



Caterpillar Soup

One of our family's camping trips that most sticks in my mind does so on account of all the armyworms that year. A native species found throughout the hardwood forests of North America, the Forest Tent Caterpillar is

often wrongly called "armyworm" because of the way the caterpillars move around in mass. Armyworms are actually a different species.

Forest tent caterpillar numbers are cyclical, and you can tell when the populations are high due to the bare look to aspen, birch, basswood and oak, the leaves of which are favored by the growing caterpillars. The caterpillars hatch from eggs in the spring, feed on vegetation and grow larger, and eventually form silk cocoons and emerge as moths. The moths fly around at night, perhaps being carried for miles by the wind, and lay their eggs in the upper crown branches of trees. The eggs overwinter, leading to hatching in the spring.

In northern Minnesota, outbreaks of the forest tent caterpillar occur about every 10 – 16 years, lasting perhaps 3 – 7 years. Minnesota DNR reports that during the peak of an outbreak there may be 1 – 4 million caterpillars per acre. There can be so many crushed caterpillar bodies that roadways may become slippery. The year 2001 was an especially big year for this species in Minnesota, with over 7 million acres of hardwoods defoliated.

Perhaps 2001 is the year that I am remembering. On our armyworm trip, the girls were still pretty young, and being children of the woods, simply took caterpillars in stride. I recall the kettles out of the camp cook set being used for pretend cooking, the contents therein involving great masses of caterpillars, stirred round and round with a wooden spoon. Perhaps I should have objected, but how many times in your life are you going to do something with an ingredient like that? We were camping on an island up on Namakan Lake in Voyageurs National Park. A little boat trip up to Kettle Falls was made more interesting when we saw other visitors running screaming along the woods trail, on account of all the silk threads they were encountering. Young caterpillars spin threads, and fall from the trees. As for us, we found it best to walk along with a stick, brushing the webbing aside before it hit you in the face. Or let your kids run out in front of you. Camping in a tent, you could literally hear the caterpillar poop raining down from the trees. I wonder if anyone has ever made a horror movie about such things.

At home on the Chippewa it became a more personal battle. The lilacs were stripped bare of their leaves before they were even done blooming. Worried about some new apple trees, we kept

the caterpillars off of them by applying a coating of Vaseline down near the base of their tiny trunks. In the garden it seemed as if I was constantly picking caterpillars off of the vegetables, hoping not to lose it all. The yard was fairly crawling with the caterpillars. Even the chickens lost interest, as dozens of the worms crawled by them unmolested. That seemed odd, because usually chickens are all over anything that moves – dragonflies, frogs, even mice. Why in the world would they not be filling up on all of these darn caterpillars?

As it turns out, one of the protective mechanisms of the tent caterpillars as they grow larger is the development of stiff hairs and calcium oxalate crystals that clog digestive tracts and make them unpalatable to many species of wildlife. The worms congregate in large masses, which you can see even as you drive by on the road, and when threatened will rear up, waving their front ends back and forth, presenting a fiercer opponent. That might work against a bird, but it didn't really slow my kids down much. I don't really know if my chickens found the caterpillars to be distasteful, or maybe they were just tired of the sheer numbers. Generally consuming the smaller larvae and pupae, at least 60 bird species have been found to eat forest tent caterpillars, including cuckoos, orioles, jays, chickadees and nuthatches. The black-billed cuckoo is known to regularly eat large army worms, and periodically sloughs the lining of its stomach, which gets rid of accumulated hairs and crystals. Bay-breasted warblers are known to eat plenty of the smaller sized caterpillars. Wood frogs, deer mice, toads, squirrels and skunks eat tent caterpillars. Interestingly enough, black bears eat these caterpillars when they get larger, at times even making them their primary source of food. The caterpillar skins come through the bear intact, so it is possible to sift through a bear's scat to learn that a single bear can consume about 25,000 caterpillars in a day. That's more than 20 pounds of caterpillars. Yum yum!

After a forest tent caterpillar outbreak peaks, it crashes due to natural controls such as a cold, wet spring, starvation, disease, or natural enemies. One such enemy is the "friendly fly", a large gray fly referred to as "friendly" because it is constantly landing on people. A native fly, although annoying, the fly will not bite you. Their larvae, however, eat forest tent caterpillars when they are inside their cocoons. As you may have guessed, when there are plenty of caterpillars, that's when there are also lots of these flies.

Although wide-spread defoliation due to forest tent caterpillar can have a dramatic appearance, forest tent caterpillars usually do not cause severe damage to trees. A native part of Minnesota ecosystems, natural controls cause the collapse of high populations. The DNR indicates that little damage is usually caused to healthy, vigorously growing trees by this defoliation, with most hardwoods developing a second set of leaves later in the summer. If the trees are stressed by something such as drought or root damage, the defoliation may cause them to be vulnerable to secondary pests, and mortality may occur. Repeated, heavy defoliation of aspen-mixed wood forests can reduce tree growth rate, and may influence forest composition. On the plus side, I read that all that caterpillar poop is useful in fertilizing forest soils. And with so many caterpillars to play with while you are camping, why would you bother to pack any toys for your kids? Would you care for a bowl of caterpillar soup?

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