



Field Guide:

Light Brown Apple Moth

Light brown apple moth caterpillars will eat just about anything. Chances are your favorite fruit is on their menu, too.



**Plant
Protection
Program**

AMERICAN PUBLIC GARDENS ASSOCIATION

Photo: USDA, hungrypests.com

LIGHT BROWN APPLE MOTH

Identification

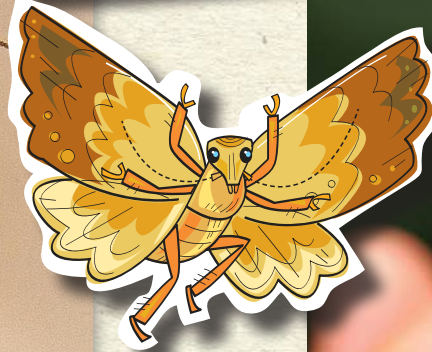
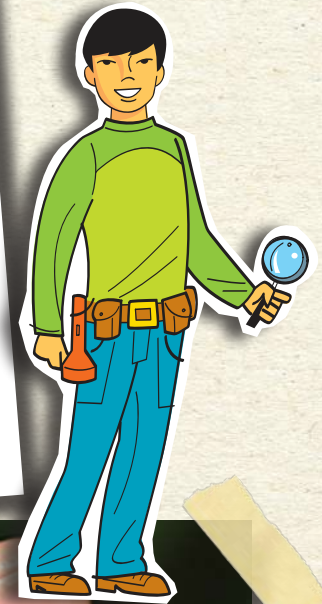
Bottom view of a light brown apple moth adult. It is difficult to tell light brown apple moths apart from similar native species. >>



Top view of a light brown apple moth adult. Adult females are about 1 centimeter long (the size of a small blueberry), and males are smaller. One moth may have wing patterns that are very different from others. >>



<< Top views of adult light brown apple moths showing how different their wing patterns can be.



^ Caterpillars of the light brown apple moth are often found stuck to silken mats inside rolled leaves, or between fruits. Full-grown larvae (the caterpillar life stage) are a bit larger than a thumb nail.

LIGHT BROWN APPLE MOTH

Life Cycle

When a light brown apple moth caterpillar is ready to change into an adult, it goes through a process called "pupation," or a stage where it metamorphoses inside a cocoon. Here we see a pupa inside a silken cocoon with a much younger light brown apple moth caterpillar. >>

Soon an adult light brown apple moth will emerge from this pupa. Can you see the outline of the adult's wings? >>



Light brown apple moth caterpillars are light green or yellowish. When they first hatch they are very tiny, only a couple of millimeters long (the size of a grain of sand), but they eventually grow to around 1 to 1.5 centimeters long, or about the same size as the adult moth. ∨

∧ Light brown apple moth females usually lay their eggs on the upper surfaces of leaves. Eggs are light green or yellow and are laid in an overlapping pattern that looks like fish scales.



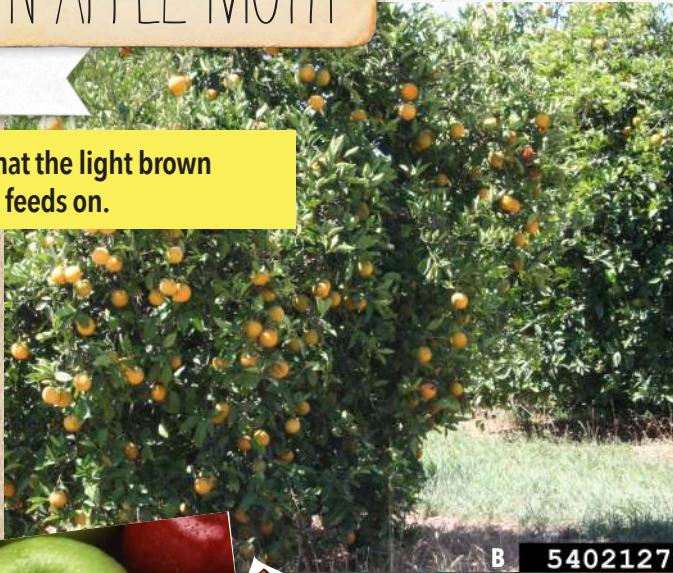
<<< Adult males have smooth antennae and are much smaller than adult females. Depending on how warm the climate is, the light brown apple moth can have between 2 and 4 generations per year.

LIGHT BROWN APPLE MOTH

Host Plants

Host plants are plants that the light brown apple moth lives in and feeds on.

Many citrus trees are at risk of the light brown apple moth, and are grown in parts of California where the moth has been found. >>



B 5402127



A UGA1322076

>> The light brown apple moth can eat many different types of plants, but apple trees and fruit are some of its favorites. The moth's larvae chew up apple tree leaves, damage buds, and can damage the surface of fruit.

Grapes are a very important crop grown in parts of California where the light brown apple moth has been found. Larvae weaken grape plants with their feeding and spin silken nests between the grapes, causing them to rot. >>



C 1556207



D UGA1355015

<< Stone fruits, such as peaches, are also threatened by the light brown apple moth.

Berries that grow on canes, such as blackberries and raspberries, are also vulnerable to attacks by the light brown apple moth. >>



E UGA2118092

LIGHT BROWN APPLE MOTH

Symptoms

Symptoms are visible clues that a plant is suffering from a pest or disease issue.

Light brown apple moth caterpillars eat the tissue between leaf veins, called "skeletonizing," and roll leaves up tightly with silk cocoons to make shelters, reducing the ability of damaged leaves to capture sunlight to make food for the tree. >>



B 5385956



A

⚠ Botrytis bunch rot, a fungal disease, is made worse on these Chardonnay grapes because of surface damage to the grapes by the light brown apple moth larva on the top.



C

<< Light brown apple moth caterpillars chew holes in leaves and skeletonize them. They also spin visible white webbing for attachment and shelter while feeding.



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<< Light brown apple moth feeding damage on grapes. Damaged grapes at the center of the bunch cause fungal disease to spread to healthy fruit when the grapes ripen.

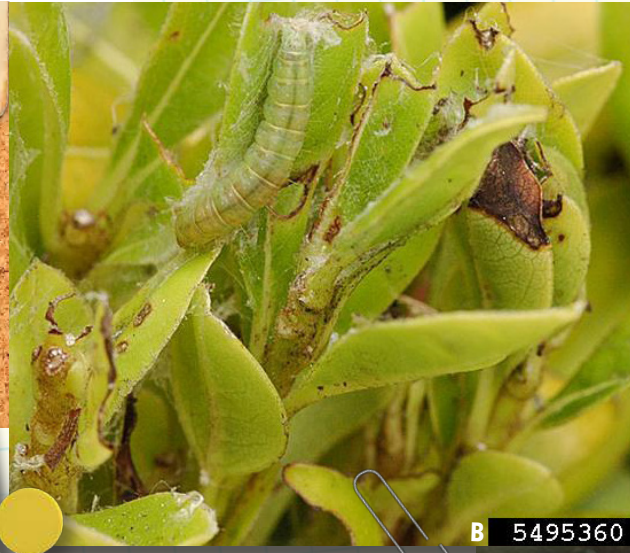


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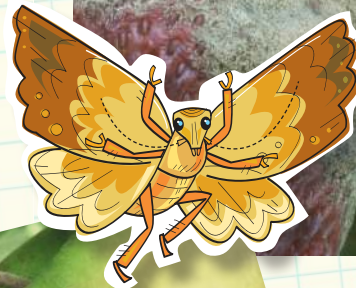
⚠ Older light brown apple moth caterpillars often fold leaves over themselves to form a protective shelter while they feed, which is why they are called "leaf rollers."

LIGHT BROWN APPLE MOTH

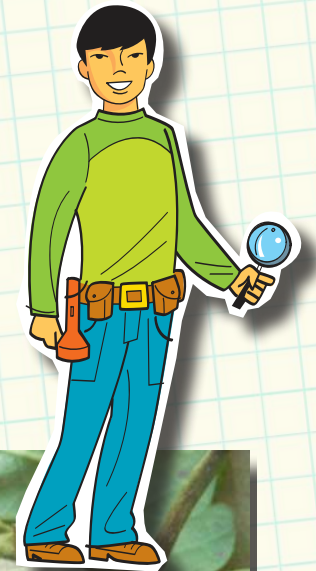
Damage



<< Caught in the act! The light brown apple moth caterpillar in the center of this photo has caused feeding damage on these young apples, which will likely make the apples unable to be sold later.



<< Feeding by light brown apple moth caterpillars can destroy young leaves and shoots, which results in small plants that grow very slowly.



⚠ Light brown apple moth caterpillars feed on and make their nests between fruits, causing the fruits to rot and not develop properly.



<< The most important damage that the light brown apple moth causes is on fruits. Caterpillar feeding has caused the ugly brown patches on the surface of these apples. Caterpillars can also sometimes eat the insides of fruit.

LIGHT BROWN APPLE MOTH

Control



<< Adult male light brown apple moths find females using pheromones (a smell produced by female moths). Special plastic twist ties that smell like females are placed around crops to confuse the males and stop them from reproducing.



<< Plant nurseries in California have lost a lot of money due to the light brown apple moth. They are not allowed to have adults or caterpillars on plants that are shipped to other places, so they must keep a close watch for the moths and spray their plants with expensive special pesticides.

B 5458339



C 5356834

⚠ Many plants that the light brown apple moth eats are sold in nurseries for planting in homeowners' yards and gardens. In places where the light brown apple moth is found, plants must be sprayed with chemicals to ensure the moth is not moved to new places.

Knowing where light brown apple moths are is very important to stop them from spreading. House-shaped traps that have a pheromone bait only the adult males can smell are put in orchards and fields to keep track of them. Males come toward the smell and get stuck in the trap, and are counted later. >>



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How can you become a Plant Hero?

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On the Plant Heroes website, you will find materials to help you learn about plants, forest health, and ecosystem balance. The more you know, the more you can help protect plants and ecosystems in your own yard, neighborhood, and community!

Plant Heroes strives to spark curiosity about nature and science in all children.

Our program provides hands-on, nature-based learning materials for educators to engage children in topics of plant health, ecosystem balance, and forest health. We also spotlight the amazing work our public gardens do in protecting the plants and ecosystems we all depend on through our website and printed materials. Visit plantheroes.org today to learn more!

Plant Heroes is brought to you by the American Public Gardens Association, founded in 1940.

Over the last eight decades, the Association has supported the work of public gardens in North America and beyond. Our mission is to champion and advance public gardens as leaders, advocates, and innovators in the conservation and appreciation of plants. Our vision is "A world where public gardens are indispensable" as they provide botanic, conservation, community, education, and economic resources to their community.

The Association is committed to increasing the knowledge of public garden professionals throughout North America through information sharing, professional development, networking, public awareness, and research, so that they have the tools to effectively serve visitors and members.



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