



# Tent Caterpillars

## Pest Note



Photos courtesy of: Henri Goulet, Canadian National Insect Collection; Minnesota Department of Natural Resources Archive, Minnesota Department of Natural Resources, Bugwood.org;

### Tent caterpillars: What are they?

The three most common types of tent caterpillars in Canada are the Eastern tent, the Western tent and the Forest tent caterpillar.

**Eastern tent caterpillars** are hairy, brownish black with a light stripe down the back. Blue spots and brown yellow lines are found along the sides of their bodies. The adult moths are usually a reddish-brown colour, but can be yellow-brown as well.

**Western tent caterpillars** tend to be reddish brown on top and pale underneath. They have a row of blue spots on their backs, with orange spots mixed in between. The adult moths are orange-brown with yellow lines on the wings.

**Forest tent caterpillars** feed on deciduous trees (trees that lose their leaves seasonally) in many parts of Canada. Outbreaks last two or more years and usually happen at intervals of ten years or more. They have a similar life cycle to the Eastern and Western tent caterpillars, with one distinct difference: instead of building tent-like webs, they make a type of silken mat on the trunk or branches where they collect to rest, leaving only to feed on the leaves. These caterpillars are a pale blue colour with black, and have a series of white spots on the back. The adult moth is a yellow-brown colour.

The Eastern and Forest tent caterpillar moths lay their eggs in late June or early July, while the Western tent caterpillar moth appears later and lays eggs in August. The eggs are laid in groups of 150 to 350 and encased in a frothy substance that hardens into a shiny Styrofoam-like material, forming a dark brown or gray band that straddles or encircles twigs of susceptible trees.

In the spring, as soon as foliage opens, the eggs hatch into young caterpillar larvae that make communal tent webs. The Eastern tent is usually built in tree or branch forks while the Western tent may enclose the tips of branches. The size of the tent increases as the larvae grow. The caterpillars mature in four to six weeks, reaching a length of about 2 to 3 cm.

In June or July, the caterpillars enter the pupal stage of development, covering themselves in cocoons. The cocoons may be found on tree trunks, fences, debris and beneath sheltered areas such as raised plant boxes. Approximately 10 days later, the adult moth will come out of its cocoon and mate within 24 hours. The female immediately begins to lay eggs for the next spring, producing only one generation of tent caterpillars every year.

Caterpillars feed on deciduous trees in most parts of southern Canada. The Eastern tent caterpillar feeds mainly on cherry, apple and crab apple trees. The Western tent caterpillar chooses willow, poplar, apple, plum, cherry and oak, while Forest tent caterpillars seem to prefer trembling aspen and poplars in Canada, but also feed on many other trees like American beech, apple, basswood, cherry, white ash, birch, mountain ash, sugar maple, red oak, white elm and willow.

### What can they do?

Eastern Tent caterpillars have been seen in North America since 1646. Outbreaks happen about every ten years and sometimes last up to two years.

Tent caterpillar outbreaks are periodic but do not happen on a regular cyclic basis because they largely depend on several environmental and biological factors. Although they seldom kill the infested tree, these caterpillars can cause severe damage, often nearly defoliating the entire tree.

If damage is minor and the tree is healthy, the tree can bud again later in the summer. However, repeated defoliation can weaken trees and make them more susceptible to other types of stress.



**Eastern Tent Caterpillar**  
Photo: Pennsylvania Department of Conservation and Natural Resources, Forestry Archive, Bugwood.org



**Caterpillar eggs**  
Photo: William M. Ciesla, Forest Health Management International, Bugwood.org



**Caterpillar cocoon**  
Photo: Whitney Cranshaw, Colorado State University, Bugwood.org



**Tent caterpillar nest**  
Photo: G. Keith Douce, University of Georgia, Bugwood.org



## Responsible Pesticide Use

### Before Purchasing a Pesticide

- Identify the pest correctly.
- Use physical control methods and alternatives to pesticides.
- Read the label directions and safety precautions before buying the product. The label must include the name of the pest to be controlled and the treatment location (e.g., indoor, outdoor, garden uses, pet treatment).
- Purchase only the quantity of product needed for the treatment.
- Consider hiring a licensed pest control operator.

### Using a Pesticide

- Carefully read all label instructions and precautions before using pesticides.
- Do not drink, eat or smoke while applying pesticides.
- Persons and pets should vacate the area during treatment. Cover or remove aquaria.
- If kitchen area is to be treated, cover or remove food, dishes and utensils.

### After Using a Pesticide

- Always wash your hands thoroughly after handling any pesticide product.





**Eastern tent caterpillar moth**

Photo: Pennsylvania Department of Conservation and Natural Resources, Forestry Archive, Bugwood.org



**Caterpillar trap**

Photo: Ohio State University Extension

## How can I manage them?

When deciding if you need to act, keep in mind that tent caterpillars have only one generation per year and each female lays only a single egg mass. Since tent caterpillars are native to North America, insect parasites and natural predators like birds and rodents control a certain amount of the population. However, some means of control may be needed where infestations are severe.

### Destroying pupae and egg masses

In the summer, look for tough, yellow-to-white cocoons on tree trunks, fences, debris and sheltered areas. In the fall, look for shiny, dark brown or gray saddle-like cases which straddle or encase twigs of trees which are known to be susceptible to tent caterpillar infestations. Destroy egg cases and cocoons by scraping them off carefully to avoid damage to the bark, and dispose of them in a sealed bag.

In the spring, if webs are present, colonies of young larvae can be removed by clipping and destroying the tents and caterpillars. This is best done when the caterpillars are at rest in the tent, either in early morning, late evening or on cool rainy days. A pole pruner can be used to remove the nests in taller trees.

### Biological control

The bacterium *Bacillus thuringiensis* (B.t.) is a selective biological insecticide. After eating vegetation treated with B.t., caterpillar larvae will stop feeding and die within five days. Thorough coverage of foliage is needed and spraying should not be done until the first signs of leaf damage appear. Younger larvae are more susceptible to this product. Insects other than the larvae of moths and butterflies are not affected by B.t. made to be used against caterpillars. Products which contain this bacterium are also non-toxic to mammals, birds and fish.

### Products

If you have an infestation of caterpillars, you can use a dormant oil spray on susceptible trees in late winter to smother the eggs before they hatch in early spring. Dormant oils are thick oils used mainly on fruit trees to control overwintering eggs, mites, scales and other insects. Dormant oils can cause damage to plants if not used according to directions, so follow all label instructions.

Products that contain spinosad, permethrin and some other pyrethrins are registered for control of tent caterpillars. If the tent is within reach, break it open with a stick and direct the insecticide into it. Spraying is most effective in the evening, as the caterpillars return to the nesting area at night.

### Did you know...

Tent caterpillars are social creatures: caterpillars from one egg mass stay together and spin a silken tent in a fork of a tree, while caterpillars from two or more egg masses may unite to form one large colony.

Tent caterpillars are known to build silk trails while travelling between their nest and feeding sites on the tree. You may be able to see these silken strands when the sunlight shines through an infested tree.



Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

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### Health Canada Pest Management Regulatory Agency

2720 Riverside Drive, Ottawa ON K1A 0K9  
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Phone from outside Canada: 613-736-3799 (long distance charges apply)  
Fax: 613-736-3798  
[www.healthcanada.gc.ca/pmra](http://www.healthcanada.gc.ca/pmra)



- Do not permit persons or pets to contact treated surfaces until residue has dried completely.
- Provide adequate ventilation of treated areas after use.
- Wipe clean all surfaces that come in direct contact with food, such as counters, tables and stovetops, including indoor and outdoor surfaces.
- Always store pesticides out of reach of children and pets and away from food and beverages.

#### Accidental Poisoning

- Call a poison control centre immediately and seek medical attention.
- Take the pesticide container or label with you to the emergency facility or physician.
- Follow first aid statements on the label.
- In case of accidental poisoning of pets seek veterinary attention immediately.
- Report pesticide incidents to manufacturers (phone number on label). They are required to send them to Health Canada.

#### Disposing of Pesticides

- Do not reuse empty pesticide containers. Wrap and dispose of in household garbage.
- Follow the product label instructions or contact provincial authorities for disposal of pesticides.

**Note:** These are general recommendations. Consult the label for specific instructions. When in doubt, contact a professional.

#### Health Canada

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