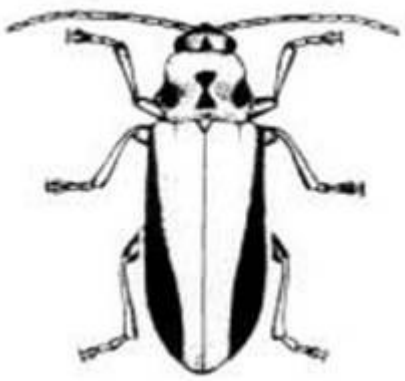
Elm Leaf Beetle

Elm leaf beetles are plant feeders both in the adult and larval stage. They feed almost exclusively on elm trees, and the most damage is done by the larva, which skeletonizes the elm leaves. Elm leaf beetles occasionally become annoying in the home. Adult beetles enter structures during the autumn but may be most troublesome during the spring when they become active after hibernation in attempting to get back outside to elm trees. Although these beetles do not harm humans or their possessions, they are sometimes confused with carpet beetles and other household pests and considered a nuisance by their presence.

Identification

Adult elm leaf beetles are about 1/4 inch long, 1/8 inch wide and elongate oval in shape. Beetles vary from yellow when young to olive green when mature, with a black stripe along the outer edge of the wing covers. There are four black spots on the thorax. During the winter, many beetles fade in color and by spring appear dull to olive green with the edge stripes less distinct. Eyes are black and the antennae and legs are yellowish. Larvae are about 1/2 inch long and dull yellow with two dark stripes down the back. Pupae are about 1/4 inch long and bright yellowish-orange. Eggs are about 1/16 inch long, yellowish to orange, spindle-shaped and attached in clusters of 5 to 25 in two or three parallel rows on the undersides of elm leaves.



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Life Cycle and Habits

Elm leaf beetles over winter as adults in homes, buildings, wood piles, tree bark crevices, debris at the tree base and other protected places. During the spring, beetles leave their over wintering quarters, become active and fly to elms (especially Chinese or Siberian elm) and American elm, and begin feeding on newly emerged leaves. Egg-laying begins in late May and early June, with each female laying between 400 and 800 eggs over her life span. Eggs hatch in about seven days. Small, black larvae feed on the leaves and mature in two to three weeks. Young larvae feed in groups and older larvae sometimes singly. Pupation occurs in tree bark crevices or on the ground in sheltered places, with new adults emerging about 10 days later. There are two or more generations per year depending on the season. Both adults and larvae feed on the elm foliage. Adults chew small, round, irregular holes in the leaf, whereas the larvae skeletonize, leaving only the vein intact. When damage is severe, leaves curl, dry out and fall prematurely.

Foliage feeding usually will not kill the tree but may weaken it, resulting in more susceptibility to branch dieback, attacks of bark beetles and borers, as well as disease organisms such as Dutch elm disease. However, elm bark beetles, not elm leaf beetles, transmit this serious fungus disease of American elm.

Control Measures

Natural

There are/several natural enemies of elm leaf beetles such as birds, toads, diseases, and predaceous and parasitic insects. A chalcid wasp frequently kills many pupae. The fungus *Beauveria bassiana* (Bals.) also kills pupae and even adults during late summer, especially in humid seasons.

Indoors
Beetles in the home can be collected with a vacuum cleaner or broom and dustpan for disposal. Household pressurized aerosol sprays of pyrethrins applied directly on the beetles are effective. Collect dead and dying beetles soon after for disposal.

Prevent entry at window wells, doorways, unused fireplaces, etc. by providing tight-fitting screens and snug windows and doors. Stuff cotton in sash cord channels and use caulking compound to repair cracks and cervices in the house foundation, around doors and windows and other possible entry points. Crack and crevice treatments of amorphous silica gel (Tri-Die) or boric acid (Perma-Dust) will help.

Larvae on elm leaf

Outdoors
For control of beetles crawling on and into buildings, spray the exterior foundation, outside walls of the house, around window wells, doorways, etc.

On Trees
Thorough spray coverage of all foliage is essential. Use appropriate spray equipment of sufficient capacity, especially for tall trees. (Commercial spraying may be needed for a community-wide control program).

Apply in early spring when eggs are hatching, new larvae are appearing and leaf skeletonizing is first observed on fully expanded leaves usually in late May. A second spray may be needed in July for second generation larvae. Carefully inspect the undersides of the leave for small, black larvae and spray only if found in large numbers with leaf skeletonization. Only the trunk of the tree needs to be sprayed when larvae are near the tree base and prior to pupation.

Information obtained through the Ohio State Extension FactsheetHYG-2036-94

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