

Boxelder Bugs, *Boisea trivittata* (Say)

Order: Heteroptera (True Bugs) **Family:** Rhopalidae
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Description. Adult boxelder bugs are black and reddish orange with red eyes and are about ½ inch long. They have three reddish stripes on the thorax (segment between the head and abdomen). When the immatures hatch from the eggs, they are bright red, and are smaller than adults, and lack wings. They mature gradually, and at each stage, look more like adults. The eggs are a glossy rusty red color.

Pest status. This is a native insect which can be a nuisance pest for homeowners when it congregates on walls of homes and other structures in the fall. They can enter homes through gaps around windows and doors in search of shelter. In spring and summer it feeds on the seeds of boxelder (*Acer negundo*) and other maple species (*Acer* spp.) and ash trees (*Fraxinus* spp.), which are common in this area. It also can suck sap of other parts of the plant besides the seeds. Plant damage is minimal. Populations are generally higher in years with a warm spring and a hot, dry summer. They can stain fabric in the house or deposit their excrement on the siding, which is unsightly. They emit an unpleasant smell when crushed. They do not sting or bite, nor do they transmit diseases. They can be found on house plants in the winter.

Biology. The adults emerge from their overwintering sites in the spring and fly to nearby host trees (usually boxelder) and other understory vegetation. After mating, the females lay eggs in clumps on the surface of host leaves. Eggs hatch in 7-10 days and nymphs begin to feed on the leaves in the understory. Later in their life cycle they may predate on other soft-bodied insects, so in this respect they could be considered a beneficial insect. They complete 5 stages before reaching adulthood. There are several generations each year in northern New England. The last generation of the season, which occurs in autumn, tends to congregate on sunny walls, fences and other structures, especially around boxelder trees. Only fully mature adults will survive over the winter. As it gets colder, they seek shelter in tree cracks and crevices or inside homes or garages. They appear to favor some homes over others, though the reason why is unknown. Some believe they are more abundant around buildings that are taller than others in the area, or those that stand alone in the landscape. Apparently, the color of the building is not a factor in their selection of a congregation site. They tend to congregate in warm, protected areas, and favor the southern or western sides of buildings.



Life stages of the boxelder bug: (left to right) adult, eggs, eggs and immatures, congregating adults and immatures on a tree trunk.



Boxelder tree (*Acer negundo*): (Left to right) leaves and seeds, single compound leaf, bark.



Boxelder bug lookalikes: (Left to right) large milkweed bug (*Oncopeltus fasciatus*), small milkweed bug (*Lygaeus kalmii*), and false milkweed bug (*Lygaeus turcicus*).

Management. This can be challenging in years when there are large numbers of the bugs. Make sure the screens on the windows and doors are repaired and closed so the bugs don't enter your home or garage. Caulk any cracks and gaps around the home that they might use to enter the home. Eliminating the bugs at the first sign of them is good because it may discourage others from gathering around them. Spraying the clusters of bugs with a mixture of soapy water is recommended by some. You can also vacuum them up with a shop vac or vacuum cleaner, though make sure you kill the insects before disposing of them or they will escape and reinfest your area. To kill them, you can drown them with soapy water containing a small amount of rubbing alcohol. It may be necessary to continue to spray the area several times during their congregation period as there is no residual effect from the soap spray.

It is wise to inspect the area around your home to look for potential sources for the infestation. They often cluster under shrub vegetation or woody debris. Removing these habitats is advised. Some say that removing the favored host tree, boxelder, from around your home will discourage them from invading your property. However, boxelder and other host trees are common in our area, so this is not likely to be a reasonable solution. However, if you have a boxelder growing within a few yards from your home, removing it may reduce the population somewhat. Several chemical pesticides may be effective to kill them when they congregate on the sides of houses, but before using them on any surface, apply it to a place out of sight to make sure it doesn't damage the surface. In addition, an insecticide spray may unnecessarily expose you or your family and friends to chemical insecticides. Spraying an insecticide on boxelder trees to kill the bugs is not recommended because these bugs can fly over 2 miles to find a suitable overwintering site. As soon as it is cold outside, the bugs will become inactive and will no longer try to enter the home. You may notice them again in the spring as they awake from hibernation and search for food.

For additional information, check these websites:

<http://extension.colostate.edu/topic-areas/insects/boxelder-bugs-5-522/>

<https://extension.umn.edu/nuisance-insects/boxelder-bugs#what-to-do-about-boxelder-bugs-indoors-117861>

<https://extension.psu.edu/boxelder-bug>



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Images used in this factsheet were obtained from several different websites, too many to mention. We appreciate those who contributed to promoting Integrated Pest Management through their images. This information is provided with support from the Univ. of VT College of Agriculture & Life Sciences and Extension System; and the IPM Extension Program from the USDA National Institute of Food and Agriculture.

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