

Dotted Paropsine Beetle

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Quick Facts



Fig. 1.

Adult dotted paropsine leaf beetle (*Paropsis atomaria*). Christopher John Shogren, UC Davis



Fig. 2. Eggs

ANR on a eucalyptus shoot.

Dianne Clarke, naturemapr.org/



Fig.

users/27431

3. Larvae of various instars consuming a eucalyptus leaf. Christopher John Shogren, UC Davis ANR

- Dotted paropsine leaf beetle (DPLB) is an invasive eucalyptus pest native to Australia. Its first U.S. detection was in California in 2022.
- DPLB feeds on several eucalyptus species, with blue gum as its primary host.
- Feeding damage includes semicircular notches on leaf edges, defoliation of young leaves, and dieback of shoot tips.
- DPLB poses a threat to eucalyptus plantings across the western U.S. and to cut foliage producers in Utah.

Eucalyptus is grown on several cut flower and foliage farms in Utah and is typically pest-free. In 2022, the dotted paropsine leaf beetle (*Paropsis atomaria*, DPLB) (Fig. 1) was detected on a lemon-scented gum tree (*Corymbia citriodora*) in Los Angeles County as the first report in North America. It has since established populations throughout southern California in ornamental and commercial eucalyptus plantings (Patton, 2023) and as of 2025, does not occur in Utah. The beetle may continue to spread to other areas in the western U.S., including Utah, where few natural enemies exist. Although the beetle reportedly tolerates a wide range of environmental conditions, areas with warm, dry summers and mild winters are especially at risk (Schutz et al., 2006).

DPLB is native to eastern Australia, where it is a common pest of several eucalyptus species (Schutz et al., 2006). Both the adults and larvae feed on foliage, and their ability to consume massive amounts of leaf tissue in two generations per year in California's mild climate has contributed to its spread and impact (Arakelian, 2022).

Hosts

Hosts include approximately 21 eucalyptus-type trees grown in ornamental, cut flower, and forestry settings (Schutz et al., 2006), such as:

- Blue gum (*Eucalyptus globulus*) – primary host
- Mountain gum (*E. dalrympleana*)
- Red gum (*E. camaldulensis*)
- Silver dollar gum (*E. polyanthemos*)
- Lemon scented gum (*Corymbia citriodora*) – potential host if resources are limited

Description

Eggs are about half the size of a grain of rice, cylindrical, and tan. Laid in a pattern of 20 to 100, they wrap around young eucalyptus shoots, resembling a flower (Fig. 2). The location provides larvae immediate access to food after hatching.

Larvae have a black head and hind region (Fig. 3). The body is initially yellow and as larvae progress through their four growth stages (called “instars”), they develop a black longitudinal stripe along the back and sides of their body. Larvae feed in groups throughout their development, and when threatened, they raise their hind end and expel a defensive fluid through specialized glands. Mature larvae are about 4–8 mm long.

Pupation occurs in the soil directly under feeding sites.

Adults resemble lady beetles in size and shape but have longer antennae. They are oval-shaped and approximately 3/8-inch long. They are tan with numerous tiny orange dots and faint black markings scattered across the elytra (wing covers; Fig. 1).

Life Cycle



4. Larval feeding may result in defoliation (top) while adults remove half-circle notches from the leaf edges (bottom). Christopher John Shogren, UC Davis ANR

In southern California, DPLB has two generations per year (Patton, 2023). Adults overwinter in leaf litter and under bark, emerging in spring (Carne, 1966); however, the exact timing for populations in the western U.S. is still unknown. After mating, females lay eggs on the young shoots of the first eucalyptus host they encounter, not flying far (Carne, 1966). The average female can lay 600 eggs or more (Carne, 1966). Eggs hatch within several days, and larvae feed only on the youngest, most succulent leaves and progress through four growth stages (instars) over several weeks. When mature, larvae drop to the ground, burrow into the soil, and form a pupal

chamber. Adults emerge, feed, and reproduce to continue the cycle. In ideal conditions, development from egg to adult can take as little as five weeks.

Symptoms

Larvae prefer young eucalyptus leaves, where they may consume a majority of the leaf or cause defoliation of partially fed leaves (Fig. 4). Healthy trees can produce a fresh flush of foliage.

Adults prefer to feed on mature leaves, creating semicircular notches along the edges (Fig. 4).

Repeated and annual feeding and defoliation by DPLB can stress and kill young trees.

Look-Alikes



5. *Trachymela sloanei* (top) and *Paropsisterna m-fuscum* (bottom) are two related eucalyptus leaf beetles. Jon Sullivan, inaturalist.org/photos/1365106 (top) and Martin Lagerwey, [wikimedia.org](https://commons.wikimedia.org/wiki/File:Paropsisterna_m-fuscum) (bottom)

Two other species of eucalyptus leaf beetles are established in California (Millar et al., 2009) and have also not been reported in Utah. *Trachymela sloanei* was found in 1998 in Riverside County and now occurs throughout most areas of California where eucalyptus grows (Fig. 5). *Paropsisterna m-fuscum* (Fig. 5) was discovered in Orange County in 2003 and remains in southern California. All three beetles cause comparable damage and have similar life cycles.

Management

As of July 2025, none of the eucalyptus beetles mentioned in this fact sheet have been detected in Utah. The management strategies outlined below are only recommended for where they currently exist or if they are ever detected in the state. Preventing their introduction into Utah is the most effective strategy at this stage.

Regardless, eucalyptus growers and homeowners with eucalyptus trees are encouraged to routinely inspect their plants for signs of insect activity and discouraged from transporting infested plant material. Key indicators to examine include:

- Flower-like pattern of eggs on new shoots.
- Larvae feeding in groups.
- Visible feeding damage on leaves.

Cultural Controls

In California, eucalyptus trees are vulnerable to a variety of introduced insect pests, including DPLB, eucalyptus longhorned borers, and eucalyptus tortoise beetles. Preventive strategies are the most effective options for these pests, and they share common emphases: maintaining proper horticultural practices and avoiding actions that may harm beneficial biological control agents.

Maintain Plant Health

- Deeply and regularly water plants, especially during prolonged drought, to minimize drought stress.
- Avoid applying nitrogen fertilizer unless absolutely necessary. Excessive nitrogen has a limited impact on overall plant growth but leads to tender shoot growth, which attracts beetle egg-laying.

Sanitation and Biocontrol

- After proper identification, promptly remove affected shoots with congregations of larvae.
- For small numbers of young trees, collect adults and larvae into soapy water. Scrape off eggs on shoots and hose off larvae on foliage.
- In cases of severe infestation, remove the entire plant to limit further spread.
- Natural predators in Australia include shield bugs, ladybirds, wasps, spiders, and tachinid flies; however, California reports no known natural enemies (Shogren, 2025).

Chemical Controls

In areas where DPLB occurs, avoid using broad-spectrum insecticides (e.g., carbaryl, pyrethroids) on landscape eucalyptus due to drift and runoff risks. However, the following are options.

- When young larvae are present, apply a product containing the organic ingredient spinosad to the tree canopy.

- A systemic insecticide (imidacloprid) could be soil-applied in spring for suppression of severe infestations.

Potential Impact on Utah's Cut Flower Industry

In Utah, eucalyptus is primarily grown by cut flower producers, with operations occurring across the state from Brigham City to St. George and Kanab. These growers typically start plants from seed or purchase propagation material from California-based nurseries. When used as greenery in floral arrangements, growers prefer tender, flexible shoots, which are especially vulnerable to damage from DPLB.

Even minor feeding injury can reduce market value, and the young shoots are more vulnerable to leaf deformation and aesthetic flaws. Although DPLB is not currently found in Utah, growers and homeowners should raise awareness and learn to recognize early signs of infestation. If you suspect DPLB or observe unusual feeding damage, contact your local county Extension agent for assistance.

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