Managing Insects When They Eat Your Plants

Some adult or larval stage insects eat your plants. What do you do?

Integrative Pest Management (IPM) is a guideline to managing pest insects without harming other insects, wildlife, or plants. Some of the guidelines are:

Identify the problem:

- **Find** the insect
- **Observe** the type of damage
- **Look** for insect clues (wax, molts, eggs, honeydew, poop, etc.)
- **Note** which plant is damaged as some insects only feed/lay eggs on certain types of plants; noting which plant provides additional clues.

Try less harmful ways to remove the pest first:

- **Remove** damaged leaves
- **Spray** damaged area with water
- **Plant** resistant cultivars
- **Keep** plants healthy
- **Use** insecticidal soaps, Neem oil and chemical sprays if the above actions are not enough or damage is too great; follow directions on the container

More Resources for Help

Websites

Integrative Pest Management
https://ipm.ucanr.edu

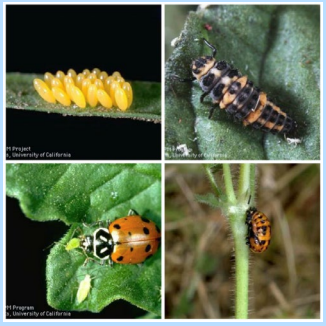
Bug Guide https://bugguide.net

Plant and Pest Guide
Los Angeles State Historic Park
https://metabolicstudiowebsite-media.s3-us-west-1.amazonaws.com/files/ea9af36c5f844f828681ec4cf8e7adc2.pdf

Books

Extraordinary Insects
by Anne Sverdrup-Thygeson

Insects of the Los Angeles Basin
by Charles L. Hogue



*The life cycle of **ladybugs**, officially known to entomologists as **ladybird beetles**.*

Photos: University of CA

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources
UC Master Gardener Program

MASTER GARDENER ASSOCIATION
of San Diego County

Our Advice to Grow By

Incredible Insects

Hotline: 858-822-6910
MasterGardenerSD.org
Help@MasterGardenerSD.org

Fun Facts About Incredible Insects

Insects have:

- **Diverse** shapes, types and lifestyles
- **Large** populations (some)
- **Fast** reproduction rate – lots of eggs
- **Short** lives but can have more than one hatch per year

Use **color patterns** to confuse predators.

Can **safely** eat toxins, and even use them for their own protection!

Use **mimicry and camouflage** to protect themselves.

Have **modified body** parts to protect themselves and survive:

- **Mouth parts** - chewing, sucking, siphoning
- **Legs** – jumping, walking, gasping
- **Antennae** – used to sense environment and predators better

Have diverse **food habits** and they may change over their lifetime:

- **Herbivore** – only eats plants
- **Predator** – eats other insects
- **Parasite** – lives and feeds on a host
- **Omnivore** – eats plants in one stage and insects in another

Lady beetle larvae (predator) and parasitoid wasp eggs on a caterpillar (herbivore).

Insects Are Seasonal

Many insects in San Diego County respond to our seasons:

- **Spring –** Most insects lay their eggs in the spring when plants are blooming and food is abundant.
- **Summer –** Larvae hatch and feed on plants.
- **Autumn** - Many larvae develop into pupae and no longer feed. Other populations, like ants, start to die out.
- **Winter** – Most populations are gone or dormant. Some, like native bumble bees, overwinter in leaf litter.

Knowing about insect life cycles helps you manage insects that feed on your plants. If it is late in summer, you can treat the insects by less harmful means because the population will soon decline naturally.

How Insects Help Your Garden

Over 90% of insects are **beneficial** in your garden. It is important to know what insects cause damage to plants, and which help manage other insects.

Many native insects do certain tasks in your garden:

- **Pollinate** flowers and crops, including buzz pollination by bumble bees.
- **Recycle** nutrients by eating plant material. Example - larvae of green fig beetles eat decaying plant material in the soil, recycling the plant nutrients.
- **Produce** a variety of products we use for food, inks, waxes, medicines, etc.
- **Food** for beautiful birds, lizards and other visitors to our gardens.

Honeybees pollinate flowers and crops and produce honey and wax we use for food and products.

All of these fun facts are why insects are important in your garden and help keep it healthy. Eliminating "pest" insects means there may be no food for all the beneficial insects who help you, and are part of the larger food web.