Multi-Colored Asian Lady Beetle (MALB) Management Procedures
HANDOUT

Does your house seem to attract large numbers of lady beetles? If so, it may be the multicolored Asian lady beetle (MALB). The MALB is a native Asian species. This insect was first introduced into the U.S. in the early 1900s and after numerous subsequent releases, became permanently established across the country. The reason this insect was established in the U.S. is because it is an effective predator of aphids and scales on trees, shrubs, and agricultural crops. Thus, the MALB is considered an effective biological control agent in controlling many insect pests.

MALB adults differ from other lady beetle species by a pair of white, oval markings behind the head that form a black M-shaped pattern. Adults are approximately 1⁄4 inch in length, spherical or domelike, and yellowish orange to red. Most adults have 18 black spots on their forewings that vary in darkness. The spots may be missing or faint on some beetles.

Unlike native species, MALB prefers protected overwintering sites in and around buildings. Large hidden aggregations may hibernate in dark, secluded areas inside homes, such as attics and basements. They also may invade living areas of the home and on warm sunny days may be found flying toward windows. When disturbed, MALB exudes a foul smelling yellow-orange liquid that can permanently stain walls, carpeting, drapes, and furniture. Do not swat or crush the MALB to reduce the likelihood of this defensive behavior.

Another unpleasant aspect of the MALB that differs from native lady beetle species is the fact that it will bite humans. These bites may cause welts that last 24 to 48 hours. In extreme cases of sensitivity, humans may have an allergic reaction to the fluid the beetles secrete, resulting in dermatitis and a stinging sensation.

The best approach to managing a MALB problem is to prevent them from entering your home or building by sealing cracks and other points of entry before they begin to congregate in late summer and fall. If MALB has gained entrance into your dwelling, a vacuum cleaner may be used to collect the beetles. Be sure to remove the vacuum cleaner bag and dispose of it outside once you have finished collecting the beetles to prevent them from escaping.

REMEMBER: PREVENTION IS YOUR BEST DEFENSE

Exclusion Methods

Seal, Caulk and Screen – Use good quality silicone or silicone latex caulk to seal cracks and small holes throughout the house, especially around windows and doors. Install screens (20-mesh max.) over all vents and replace or repair damaged door and window screens. Leave screens on windows instead of storing them. Install tight fitting door sweeps and a rubber seal around garage door.

Exterior Pesticide Application – Preventative chemical treatments with pyrethroids insecticides work well due to their highly repellent, long-lasting residual activity. Applications should begin no more than two weeks before the MALBs usually arrive. **The following application restrictions, however, do apply:**

- Do not water the treated area to the point of run-off.
- Do not make applications during rain.
- All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

  (1) Treatment to soil or vegetation around structures;
  (2) Applications to lawns, turf, and other vegetation;
  (3) Applications to building foundations, up to a maximum height of 3 feet.
- Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches and structural surfaces (such as windows, doors, and eaves) are limited to spot and crack-and-crevice applications, only.
- Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.

Applications are effective for about 3 weeks, less if it rains frequently. The MALB usually begins to swarm on the first warm day after the temperature has dropped to near or below freezing.

If adults have already begun to congregate and attempt entry into buildings, it may be too late for preventative action. The best solution then is physical removal with a good shop-type vacuum. Then make spot or crack-and crevice treatments to the outside walls as described above.

PESTICIDE OPTIONS THAT CAN BE APPLIED BY THE HOMEOWNER:	
Active Ingredient	**Commercial Product**
lambda-cyhalothrin	Spectracide® Bug Stop® Indoor Plus Outdoor Insect Killer Ready to Use
deltamethrin	Bayer Advanced™ PowerForce® Carpenter Ant & Termite Killer Plus Ready-to-Use
bifenthrin	Ortho® Home Defense® MAX® Perimeter & Indoor Insect Killer
β-cyfluthrin	Bayer Advanced™ Home Pest Control Indoor & Outdoor Insect Killer Ready-To-Use
cypermethrin	Enforcer Overnight Pest Control Concentrate, Martin's Viper EC

PESTICIDE OPTIONS THAT CAN BE APPLIED BY A PROFESSIONAL PEST CONTROL COMPANY:	
Active Ingredient	**Commercial Product**
acetamiprid + bifenthrin	Transport Insecticide
imidacloprid + beta cyfluthrin	Temprid Insecticide
chlorfenapyr	Phantom Insecticide (non-repellent non-pyrethroid)
dinotefuran	Alpine Insecticide (non-repellent non-pyrethroid)
lambda-cyhalothrin	Demand CS Insecticide
deltamethrin	Suspend SC Insecticide
bifenthrin	Talstar GC Flowable Insecticide/Miticide
cypermethrin	Demon WP Insecticide, Cynoff EC, Cynoff WP, Cyper WP
cyfluthrin	Tempo 2 Insecticide, Tempo 20 WP Insecticide, Tempo SC Ultra, Tempo SC Ultra Premise Spray

This product list is not all inclusive and other suitable products may be available. All chemical information provided is given with the understanding that no endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned. Individuals who use pesticides are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Before purchasing or using any pesticide, always read and carefully follow the label directions.

Interior Pesticide Application – Interior pesticide application is not recommended as dead beetles may accumulate within wall voids and this can lead to infestation by dermestid beetles which feed of the dead/decomposing MALBs. For the same reason, **DO NOT APPLY** pesticides to the exterior of the structure in the spring when MALBs are trying to exit from their overwintering sites. Also, exterior pesticide application in the spring may force overwintering MALBs to exit into the interior of the structure.

Temporary but immediate indoor relief can be achieved by removal with a vacuum. Then to prevent the entry of more adults, seal the possible routes of entry. Use paintable silicone caulk and/or expandable foam to seal. Such routes include

around window pulleys (seal with tape or steel wool), window frames, door frames, baseboards, etc. For electrical outlets and switch boxes and heating duct and return-air vents, remove the cover plate, seal, and replace. For light fixtures and ceiling fans, remove the fixture to its base plate, seal, and replace.

Camphor – Camphor cakes or crystallized camphor placed in nylon stocking may be hung on the outside of the house near known entry points, or cotton balls containing a few drops of camphor essential oil may be placed in the corners of the windows as a repellent. Reapply the oil often.

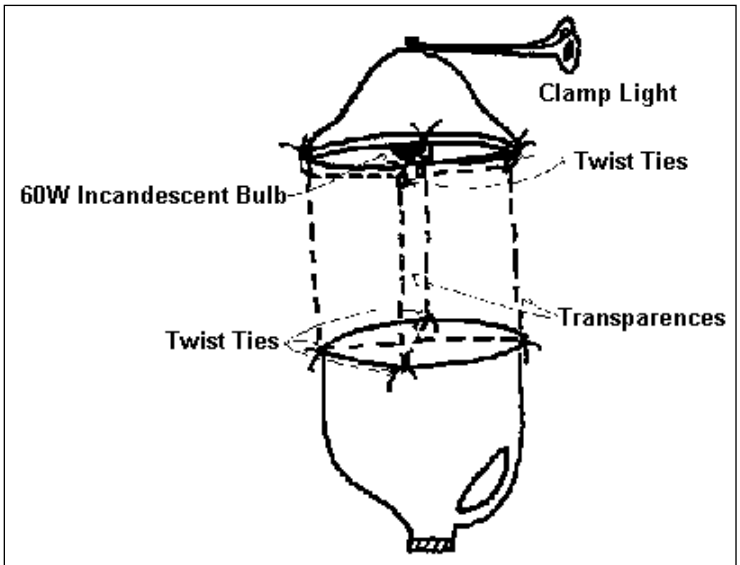
Trapping Methods

Commercial Black Light Trap – This trap is very effective in catching lady beetles that have entered the home. Operate the trap in a dark room or at night. Place in room most infested. Leave black light on all night. Empty the collection container often. IMPORTANT: Put cornstarch, talc or baby powder on the "wings" of the trap so that the beetles fall easily into bag. Commercially produced traps can be purchased from Southeastern Insectaries, Inc., http://southeasterninsectaries.com. Many other sources for black light insect traps can be found at websites related to entomological equipment and supplies.

Home-made Light Trap – Assembly instructions for a home-made black light trap can be found on the web at http://www.ars.usda.gov/is/pr/2000/001030.htm.

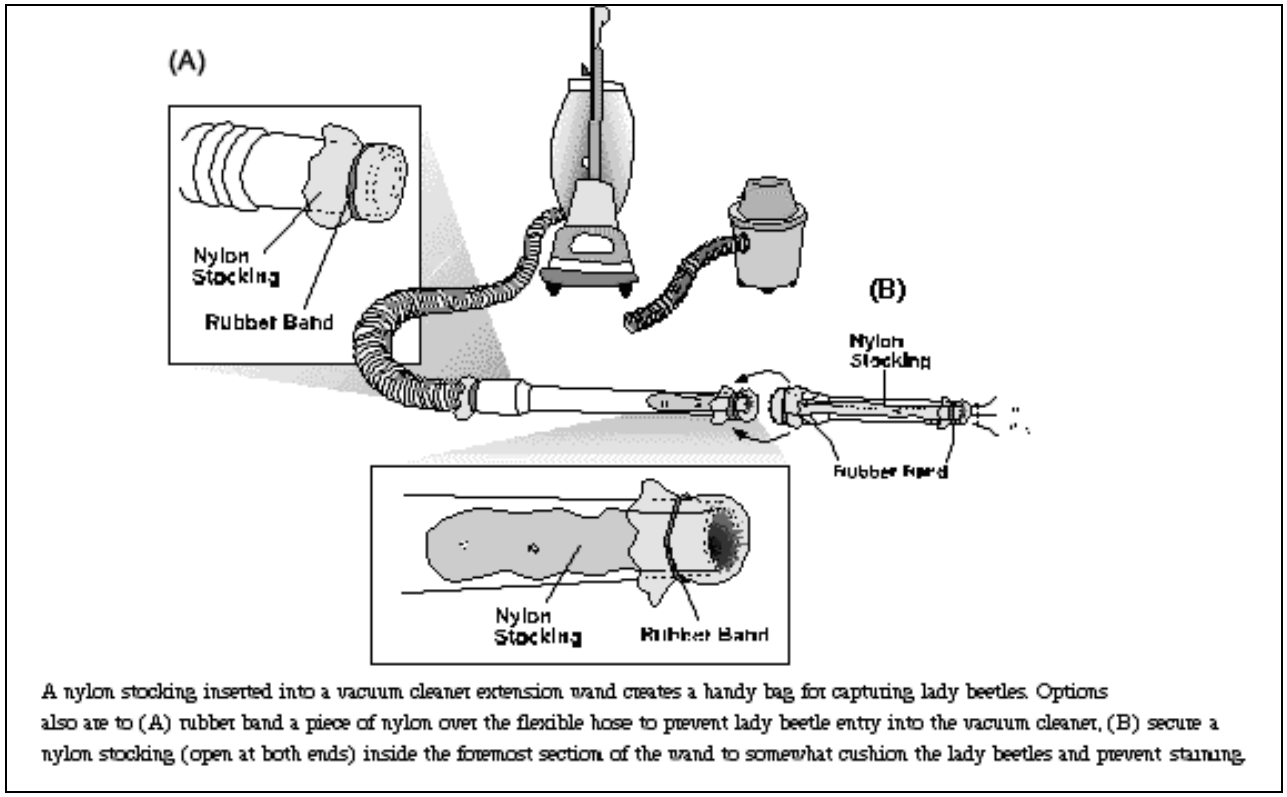
Another home-made light trap can be made from items found in the home or at the local hardware, a clamp light, a 60W light bulb, twist ties, transparencies or plastic report covers, two gallon plastic milk containers with caps and black paint. See diagram below for assembly instructions. Use like the commercial version and remember to use cornstarch, talc or baby powder on the trap wings and down into the collection container.

Home-Made Light Trap



Drill 4 holes, evenly placed around the rim of the light. Cut both transparencies half way lengthwise. Invert one transparency and slide it through the slit in the other. Tape the two sheets together along the four seams. Punch one hole in each corner of the transparencies on the top and bottom. Cut the bottom off of one milk container. Punch four holes, evenly placed along cut line. Use twist ties to attach top of transparencies to clamp light and the bottom to the inverted milk container. Remove caps from milk jugs and cut holes in each nearly the diameter of the caps. Put one cap back on the inverted milk container then tape the second cap, top to top to the first. This will allow you to easily attach and remove the second milk jug which will serve as your collecting container. Attach the second milk jug and then paint both containers black. When operating, the light will illuminate the milk containers drawing the beetles to them instead of the transparencies. Before use, make sure to liberally apply talc or baby powder to the transparencies and down into the milk containers. Re-apply powder as needed and empty collecting container often.

Vacuuming – Vacuuming is an effective method to remove live beetles from inside the house. This method will work with vacuum cleaners, shop vacs, and reverse cycle leaf or snow blowers. To avoid insects entering or damaging the vacuum, insert a knee-high nylon stocking into the end of the extension hose or wand to bag the insects. Be sure to secure the knee-high nylon stocking in place with a rubber band (see illustration below). As soon as the vacuum cleaner is turned off, be sure to remove the stocking so that the captured beetles cannot escape. As you remove it, the rubber band closes around the stocking, effectively capturing the lady beetles. You then can discard the contents of the stocking. If you want to keep the lady beetles and release them during the spring, place a damp cloth (they need moisture) inside the stocking. If you want to reuse the stocking, place the damp cloth inside a container perforated with numerous air holes and empty the lady beetles into the container. The collected beetles should be kept in a protected, unheated area, such as a detached garage or storage shed.



A nylon stocking inserted into a vacuum cleaner extension wand creates a handy bag for capturing lady beetles. Options also are to (A) rubber band a piece of nylon over the flexible hose to prevent lady beetle entry into the vacuum cleaner, (B) secure a nylon stocking (open at both ends) inside the foremost section of the wand to somewhat cushion the lady beetles and prevent staining.

Mention of any specific product does not constitute endorsement by the University of Arkansas, Division of Agriculture.

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