



## Boxelder Bug *Boisea trivittata*

**Injury:** The boxelder bug may be a pest of outdoor trees as well as a household nuisance. It is the latter that is of most concern to homeowners. The bugs overwinter as adults and nymphs in protected dry places, often in wall voids or attics of houses and buildings. During warm days in the fall and again in the spring, the bugs become active and invade homes, causing an extreme nuisance.



**Figure 1.** An adult boxelder bug (Bob Moul  
[www.PBase.com/rcml840](http://www.PBase.com/rcml840))

**Description:** The adult boxelder bug is about 1/2 inch in length, and brownish-black in color, with red stripes on the thorax and wing margins. The body is also bright red. Eggs are a rusty red color and are not often seen, as they are deposited on boxelder trees. The nymphs, also found on the trees, are bright red in color with the head end darker. Nymphs resemble adults but do not have fully developed wings and are not able to reproduce. The change from nymph to adult is a gradual one.

**Life History:** The boxelder bugs pass the winter in the adult and sometimes nymphal stages in dry, sheltered places where they have accumulated in gregarious masses. They often choose buildings or houses as a protected place to overwinter. When weather warms up in the spring, the bugs leave their places of hibernation to fly to boxelder trees, where they deposit their eggs. Eggs are usually deposited in bark crevices and hatch in 11 to 14 days. The nymphs feed by inserting their beaks into leaves, fruits or soft seeds and sucking the plant juices.

Boxelder bugs feed on the seeds of other maple species as well as on boxelder. Feeding continues throughout the summer, and the nymphs gradually mature, becoming adults as cold weather approaches in the fall. In some areas there may be two broods of this insect, one reaching maturity in mid-summer and the second one in early fall.

The boxelder bugs begin to aggregate in warm spots in the autumn, and may continue to be active until cold weather sets in. Although the base of the host tree is often chosen as an overwintering site, other nearby sites (usually on south facing sides) including rock walls, log or firewood piles, or under the siding of houses or buildings.

### Management

**Non-insecticidal control:** Building surfaces that are exposed to the sun and stay warm longer may be made less desirable by shading them. Aggregations of the bugs may be washed from the sides of buildings with a strong spray of water. They will return however, if the site is still warm. Covering firewood may prevent the bugs from accumulating there.



**Figure 2.** A nymph stage boxelder bug (J. Davidson, HGIC, University of Maryland)



**Figure 3.** A picture of the compound leaves of the boxelder tree. Note the typical maple samara (fruit) on the left. (HGIC, University of Maryland)



**Figure 4.** Boxelder bug adults and nymphs aggregating on the bark of a tree. (James Solomon, USDA Forest Service, [www.Bugwood.org](http://www.Bugwood.org))

Indoors, vacuuming up the bugs and discarding the contents of the vacuum bag when finished is a good, effective, housekeeping method. (If bugs are left inside the vacuum they may crawl out in the storage place.) During active periods you may have to vacuum daily. Closing up the routes of entry the bugs use by caulking or screening is a more permanent solution.

Since the presence of these bugs is associated with boxelder trees, replacement with other tree species is one method of limiting this nuisance pest. If boxelder is grown, it may be best to keep only the male or staminate trees - female trees produce seeds on which the bugs can feed. However, boxelder bugs can feed on the seeds of some other species of trees, including other maples.

**Insecticidal control:** For control on trees during the summer growing season, the insecticide malathion is labeled. A small number of trees may be sprayed by the homeowner, but large trees and large groups of trees should be done by a certified pesticide applicator.

Outdoors around the home where boxelder bugs accumulate, pesticides registered in New York State in 2009 that can be used as a targeted perimeter treatment include: bifenthrin, cyfluthrin, esfenvalerate, lambda-cyhalothrin, and malathion.

**BE SURE TO FOLLOW THE MANUFACTURER'S DIRECTIONS ACCURATELY WHEN USING ANY PESTICIDE.**

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The Pesticide Management Education Program (PMEP), in cooperation with the New York State Department of Environmental Conservation (NYSDEC), maintains a web site with a searchable database for pesticide products currently registered in New York State. Individuals who have Internet access can locate currently registered products containing the active ingredients suggested above at <http://pims.psur.cornell.edu/> (NYS PIMS).

**This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

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