

Boxelder Bugs and Leaf-footed Bugs

Order: Heteroptera (formerly Hemiptera)	
Common Name	Scientific Name
Boxelder bug	<i>Boisea trivittata</i>
Leaf-footed bugs	<i>Leptoglossus</i> ssp.

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Boxelder bugs (family: Rhopalidae) and leaf-footed bugs (family: Coreidae) are larger species of true bugs that may invade buildings, especially during the warm days of autumn, to seek sheltered sites for overwintering. Large populations are often correlated with long, hot, dry summers. During the fall, they are attracted to buildings and occasionally to night-lights. They may fly through open doors and windows, but they most commonly enter homes and buildings through cracks and crevices around doors, windows, and roof soffits. Indoors, these bugs are a nuisance because of their presence, foul odor when crushed or disturbed, and fecal stains on curtains or walls. Although they do not cause damage to buildings, clothing, food, or humans, their presence is annoying. Outdoors, boxelder bugs have the habit of clustering in large numbers on the sides of trees, buildings, and other structures. During warm winter and spring days, boxelder bugs and leaf-footed bugs may become active, moving from their hiding places into living spaces. While both insects have piercing-sucking mouthparts, neither is known to bite humans or animals.



Adult and large nymph boxelder bugs.

Identification

Boxelder Bugs

Adult boxelder bugs are flat-backed, elongated, narrow-bodied insects, about ½ inch long and ⅓ inch wide. They are dark brownish-black with three lengthwise red stripes on the pronotum (area behind the head) and reddish margins on the front wings; the abdomen is bright red underneath the wings. As is characteristic of this order of insects, the forewings are thick and leathery at the base, and membranous at the tip; the hindwings are entirely membranous.

The head is black with a reddish-orange “beak” or proboscis. It has thin, four-segmented antennae that are half as long as the body. The nymphs or immatures resemble the adults in shape, but they are smaller, more rounded, wingless, and bright red. Eggs are dark reddish-brown.

Western Conifer-seed Bugs

The western conifer-seed bug, also known as the western pine-seed bug, belongs to a small group of true bugs called the leaf-footed bugs. As the name indicates, these bugs have long hind legs that end with a flattened, leaf-like structure. They sometimes are called “walky bugs” in Ohio due to the slow and steady way that they walk. Adults are reddish-brown to black and are approximately ½–¾ inch long. They are elongated and somewhat heavy bodied, with antennae nearly as long as the body. Adults have brightly colored bands on flared edges of their abdomen (laterotergites), and a white zigzag band across the center of their back. Nymphs are wingless, bright red, and resemble the adults. Eggs are reddish-brown and keg-shaped. These bugs resemble wheel bugs and assassin bugs (family: Reduviidae), but unlike the assassin bugs, leaf-footed bugs do not bite humans.



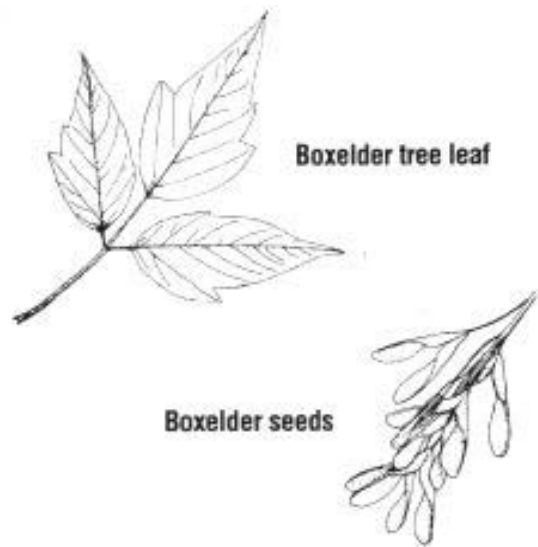
Adult western conifer-seed bug showing leaf-like structure on the hind leg.

Life Cycle and Habits

Boxelder Bugs

Boxelder bugs are so named because they are a major pest of boxelder trees, their primary host. These bugs feed on seed-bearing (female) boxelder trees, and they also feed on seed-bearing silver maples; they do not feed on male trees. They use their piercing-sucking

mouthparts to suck sap from the leaves, tender twigs, and developing seeds of host trees. Occasionally, they have been observed feeding on plum and apple fruits, causing some scarring or dimpling.



During autumn, adult and late-stage nymphs become gregarious and begin to congregate in large numbers, primarily on the bark of boxelder trees. They then begin migrating by flying or crawling to protected overwintering sites. These bugs hide in cracks and crevices in walls, in door and window casings, around foundations, in stone piles, in tree holes, and in other protected places. Only full-grown adults overwinter. On warm days during winter and early spring, the bugs sometimes emerge on light-colored surfaces outdoors on the south and west sides of houses and buildings, resting in the sun.



Cluster of adult boxelder bugs and nymphs on the siding of a home.

Overwintering adults leave their hibernating sites with the coming of warm weather (last week of March), and females begin egg-laying in late April to early May. Females lay clusters of eggs in crevices of bark, especially in boxelder trees, and on stones, leaves, grasses, and other objects near host plants. Eggs hatch in 11–19 days, with bright red nymphs appearing about the same time that new tree leaves develop. Nymphs may feed on fallen boxelder seeds and then on new leaves and developing seeds. There are five nymphal stages that become progressively darker red with each stage. In warmer regions of the U.S., two generations typically occur; in July, new adults lay eggs that result in a second generation by early autumn.

Western Conifer-seed Bugs

The western conifer-seed bug is native to western North America, but its range has expanded rapidly, and it is commonly found in the northeastern U.S. as well as Canada. Adults and nymphs typically spend the summer on Douglas-fir, hemlock, white spruce, and various species of pine, where they use their piercing-sucking mouthparts to feed on the sap from seeds, cones, twigs, and needles. This sap-feeding typically is of no consequence to healthy conifers, although some damage to seed cones may be evident and seeds can fail to develop.

Leaf-footed bugs have a single generation per year. In the spring, adults move out of their overwintering sites and search for nearby conifers. Females typically lay their eggs in rows on tree needles. Eggs hatch in approximately 10 days, and the young nymphs then begin to feed. After undergoing five nymphal instars, adulthood is typically achieved by late August. During the late summer and early fall, adults begin to seek protected sites to spend the winter, and they may inadvertently enter a home or other building. While their presence is a nuisance, these insects are harmless to animals and humans.

Control Measures

Prevention

Eliminate potential hiding places for the bugs such as piles of boards, rocks, leaves, grass, and other

debris close to the house. Rake leaves and grass away from the foundation in a **six- to ten-foot-wide strip**, especially on the south and west sides of the structure. Removal of host trees is an option, but this generally is impractical and unnecessary.

Be sure to caulk and close openings where bugs can enter the house: around light fixtures, doors and windows, vents, chimneys, fireplaces, utility pipes or conduits, air conditioners, heat pump lines, and the foundation. These bugs are attracted to lights and can fly in open doors, windows, or vents, so it is important to use screens and keep them well maintained. Screening should be 16-mesh or smaller. Some roof vent systems do not have screens, so they may need to be stuffed with plastic wool or stainless steel wool so as to prohibit entry of bugs but allow air flow from the attic space.

Non-chemical Control Measures

Boiling water can be poured on clusters of bugs to kill them, but be careful to avoid killing grass and other desirable plants. Use caution on vinyl siding that could be damaged by the heat. Insects also can be vacuumed if the bag is then discarded. Bugs that are found indoors also can be picked up and discarded.

Insecticides

The best time to treat young, exposed boxelder bug nymphs on host trees is during spring and early summer to prevent potential large populations and indoor migration during the autumn. Some homeowners report effective, cheap control by spraying a soap mixture on the nymphs and adults as they begin congregating in autumn. There are commercial insecticidal soaps registered for this purpose. Be sure to first test the soap mixture on an inconspicuous spot before application, as it might stain cedar and other siding. Many insecticides registered for “creeping and crawling” pests or “bugs” will work to quickly knock down these nuisance bugs. Spray applications to tree trunks, limbs, and foliage are effective. Sprays can also be applied on foundation walls, sidewalks, fence rows, etc., as boxelder bugs mature and migrate from their host trees. Cracks and crevices, wall voids, and similar areas may be treated with dusts and/or aerosols. When applications are needed on tall trees

or large areas requiring specialized equipment, it is best to employ a reputable pest control firm. Only a licensed pest control professional can use “Restricted Use” pesticides. Indoor control with insecticides is impractical and difficult since the bugs may be scattered throughout the house.

This publication contains pesticide recommendations that are subject to change at any time. These recommendations are provided only as a guide. It is always the pesticide applicator’s responsibility, by law, to read

and follow all current label directions for the specific pesticide being used. Due to constantly changing labels and product registration, some of the recommendations given in this writing may no longer be legal by the time you read them. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The author, The Ohio State University, and Ohio State University Extension assume no liability resulting from the use of these recommendations.

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