bepesticide**free** problem pests: **Tent Caterpillars**

What are Tent Caterpillars?

Tent Caterpillars (*Malacosoma disstrium)* can be found throughout North America. They are the larvae portion of a moth's life cycle. The tent caterpillars hatch from their eggs (which are laid in the tree's branches) early in the spring as the trees are just beginning to leaf out. The caterpillar's main source of food is young leaves.

The caterpillars spin silk and use the silk to create a "tent" in the branches. They position the tent to help regulate their body temperature with the sun. After approximately 7-8 weeks they spin a cocoon and two weeks later they emerge as moths. Mating takes place soon afterward. Eggs are laid in the tree branches and covered with a protective coating known as spumaline that allows the eggs to survive until the following spring.

Preventative Measures

- Keeping a tree healthy can minimize the damage done by a caterpillar outbreak. Remember to monitor for early signs of pest problems.
- Band your trees in early spring! Wrap a layer of insulation around the trunk, cover it with plastic and adhere it securely. Then slather on a sticky layer of *tanglefoot* (purchase from garden centres). This prevents outbreaks of tent caterpillars by stopping the worms from climbing the tree.
- Caterpillar eggs can be seen as large black masses on the branches of trees in the fall and winter months. Simply remove these masses from the tree in the fall to prevent the breakout of caterpillars in the following spring.
- Bird and bats are the main predators of these insects. By maintaining a healthy bird population in your yard you can help keep the caterpillar populations very low. Try keeping bird feeders in your trees as well as bird houses. Bat houses can also be an effective way to attract predators.

Mechanical Controls:

Once an infestation has occurred try these things to minimize effects:

- Place buckets of water, ¼ filled with water beneath the tree (beneath the 'tents'). These buckets will attract the caterpillars and they will then drown in the water.
- Encourage natural predators (birds) to control a large population of caterpillars.
- If the nest is within reach, wait until morning or evening when the caterpillars are in their nest. Insert a long stick into the nest and rotate it around. This will cause the nest to wind around the stick, bringing the caterpillars with it. You can then dispose of the nest and the caterpillars as you wish.

Organic Controls

Organic sprays containing the bacteria *Bacillus thuringiensis kurstaki* (Btk) can also be used to control caterpillar populations. It works by obstructing the digestive systems of caterpillars after consumption. Warning, Btk can be deadly to non-target caterpillars (i.e. those that become desired butterflies, etc…) ***It is only recommended as a last resort to ensure the health of the tree and should be used sparingly.***

How to Identify

Colour: can be brown, black or a dark bluish green colour. They often have colourful blue or yellow lines running longitudinally. Each section of the abdomen has a white spot on its backside.

Size: 5cm (2 in.) in length, full grown.

Texture: a lot of hair-like structures (setae) which gives them a furry appearance.

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May 2011

bepesticide**free** problem pests: **Cankerworms**

Preventative Controls:

- A healthy tree can withstand a certain level of defoliation. Keep your trees healthy by removing/pruning dead or rotting limbs and by remembering to water them.
- Take action by banding your trees. Trunk banding will trap the wingless females that are climbing up the tree to lay eggs. Be sure to band in both spring (March) and fall (September). This will catch the caterpillars and the wingless females.
- Remember to remove tree bands at the end of the season.

Cankerworms are caterpillars when immature and later develop into moths as adults. The picture on the left is a wingless adult female. The adult male is notably larger and winged.

Biological Controls and Beneficial Insects:

- Expose the cankerworms to predatory insects such as chalcid and trichogamma wasps, and the predatory mite, *Nothrus ovivorus.* These insects are parasitoids, feeding on the eggs of the cankerworms and killing the adults and larvae by laying their eggs on the bodies of the worms/moths. They can be purchased online or attracted to your garden by bird-feeders, etc.
- Place bird feeders and houses in your yard to attract predatory birds.
- Till the soil around the affected trees to increase the cankerworm's exposure to predatory insects and to prevent pupation (growth) into adults.

Organic Controls:

- **Band your trees!** Wrap a layer of insulation around the trunk – cover the insulation with plastic and adhere it securely – slather on a layer of sticky substance, such as *tanglefoot* (purchase at garden centres). Be sure to do this in **both** spring (March) and fall (September) to get results.
- Products containing *Bacillus thuringiensis kurstaki (Btk)* can be used to impair the digestive system of the worm with death occurring in 12-24 hours. **Use Btk only as a last resort and use sparingly. Use the product with caution and be aware that it will also kill non-target caterpillar species such as those that turn into butterflies.**
- Use a horticultural oil (lightweight) such as cottonseed oil or soybean oil to spray and wet the tree bark before leaves emerge in the spring. The oil will suffocate the over-wintering eggs and prevents them from hatching in the spring. It disrupts the metabolism of the eggs and the insect feeding habits. You can purchase various horticultural oils at garden centres in Saskatoon, SK.

How to Identify

Cankerworms, also known as inchworms, are deciduous tree defoliators (they eat tree leaves). There are two different species of cankerworm, one emerging in the spring *(Paleacrita vernata)* and one in the fall *(Alsophila pometaria)*. The eggs of both species hatch in April or early May and are laid in late fall. Their adult form is that of a moth.

Adult Female: full grown length 0.8 cm (5/16 in.), grayish green-brown and wingless.

Adult Male: full grown length 2.5 cm (1 in.), grayish green-brown with a 3 cm (1 ⅛ in.) wingspan.

For more information on Tent Caterpillars and Cankerworms:
Tent Caterpillars, Spring Cankerworms, Fall Cankerworms,
http://www.hc-sc.gc.ca/cps-spc/pubs/pest/_pnotes/tent-livreeamerique/index-eng.php,
http://counties.cce.cornell.edu/oneida/home%20garden/INSECTS/Insects%20on%20Trees%20&%20Shrubs/Cankerworms.pdf

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