Hawaiian garden spider, or banana spider) (Fig. 11) and *Hierodula patellifera* (Giant Asian Mantis) (Fig. 12) have been found to predate on this pest in Guam. Fast-growing cucurbit varieties may outpace beetle damage naturally.

Avoid planting new cucurbit crops near infested fields. In home gardens, handpicking beetles and killing them can be a fun and effective activity for children and families.

Chemical control

If beetle numbers remain high, spraying with carbaryl is effective. Studies suggest that spraying alternate rows is sufficient (Yudin & Schlub, 2014). Since adults are strong fliers, they will move into sprayed areas and come into contact with the insecticide. This method is cost-effective and helps conserve natural enemies and pollinators in unsprayed areas. Always follow label instructions and consult the UOG Land Grant Extension Service for current pesticide recommendations.

Post-harvest practices

After harvest, plow or till the field to expose and kill pupating larvae, as adult beetles can emerge from old fields and reinfest new crops.

Need help?

For the most up-to-date pest control recommendations, contact the UOG Land Grant Extension office at (671) 735-2080 or UOG Extension Entomologist Dr. Alfred Daniel Johnson at johnsona17274@triton.uog.edu or (671) 682-4672.

Useful links

Aulacophora indica (cucurbit beetle):

https://bie.ala.org.au/species/ALA_DR31252_536#names

Worldwide observation and distribution:

<https://www.gbif.org/species/5876578>

Related fact sheets:

https://apps.lucidcentral.org/pppw_v11/text/web_full/entities/pumpkin_beetle_040.htm

Detailed descriptions:

<https://tb.plazi.org/GgServer/xhtml/415324563F4DE56D708FC164FDBC4717>

REFERENCES

- Abe, M., & Matsuda, K.** (2005). Chemical factors influencing the feeding preference of three *Aulacophora* leaf beetle species (Coleoptera: Chrysomelidae). – *Applied Entomology and Zoology*, 40(1), 161-168.
- Das, S. R., Tithi, J. F., Sarker, S., Rain, F. F., & Aslam, A. F. M.** (2020). Diagnosis of three pumpkin leaf beetle (*Aulacophora* spp.: Chrysomelidae; Coleoptera) pests through mtDNA-COI barcode molecular approach. *Bangladesh Journal of Zoology*, 48(2), 399-411.
- Nguyen, D. T.** (2022): Exploring the diversity of leaf beetles (Coleoptera: Chrysomelidae) on the islands of Vietnam: A survey of Phu Quoc Island, South of Vietnam. *International Journal of Tropical Insect Science* 42(5): 3525-3539.
- Schreiner, I. H., & Nafus, D. M.** (1994). Soil insecticides, plastic mulch and adult control as methods of reducing populations of larval *Aulacophora similis* (Coleoptera; chrysomelidae) in cantaloupe fields. *International Journal of Pest Management*, 40(1), 50–55. <https://doi.org/10.1080/09670879409371853>
- Yudin, L., and R. Schlub.** (2014). *Guam Cucurbit Guide*. Cooperative Extension Service, University of Guam.

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