Bug-Wise

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Prepare for the Lady Beetle Invasion: Multi-colored Asian lady beetles, *Harmonia axyridis*, specialize in preying on tree-dwelling aphids. During the warm months they are "good bugs". However, as fall approaches and they begin looking for a place to spend the winter, these beneficial insects often become worrisome household pests.

In their native country they congregate in rocky outcrops, where they overwinter in cracks and crevices among the rocks. Here in Mississippi we do not have many rocky outcrops, but these insects seem to find many of our homes and buildings to be a suitable substitute. They are especially attracted to buildings with an unshaded western or southern exposure.

Once the lady beetles land on the side of the building they search out cracks and crevices, which allow them to enter wall voids and attics where they often congregate in large numbers. Some homes are more attractive to the beetles and easier for the beetles to invade than others, and buildings that are especially invasion-prone may harbor many thousands of beetles. As temperatures warm in the spring, overwintering lady beetles begin to search for cracks and crevices through which to leave their overwintering quarters. Many of these beetles 'get lost' and find their way into the inside of the building, rather than the outside. Lady beetles also move about during warm periods throughout the winter, which often results in periodic invasions of dwelling areas throughout the winter months.

Whether they invade the home in the fall, during warm spells in winter, or during the spring as they attempt to leave their overwintering quarters, these otherwise beneficial insects can become a serious nuisance, especially when they occur in large numbers. The best way to avoid this problem is to prevent them from entering the home in the first place, and that means taking steps to make the exterior of the home 'bug-tight' <u>before</u> these insects begin searching for overwintering quarters. This usually occurs during October to November, depending on weather conditions.

The key is to seal or screen any opening that is greater than 1/8 inch in diameter. This is easier to do on some homes than others. Homes that have overlapping board-type siding nailed directly to the wall studs, without any type of solid wallboard in between, are especially problematic, because there can be literally hundreds of feet of potential entry points. However, on many homes it is relatively easy to identify and seal potential entry points, and taking the time to do so now can avoid much aggravation and frustration later in the winter.

Doors and windows are obvious potential points of entry and installing sweeps on door bottoms, and metal spring strips or weather stripping around door jambs can help keep lady beetles from entering at these points. Entry points around plumbing and conduit can be sealed with caulking or foam sealant, as can cracks in brickwork and woodwork. One of the most important steps is to check all attic, roof and soffit vents to be sure that they are adequately screened and bug-tight. Unscreened soffit vents can be a prime point of entry, but lady beetles can also enter around screened soffit vents if they do not fit tightly against the soffit. Many homes have ridge vents or other types of vents on the roof through which beetles can enter if they are not properly screened. Special attention should be given to proper screening of the large gable vents that are located on the ends of many houses. Obviously, each house has it's own unique set of potential entry points, and each house must be considered on a case-by-case basis.

Exterior screening and sealing efforts must be completed before the beetles enter the building.

Sealing buildings after the fall overwintering period begins will only intensify the problem by sealing the beetles inside attics and wall voids and forcing them into the interior of the building. However, sealing efforts focused on the interior side of the wall and ceiling can be initiated at any time. Here the focus is to seal around electrical outlets, light fixtures, and other holes in interior walls and ceilings in order to prevent beetles that are overwintering in attics and wall voids from being able to make their way into rooms. When sealing buildings, one must take care not to make the building so air tight as to present a health hazard.

Insecticides play a relatively minor role in managing invasions of Asian lady beetles. However, residual sprays of synthetic pyrethroid insecticides can be applied to exterior walls of 'invasion prone' buildings in an effort to reduce the number of beetles that successfully enter the building. Such treatments are most beneficial on those buildings that have so many potential entry points that they cannot be effectively sealed. Because insecticide residues break down over time, applications may have to be repeated at intervals of approximately 10 to 14 days. Where sealing is practical, it is more effective than relying on insecticides, though timely insecticide treatments can still provide useful supplemental control, especially on invasion-prone houses.

Pyrethoid insecticides that are labeled for use as residual sprays to exterior walls include permethrin, cyfluthrin, cypermethrin, deltamethrin, and bifenthrin. There are many different brand names of insecticides available for use by homeowners that contain one of these active ingredients. However before purchasing the product, be sure to carefully read the label to be sure that it is labeled for this particular use and be sure to mix and apply the treatment according to label directions. Many homeowners may wish to have such treatments applied by a licensed pest control company.

What to do about lady beetles that have already entered the building and are causing a nuisance? In this case one has to resort to physically removing the insects, and a vacuum, or broom, is probably the simplest means of doing this. Insecticides really won't solve this problem. Because the lady beetles are likely to occur anywhere in the room, it is neither practical nor safe to try to use insecticides in this situation. Moreover, any lady beetles that are killed still have to be physically removed. This point is especially important when dealing with the large clusters of lady beetles that sometimes accumulate in attics and other areas. These can be killed with sprays of labeled contact insecticides, but if the cadavers are not removed, they will attract dermestid beetles and other scavengers, which can be a bigger problem than the lady beetles. Also, parts of dead, crushed insects can cause or aggravate health problems such as allergies and asthma. Again, the best approach may be to go ahead and use a heavy-duty vacuum to remove the lady beetles.

Once the insects are collected in the vacuum bag, they can be disposed by placing the bag and the beetles into a plastic garbage bag. Don't just leave them in the vacuum, because they are likely to make their way back out. Alternatively, one can use a lady's stocking, fitted inside the nozzle of the vacuum to capture the beetles for later release. If using the 'catch and release' method, be sure to take the beetles some distance from the home before releasing them, otherwise they will simply reinvade the building.

Many companies market ULV light traps that can be mounted and used in dwelling areas. These traps use sticky glue boards or 'bucket-style' containers to collect and hold the beetles. Indoor use of 'electric grid-type traps' should be avoided because the resulting insect parts may contribute to health problems, especially in allergic individuals or those suffering from asthma. While these traps are primarily designed to capture flies and other similar insects, they can be helpful in managing lady beetle infestations in dwelling areas that are continually being invaded by relatively low numbers of beetles. These traps function best during dark periods.

This information is for educational and preliminary planning purposes only. Brand names mentioned in this publication are used as examples only. No endorsement of these products is intended. Other appropriately labeled products containing similar active ingredients should provide similar levels of control. Always read and follow the insecticide label.