

Lampshade Traps for Spotted Lanternfly

How to concentrate SLF egg masses for detection, monitoring or removal

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Spotted lanternfly (SLF), an invasive pest native to Asia, feeds on the sap of a variety of trees & vines. As they feed, they excrete sticky “honeydew” that fosters growth of black sooty mold. Over time, high SLF densities can reduce vigor & growth of trees or affect the quality of grapes or hops. Egg masses are laid in summer & fall on trees or on other hard, rigid surfaces. Eggs overwinter then hatch the following spring.



Adult SLF on a grapevine

What is a Lampshade trap?

A lampshade trap consists of dual layers of abrasive material, such as grip tape, attached to a tree trunk. The coarse inner & outer surfaces mimic the rough bark textures preferred by SLF females for egg laying.



A lampshade trap (above) & an SLF adult laying an egg mass (right).

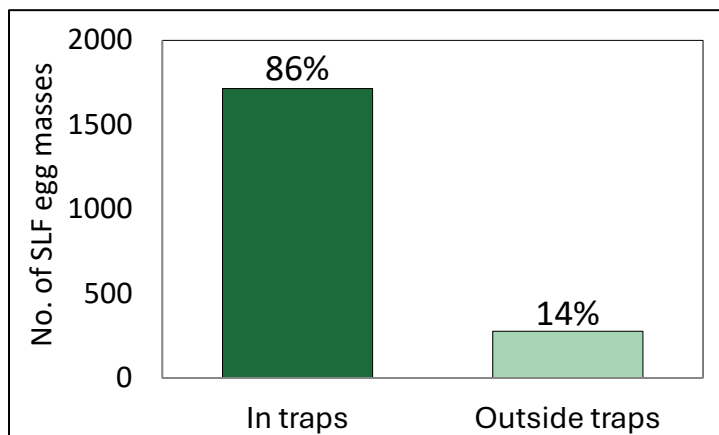
Lampshade traps can concentrate SLF egg masses in a small, accessible area. This makes it simple to remove traps with the egg masses in fall or winter. Soaking eggs in soapy water for 1-2 days will prevent any eggs from hatching.

Unlike other SLF traps, lampshade traps:

- Do not harm non-target organisms
- Do not require repeated visits to collect & dispose of dead, captured insects
- Require no lures, pesticides or sticky glues
- Can remain in place for the entire SLF egg-laying season (Aug. to Nov.)
- Can be attached to a tree within a few minutes using easily sourced materials

How can Lampshade Traps reduce SLF density?

Egg masses, each containing 30–50 eggs, overwinter then hatch in spring. Destroying egg masses in fall or winter slows local SLF population growth, reducing insect numbers next year. That means less feeding, less honeydew & less black sooty mold!



Numbers of SLF egg masses within & outside of lampshade traps in sites monitored in 2024 & 2025.

Key results from a recent 2-year study:

In 6 recently infested sites, lampshade traps required less time & effort for SLF monitoring than other trap designs or visual surveys. Moreover, SLF females consistently & strongly preferred the dark, protected shelter & rough surface provided by lampshade traps for laying their eggs.

How to Build & Deploy a Lampshade Trap

Materials	Tools
• Anti-slip grip tape or flat roofing material to wrap around the tree trunk • Cotton or foam batting – 4 inches wide & long enough to wrap around the tree trunk • Zip ties (2 zip ties, both long enough to wrap around the tree trunk) • Paper clip – jumbo size	• Staple gun with ½ inch staples or a hammer & push pins • Measuring tape • Work gloves • Scissors or utility knife

1. Choose a trap tree - Select a live Tree of Heaven (*Ailanthus altissima*), the preferred host of SLF. Measure the circumference or diameter of the trunk, 4.5 feet high. Trees that are 19 to 32 inches in circumference or 6-10 inches in diameter are ideal.

2. Wrap the inner layer - Wrap grip tape around the trunk with the abrasive side **FACING OUT**. Leaving a 1 inch overlap, cut the extra grip tape off. Staple along the seam where the tape overlaps or use a zip tie to secure the bottom of the grip tape around the tree trunk (abrasive side facing out!).

3. Add the spacer - Wrap cotton or foam batting around the top of the grip tape, double it over, then staple or use a zip-tie to create a 1-2 inch wide raised ridge (**A**). This cotton (or foam) spacer creates the dark, sheltered space SLF females prefer for egg laying.

4. Apply the outer layer - Wrap a second layer of grip tape just above the cotton or foam with the abrasive side **FACING INWARD** (towards the trunk). Flair out the bottom to resemble a lampshade. (**B**). Staple or use push pins to secure the tape around the tree at the top. The outer layer should fully cover the cotton or foam. Use the paperclip or a staple to secure the overlapping ends (**C**).

5. Periodically check your trap - Use a flashlight to look for egg masses under the outer layer & on the inner surface of the trap. If needed, traps can be repaired with staples or push pins.



How to remove lampshade traps & destroy SLF egg masses

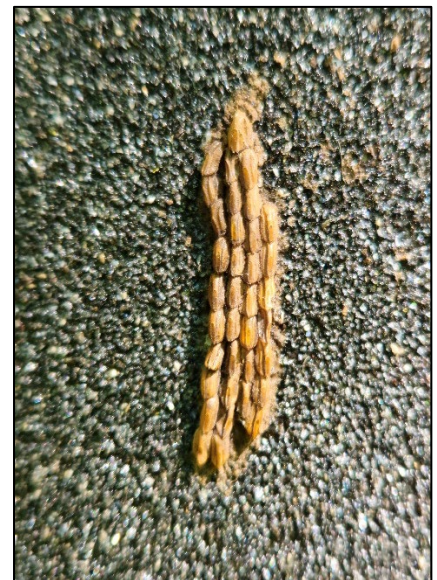
Wait until SLF adult activity has ended after the first freeze (usually in Nov.). Removing traps too early means missing egg masses laid late in the season. Be careful to avoid dislodging egg masses on the trap.

1. Remove zip ties or staples & pull off the outer layer of grip tape. Check inner & outer layers for egg masses.
2. Cut the zip tie holding the cotton or foam spacer in place & remove the spacer. Pliers may be needed if staples were used.
3. Cut zip ties & carefully peel the outer layer of grip tape off or gently pull the material through the staples along the seam.
4. Remove the inner layer of grip tape, again being careful not to dislodge egg masses. Eggs that fall to the ground may still hatch next spring.



A lampshade trap containing multiple SLF egg masses

5. Lay both sections of grip tape out flat.
6. Scrape egg masses off the grip tape into a bucket of soapy water & let them soak for 1-2 days. Eggs can also be crushed - but be careful to thoroughly crush all of the eggs.
7. Properly dispose of trap materials & soaked or crushed egg masses in sealed garbage bags.

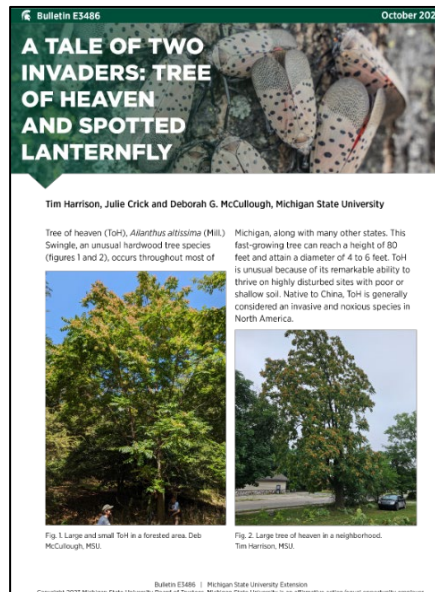


Adult SLF gathering below a lampshade trap (left); SLF egg mass covered by a protective waxy layer (center). Note occasionally, females lay an SLF egg mass without any waxy covering (right).

Destroying SLF egg masses on lampshade traps will not eradicate SLF but it can help to reduce the local population in your area. However, we expect SLF will continue to spread in Michigan. Adult insects can fly short distances but much of the spread occurs when people unknowingly transport egg masses, nymphs or adults on their vehicles or on outdoor items, such as firewood or nursery plants. Do your best to avoid transporting any SLF life stages to new areas.

Additional Information & Resources for Spotted Lanternfly

Three MSU Extension Bulletins on SLF (below) are available online at www.canr.msu.edu/spotted-lanternfly, from your local MSU Extension office or can be ordered from the MSU Extension Bookstore.



SEE IT. SQUISH IT. REPORT IT.

SPOTTED LANTERNFLY

Michigan.gov/SLF

Report SLF & get help:		
MDARD Pest Hotline 800-292-3939 MDA-Info@Michigan.gov	MSU Extension canr.msu.edu/spotted-lanternfly	USDA APHIS aphis.usda.gov/plant-pests-diseases/slf