



# Boxelder Bugs

O & T Guide [O-#04]

**Carol A. Sutherland**  
Extension and State Entomologist



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These exceedingly common and widely distributed black and red bugs are more annoying to homeowners than they are destructive pests.

**Scientifically:** Boxelder bugs are members of the insect order Hemiptera, family Rhopalidae.

**Metamorphosis:** Simple

**Mouth Parts:** piercing-sucking

**Pest Stages:** nymphs, adults

**Typical Life Cycle:** Eggs of spring or first generation bugs are laid in irregular masses of 10-25 on clusters of dropped host seed. Second or late summer generation eggs are laid on host foliage or developing seed. → five stages of Nymphs can be found in the same habitats as the adults---in the soil litter around host plants, on those plants or resting in large congregations on various surfaces → Adults are winged but fly infrequently. Most stay close to their host plants, mingling with the various ages of nymphs. Two generations occur annually.

## Description of Life Stages:

**Egg:** Eggs are oval, dark or rusty red, and about 1/10 inch long.

**Nymphs:** The immatures are smaller, wingless versions of the adult. The abdomen and bulging compound eyes are dull brick red. Legs, head, thorax and developing external wing pads are dark gray with fine red line highlights. Wing pads first become visible on 3<sup>rd</sup> instar nymphs and are largest (but still non-functional) on mature 5<sup>th</sup> instars.

**Adult:** Most of the bug's head, thorax and forewings are rusty-brown edged with brick red; the bulbous compound eyes are dark red with the antennae, legs and ends of the wings black. Adults are about ½ inch long; their bodies appear flat on top with a prominent triangle between the bases of the forewings, as is typical of many adult Hemiptera.



Boxelder bug adult, *Boisea trivittata*, about ½ inch long. This eastern species is found in New Mexico, along with a Western species that seems generally less troublesome. Photo: Clemson University - USDA Cooperative Extension Slide Series, , [www.forestryimages.org](http://www.forestryimages.org)

**Habitat and Hosts:** Boxelder bugs overwinter as nymphs or adults in protected areas including leafy mulch around boxelder and other trees, in homes or other structures. Active by late spring, they feed on a variety of herbaceous and woody plants, recently dead insects and even each other. While sap of boxelder foliage, flowers and seed is preferred, boxelder bugs will accept some maples and even ash when boxelder is not available. Second generation nymphs prefer

the sap of developing boxelder seeds but also may feed on various fruits such as apples.

**Damage:** For boxelder, maple and ash, feeding damage by boxelder bugs is negligible. Toxins in boxelder bug saliva (and that of other fruit-feeding bugs) create “cat-facing” injuries on developing fruit; in these cases, the place where the feeding stylets punctured the skin is sunken and surrounding flesh is puckered, discolored and hardened. The biggest objection to boxelder bugs is their sheer numbers. They congregate on windows, porches and sides of homes on cool, sunny days in fall and spring.

**IPM Notes:** Removal of female boxelder trees and elimination of spring leaf litter may discourage or at least delay a seasonal buildup of these insects. Homeowners should realize that the bugs will wander several hundred feet away from even their preferred hosts. Foliar insecticide treatments may reduce numbers of boxelder bugs temporarily.

Aggregations of bugs may disperse when sprayed with insecticidal soap solutions. Reducing the amount of plant cover and increasing air flow and light, particularly near walls or other areas where the bugs hide, can be helpful. Western boxelder bug, *Boisea rubrolineata*, is a widely distributed western species that is not nearly as annoying a pest as the eastern species *trivittata*. The goldenrain tree bug, *Jadera haematoloma*, is a substantially black bug highlighted on the thorax with red; it resembles the boxelder bug in color and size and has many of the same annoying habits. Its preferred host is the

goldenrain tree, a popular introduced ornamental.



Western boxelder bug adult, *Boisea rubrolineata*, about ½ inch long. This species is also found in parts of New Mexico, especially along higher elevation waterways where host trees are available. Photo: Whitney Cranshaw, Colorado State University, [www.forestryimages.org](http://www.forestryimages.org)



Aggregation of nymphs and adult boxelder bugs, *Boisea trivittata*. Photo: James B. Hanson, USDA Forest Service, [www.forestryimages.org](http://www.forestryimages.org)

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