

Lower Impact Management Strategies & Complimentary Approaches for Homeowners

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Management Approaches for Spongy Moth

Tailor these management approaches to specific situations!

- How large of an area?
- How many trees affected?
- How large are the affected trees?
- How much time do you have?
- Health of the trees?
- Client preferences?
- ...

Each management approach has strengths, weaknesses, and limitation

Understanding & communicating these is important!

Integrated Pest Management Pyramid

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Cultural Approaches:

- Manipulation of the local environment to prevent pest problems or reduce the amount of damage; *planning & decision making*
- Regulatory control (quarantines, laws, etc.)
- Sanitation (elimination of hiding spots)
- Proper plant care (proper mulching/watering/tree-care, minimize stress, etc.)
- Tolerance of damage? (*context important!*)

Two lined chestnut borer — a secondary pest of oaks

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Physical (Mechanical) Approaches:

- Physical activities performed to help prevent or reduce pests
 - Scraping away egg masses
 - Crushing caterpillars/pupae/adults*
 - Traps: sticky band, burlap, pheromone*

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Physical Removal of Egg Masses

- Each egg mass contains 500-1,000 eggs; present for 8+ months
- Egg masses can be on trees, homes, firewood, vehicles...
- Can be physically scraped away (*don't leave on ground!*)
 - *Do this safely, especially for egg masses up off the ground!*

Timing?

...consider parasitoid wasps

Egg Mass (Fresh)



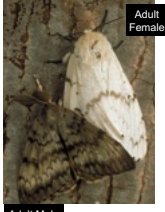
Egg Mass (Old)

Spongy Moth Egg Mass

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Crushing Caterpillars Pupae & Adults

- Spongy moths can be killed by crushing, with caveats
 - Caterpillars are covered in urticating hairs
 - Use tool, stick, etc. or wear protective gloves (leather, etc.)
 - Pupae
 - Adult ♀ possess a potent and long-lasting pheromone...
 - Consider disposable gloves (nitrile, latex, vinyl)

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Trapping of Caterpillars: Sticky Band

- Young caterpillars need to reach tree canopy to feed
- A sticky band trap can intercept small caterpillars as they climb up or down on trunk early in the season

Procedure:

- Cover trunk with duct tape or cling wrap
- Spread sticky material (Tanglefoot, Vaseline, etc.) on tape/wrap
- Can suspend chicken wire, etc. above to deter vertebrates






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Trapping of Caterpillars: Burlap Band

- Large caterpillars active at night; hide during the day
- Burlap bands provide a hiding spot to concentrate larvae in small area—but *this doesn't directly kill them!*

Procedure:

- Tie strip of burlap around trunk with twine, string, etc.
- Check daily and knock caterpillars into container of soapy water to maximize effectiveness







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Biological Control:

- Use of natural enemies (beneficials) to reduce pest levels

- Predators:** ground beetles & other insects, mice, birds
- Parasites:** stingless wasps & flies
- Pathogens:** entomopathogenic fungus and virus

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Lower Impact & Organic Chemical Options

Active Ingredients:	Notes:
Insecticidal soaps & hort oils	Very limited persistence
Dormant oils (e.g. GPSO)	For egg masses; <i>can be hard to find*</i>
<i>Bacillus thuringiensis kurstaki</i> (Btk)	Microbial; best against smaller caterpillars
Spinosad	Microbial; best against smaller caterpillars
Azadirachtin	From Neem tree; several insecticidal properties
Pyrethrins	Organic <i>but</i> broad spectrum & short persistence
Chlorantraniliprole	Conventional foliar spray; soft on beneficials
Indoxacarb	Conventional foliar spray; soft on beneficials

Understanding & communicating the strengths, weaknesses, and limitations of these treatments to clients is important!

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