

EASTERN TENT CATERPILLAR POPULATION

The eastern tent caterpillar (*Malacosoma americanum*) is native to southeastern Canada and is most widespread in the eastern United States. It is commonly found infesting various deciduous trees in open areas along roadsides and fields in urban areas, and commercial orchards. Similar species are found in the Rock Mountains and farther west.

EASTERN TENT CATERPILLAR DAMAGE AND DESTRUCTION

DAMAGE SYMPTOMS: Formation of silken tents in fork or crotches of trees in the spring and early summer; trails of silk spun by the caterpillars as they move from the tent to feed on foliage; disappearance of leaves.

DESTRUCTIVE STAGES: The majority of defoliation is done by the older larvae; young larvae do very little damage and adults do not feed at all.

TREES MOST AT RISK TO DEFOLIATION AND STRESS

HOSTS: Wild cherry, apple, and crabapple trees are most often attacked by the eastern tent caterpillar. Peach, pear, plum, rose, prune, hawthorn, and mountain ash. Mature caterpillars may leave these plants and feed lightly on other deciduous trees and shrubs before pupation.

TREE STRESS: Defoliation of mature trees by tent caterpillar during May is not particularly serious; typically new leaves will flush out within a month after defoliation. However, if a tree is young or in a very dry environment, severe defoliation may cause death. Tree stress can become severe if complete defoliation occurs several years in a row or if the same tree is defoliated for a second time by other insects later in the same season. Repeated defoliation, in addition to stresses such as drought, may kill the tree or predispose it to attack by other insects or diseases.

EASTERN TENT CATERPILLAR CONTROL

The control of eastern tent caterpillar is recommended only in situations involving ornamental tree and shrubs where extensive defoliation would be detrimental to the aesthetic appearance of the infested plant. Control is not recommended for trees in forest, woodlots, along roadsides and ditches or right of ways. Remember that in most situations, trees will put out new leaves even when completely defoliated. When control is necessary, we suggest first using a non-chemical technique (see below) and/or a non-toxic spray material such as *Bacillus thuringiensis*.

Biological: Many parasites and predators attack tent caterpillar larvae and pupae. In localized situations, caterpillars may be effectively controlled by these natural enemies. Birds feeding on larval stages can totally eradicate a colony in one day. Parasitic wasps may also be very effective, however, the tent caterpillars are not immediately killed and may require 1 to 2 weeks before dying due to parasitism.

Some chemicals are highly toxic to many natural enemies of the eastern tent caterpillar and should be avoided unless the extent of the infestation warrants these measures. Of the chemicals we have listed below, only *Bacillus thuringiensis* is non-toxic to natural enemies.

Non-chemical: Removal of the overwintered egg masses from twigs and branches is one of the easiest methods to prevent further tent caterpillar problems. The egg masses can be easily removed with your fingers and crushed, no special tools are needed. They are easiest to spot after leaf drop in the fall and should be destroyed anytime before late April.

Hand removal or pruning is also recommended for the newly formed tents in the spring. Burn, crush or place in a bucket of soapy water for a day or two and then dispose of them. Burning tents which are still on the tree is not recommended because of possible damage to the tree itself.

Chemical: Foliar sprays of carbaryl (Sevin), malathion, or *Bacillus thuringiensis* (sold as Dipel, Thuricide, Bactur, or Biotrol) will control the caterpillars. The later (B.t.) is a biologically active material that is specific for caterpillars of moths and is non-toxic. Use it where exposure to humans is a concern. It is also harmless to beneficial insects such as predators, parasites or honey bees.

IT'S NOT ALWAYS GYPSY MOTH

EASTERN TENT CATERPILLAR

[NATIVE] TO THE UNITED STATES

(*Malacosoma americanum*)



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EASTERN TENT CATERPILLAR

LIFE CYCLE

One generation of the eastern tent caterpillar develops in a year. Larvae are present in late spring, cocoons and moths in early summer, and eggs for the remainder of the time. In Spring, their unsightly nests or “tents” are conspicuous on susceptible trees by the roadside. Sometimes, these caterpillars are abundant and troublesome for several years in a row. Then they often eat all the leaves on a tree. This weakens the tree, but seldom kills it. The larvae, or caterpillars, hatch from the eggs at bud break in mid to late April (April 10-20) and begin spinning a silken tent in a nearby tree crotch. The newly hatched larvae initially feed on opening buds and subsequently concentrate on the new foliage as it becomes available. Larvae leave the tent to feed at various times of the day returning only to rest and as the caterpillars grow, they enlarge the tent until it consists of several layers. As larvae begin to mature at the end of May and early June, they leave the tent and seek out protected areas to form pale yellow cocoons. It is during this time that many people observe these large caterpillars wandering about their yards or climbing sides of buildings, fence posts, cars, etc. However, since little or no feeding occurs at this time, no controls are necessary. Adult moths emerge in 10-14 days to mate and lay eggs in bands around twigs.

EGG MASS

Eggs are deposited in a band around small twigs or branches and are covered with a foamy brown substance which hardens into a mass. The egg masses are 1/2 to 3/4 inches long with approximately 100 to 200 eggs per mass.



EASTERN TENT CATERPILLAR MOTH

Adults are yellowish to buff-brown moths with two diagonal lines running across the front wings. Wingspread varies from 1 1/4 to 1 3/4 inches. Males are slightly smaller than females.



SIMILAR INSECTS

The forest tent caterpillar (*Malacosoma disstrial*) and the fall webworm (*Hyphantria cunea*)

The forest tent caterpillar markings are- blue head, prominent central row of white or yellow markings in keyhole or footprint shape and bluish body sides. They are native and most common in forests where aspen are abundant. They do not spin silk tents.

The fall webworm makes a nest resembling that of the eastern tent caterpillar, but at the tip of a branch instead of at the crotch. In addition, they are hairier, and are present from midsummer to autumn. It feeds on many kinds of trees, including most of those attacked by the eastern tent caterpillar. Both of these insects may be controlled with the same materials used on the eastern tent caterpillar.

NATURAL ENEMIES OF THE EASTERN TENT CATERPILLAR

PREDATORS—BIRDS—INSECTS —PARASITOIDS

There are several natural enemies that take their toll on all the stages of the eastern tent caterpillar's life cycle. The toads, insects and birds (Cuckoos) prey on the larvae. Several kinds of small, wasp-like insects and flies develop as parasites in the eggs, larvae, or pupae. Many caterpillars die from disease during unfavorable weather.



CATERPILLAR

Mature larvae have a black head, prominent central dorsal yellow strip, and small blue spots to the side with reddish brown and yellow stripes. The caterpillar may grow to nearly 2 inches long.



PUPAE

The dark brown pupae are enclosed by a tough silken cocoon covered with a pale yellow powder. These 1 inch long cocoons were collected from various locations in a landowners yard.

MOTH EMERGES FROM PUPAE



TENT

The eastern tent caterpillar is found in a silken tent in a branch crotch. Native to the U.S. this caterpillar is often confused with the gypsy moth.