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 limitations.
Understanding & communicating these is important!

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!)

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*

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!
**Crushing Caterpillars Pupae & Adults**

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

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

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

**Biological Control:**

- Use of natural enemies (beneficials) to reduce pest levels
  1. **Predators:** ground beetles & other insects, mice, birds
  2. **Parasites:** stingless wasps & flies
  3. **Pathogens:** entomopathogenic fungus and virus

**Lower Impact & Organic Chemical Options**

<table>
<thead>
<tr>
<th>Active Ingredients</th>
<th>Notes</th>
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<tr>
<td>Insecticidal soaps &amp; hort oils</td>
<td>Very limited persistence</td>
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<tr>
<td>Dormant oils (e.g. GPSO)</td>
<td>For egg masses, can be hard to find</td>
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<tr>
<td>Bacillus thuringiensis kurstaki (Btk)</td>
<td>Microbial, best against smaller caterpillars</td>
</tr>
<tr>
<td>Spinosad</td>
<td>Microbial, best against smaller caterpillars</td>
</tr>
<tr>
<td>Azadirachtin</td>
<td>From Neem tree; several insecticidal properties</td>
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<tr>
<td>Pyrethrins</td>
<td>Organic but broad spectrum &amp; short persistence</td>
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<tr>
<td>Chlorantraniliprole</td>
<td>Conventional foliar spray, soft on beneficials</td>
</tr>
<tr>
<td>Indoxacarb</td>
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Understanding & communicating the strengths, weaknesses, and limitations of these treatments to clients is important!