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# LIVING

# Hordes of herbivores

Over the past two weeks, the re-greening of the landscape has completely transformed our surroundings. The speed at which this occurs each spring never ceases to amaze. With the exception of the oaks and ashes, all our deciduous trees are now clad in fresh, new foliage. Never in the year is the kaleidoscope of greens more diverse than right now.



## OUR CHANGING SEASONS

Drew Monkman

The wonderful smell of the air, too, conveys the essence of a green world. Rising early on a damp May morning is worth the effort for the fragrance of the air alone.

Nearly everywhere in the Kawarthas, the dominant smell is that of balsam poplar. The resinous buds of this common tree release a spicy, pungent smell that serves as a wonderful milepost of the time of year. We need to appreciate our fresh new world quickly, however, because an army of herbivores billions-strong is on the march. The succulent green leaves provide hordes of caterpillars with an almost unlimited source of food.

Countless inchworms, loopers, tussock moth larvae and, of course, tent caterpillars emerge and begin to devour the smorgasbord of plant tissue that has been laid out before them. The caterpillars, in turn, provide flight fuel to the millions of songbirds still migrating northward.

These insect larvae will also become the most important source of protein for baby birds.

As children, the tent caterpillar is often one of the first insects we actually catch and bring home in jam jars.

We have two species in our area, the forest tent and the eastern tent. Only the latter actually constructs a shelter.

Eastern tent caterpillars are black and hairy with a conspicuous white stripe and blue dots down the length of the body.

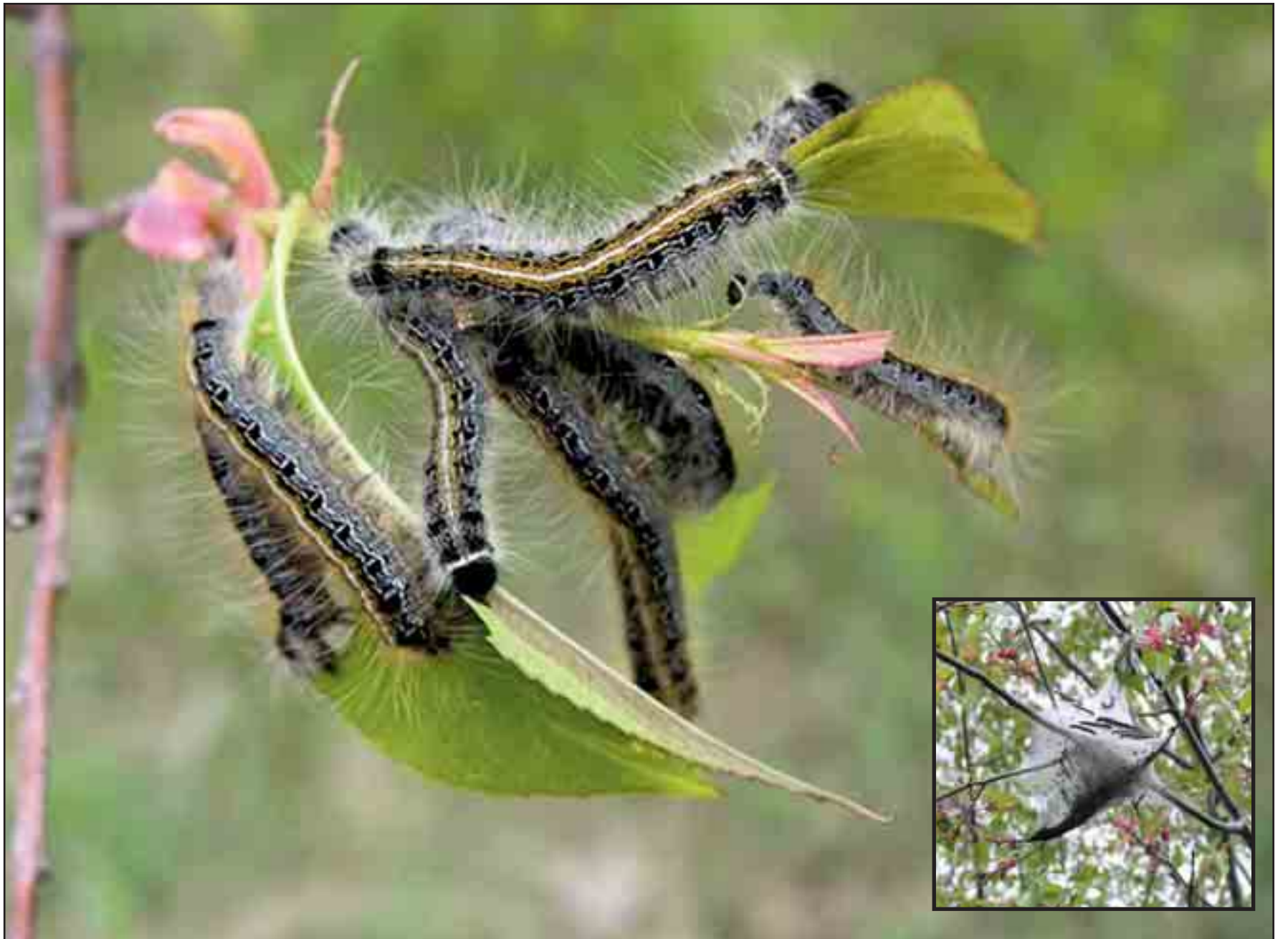
They emerge in early to mid-May at the same time as the leaf buds of their host cherry (*Prunus* spp.) or apple (*Malus* spp.) tree open. The tiny caterpillars have spent the last 10 months in egg masses wrapped tightly around a twig of the tree.

The egg mass is easy to identify, because it looks like it has been painted with varnish. The larvae immediately proceed to spin a small silken tent in a crotch of the same tree.

The caterpillars feed on the cherry leaves outside the tent during the day, using the tent at night as shelter and probably as protection from predators.

The tent grows in size as the caterpillars mature and soon becomes an unsightly mass of droppings, webbing, and caterpillars.

The eastern tent caterpillar is more a nuisance than a pest. Even though they may completely defoliate their host tree, new leaves grow by early summer and the tree almost always recovers.



Eastern tent caterpillars devour black cherry leaves. These caterpillars are more a nuisance than a pest. Even though they may completely defoliate their host tree, new leaves grow by early summer and the tree almost always recovers. Inset photo: A large "tent" in a black cherry. The caterpillars do not harm the tree, and they provide food for uncommon bird species such as cuckoos.

When fully grown, the caterpillars leave their host tree and spin silken cocoons which are often visible on the sides of buildings. By summer they will have transformed into nondescript, brown moths measuring about three centimetres across.

Forest tent caterpillars feed on a much larger variety of deciduous trees than their tent-making cousins.

They can therefore defoliate large areas of forest in years when their population peaks. Like the eastern tent, they are a species native to the Kawarthas. About every 10 years, an outbreak occurs and can last for several years. Aspen are the preferred host trees although they will readily feed on other hardwoods as well.

Even trees that have been completely stripped of their leaves usually re-leaf in three to six weeks.

These caterpillars are distinctive because of the keyhole-shaped white spots on the middle of the back.

Although forest tent caterpillars do not make tents, they do spin mats on which they rest as well as silken threads that serve as pathways to and from their feeding sites on the trees.

The strands are also a sort of safety line should the caterpillar

fall or get blown off its perch. When the light is right, it's often possible to see thousands of these silken highways hanging from the branches. Some years, simply walking through the forest can be extremely uncomfortable as you are continually brushing sticky threads and even the caterpillars themselves from your face and arms. At the same time, a confetti of caterpillar droppings cascades down from overhead.

At maturity, the forest tent caterpillars spin white, silken cocoons on trees, fences, buildings and other structures. They remain in the cocoons for about 10 days.

By about the first week of July, they will have metamorphosed into fuzzy yellow or Tent caterpillar numbers are naturally regulated by factors such as late spring, bird predation — cuckoos and orioles love them — and parasitic and predatory insects. The most important predatory insect is the tachnid flesh fly which may destroy over 80 per cent of larvae.

A much more destructive insect is the gypsy moth caterpillar.

This species was accidentally introduced to North America from Europe in 1869 and has been present in Ontario since at least 1981. The caterpillars damage our forests by eating the leaves of hardwoods

and even some conifers.

They have a particular affection for oaks, poplars and white birch. It's estimated that each gypsy moth caterpillar will consume about one square metre of foliage during its life.

Infestations often last several years. Repeated defoliation weakens trees and makes them more susceptible to other stress factors such as drought and fungal infections. The eggs are laid in July or early August and hatch in late April or early May of the following spring.

The tiny caterpillars climb trees and hang from silk threads, often being blown by the wind to other trees. They are very distinctive with the large red and blue spots along the back.

The caterpillar stage lasts for about two months.

The most damage to trees is done by large caterpillars, usually in late June.

In July, the caterpillars go into the pupal stage, at which time they transform into white moths. The pupa are dark, reddish brown. It is interesting to note that despite having wings, female gypsy moths cannot fly and must make the males come to them. They attract the male moths by releasing airborne chemicals called sex

pheromones. After mating, the female lays a buff-coloured mass of 200 to 1,000 eggs and covers the mass with hairs from her body for protection. Humans may inadvertently transport egg masses on such items as firewood, trailers and bicycles.

This helps to explain the long-distance spread of the insect.

Homeowners can reduce gypsy moth numbers on their property by scraping the egg masses from trees and either burning or squashing them.

When they are in the caterpillar stage, you can tie strips of burlap around the trunks of trees.

The caterpillars will hide under these, especially on sunny days. The insects can then be collected and squashed or thrown into a bucket of soapy water.

Populations of forest tent and gypsy moth caterpillars are both at very low levels right now and shouldn't be a problem this summer.

Eastern tent caterpillars appear to be at low to about average abundance this spring.

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Drew Monkman, Special to The Examiner