

The Good, The Bad... And the Bugly!

Some Common Insects to Know

UC MGP SDC – Class of 2023
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The Ladybird Beetle

A hint... this is the answer to Question 1



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Question 1: WHAT IS THIS BUGLY?



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Convergent Lady Beetle
•*Hippodamia convergens*

Scientific Classification

- **Phylum:** Arthropoda
- **Class:** Insecta
- **Order:** Coleoptera
- **Family:** Coccinellidae
- Lady beetles develop through four life stages: [egg](#), [larva](#), [pupa](#), and [adult](#).
- About 200 species of lady beetles occur in California.



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Adult females can lay several hundred eggs during their growing-season lifespan of about two months. After hatching, larvae develop through four increasingly larger instars.

Lady beetles, or ?ladybugs,? are round- or half-dome-shaped insects with hard wing covers. About 200 species occur in California and most are predators both as adults and larvae. Some species specialize on aphids or other groups; others have a broader diet

Question 2: WHAT IS THIS BUGLY?



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Convergent Lady Beetle
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Ladybug Life Cycle

















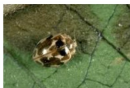

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Interestingly, ladybugs beat their wings 85 times per second in order to fly. When threatened, a ladybug can draw its head into its pronotum, like a turtle does, to protect itself. Ladybugs hibernate in the winter months and will not fly when temperatures fall below 55 degrees. They feed on pollen and nectar and live on stored fat through the winter. Ladybugs are not preyed upon by birds or other vertebrates because they exude a very distasteful fluid from joints in their legs; their distinctive colors are a reminder to would be predators they taste "bad". When threatened, ladybugs will play dead.

Convergent Lady Beetle, <i>Hippodamia convergens</i>		Other Lady Beetles	
			
<p>Lady beetle eggs (left) are oblong or spindle-shaped and often yellowish. Larvae (right) are active, have 6 long legs, and resemble tiny alligators. Some species have spines.</p>		<p>This is NOT a lady beetle! The long antennae of the spotted cucumber beetle distinguish this plant-feeding pest. Lady beetles have short, clubbed antennae.</p> <p>The ashy gray lady beetle has black spots on its light gray or yellowish wings. A black form with two red spots also occurs. It feeds on aphids and psyllids.</p>	
			
<p>During the inactive pupal stage (left), the larva transforms to an adult (right). This species has converging white marks on the thorax. Number of spots may range from 0 to 13.</p>		<p>The multicolored Asian lady beetle (left) ranges from red to yellow with no spots or up to 19 spots on the wings. The thorax is often cream colored with black markings. This larger lady beetle feeds on aphids, scales, psyllids and other insects. The vedalia lady beetle (right) eats only cottony cushion scale, a pest of citrus and certain ornamentals, often providing complete biological control.</p>	
Other Aphid-Feeding Lady Beetles (commonly reddish)			
			
<p>The California lady beetle (left) has no spots on its wings and two widely spaced white spots on its thorax, but no white band between its eyes. The twospotted lady beetle (right) is red with two black spots on the wings and two white blotches on a black thorax, or black with four reddish spots on the wings.</p>		<p>Axion plagiatum (left) shown here with its pupa, is shiny black with two red spots and feeds on aphids, oak leaf phylloxera, and sycamore scale. The black lady beetle (right), <i>Rhyzobius forestieri</i>, (adult at bottom left and larva in center) and <i>Chilocorus bipustulatus</i> (adult at bottom center and larva at bottom right) are both scale feeders. Three lecanium scales feed near the leaf vein at top.</p>	
			
<p>The sevenspotted lady beetle (left) has a black head with two white spots. The ninespotted lady beetle (right) has a white band on its thorax and a pale white band between its eyes. The California population does not have spots.</p>		<p>Twenty-spotted lady beetle (left) is about 1/16 inch long. It eats powdery mildew fungus spores and conidia. The mealybug destroyer lady beetle (right) is dark with an orange head and tail. Its wax-covered larva (bottom right) resembles its mealybug prey.</p>	

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Use in Gardens

- To increase the effectiveness of resident natural enemies and any that are released
 - Avoid the use of broad-spectrum, persistent insecticides and miticides (acaricides).
 - Control ants and dust.
 - Grow flowering plants that provide nectar and pollen for adults

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Most will fly away from the release site within 1 or 2 days after they are released even if aphids are plentiful. However, each adult can consume about 100 aphids per day before it disperses.

Although resident lady beetles are important predators, purchased *Hippodamia* inherently disperse. Most will fly away from the release site within 1 or 2 days after they are released even if aphids are plentiful. However, each adult can consume about 100 aphids per day before it disperses.

Controlling aphids on roses can require about 1,500 beetles per shrub released at 1- to 2-week intervals as long as conditions are suitable for aphids. You may need to plan in advance and purchase the beetles through a shipping service to obtain large numbers of them when needed and for a reasonable price.