Giving Tent Caterpillars the Boot

By Ann Lovejoy
Special to the Post-Intelligencer
Thursday, April 29, 2004

This year the tent caterpillars began waking up earlier than usual. By mid-April, trees and shrubs were already tipped with the raggedy white tents of these pesky creatures. In areas where the infestation was light last year, this year's crop looks bigger than ever. Where there were no caterpillars, the first few webs are just beginning to show up.

Are caterpillars really so bad? After all, they have been part of the natural cycle of events for millennia. If the caterpillars aren't very close to your home or deck and aren't bothering your garden or orchard plants, the recommendation from scientists at Washington State University is to leave them alone.

By thinning the canopy of the forest, tent caterpillars allow young conifers to stretch more quickly toward the sun. Caterpillar droppings help fertilize the understory of the woodlands.

However, when tent caterpillars are wreaking havoc in the garden, it is very hard to sit back and let them defoliate your favorite roses or fruit trees. Fortunately, there are a number of safe and effective ways to cope with caterpillars.

As soon as you spot either white tents or baby caterpillars, you can take action. Start by stripping off any webs you can reach and bag or burn them. Some folks like to prune off affected branches, but this can be disfiguring to the tree or shrub and depletes the plant's resources as badly as the caterpillars will.

Spraying toxic caterpillar pesticides works only when you spray the caterpillars, not the webs, which are waterproof and impermeable to toxins.

Instead, if there are many unreachable webs in your garden, your best option is to spray the foliage near the webs with Bt (Bacillus thuringiensis). Bt is a naturally occurring bacteria that makes a great pest control.

The form of Bt used on caterpillars interrupts their normal digestion and maturation processes. When they eat leaves sprayed with Bt, they stop eating and die. This process can take a couple of days, though affected caterpillars stop feeding fairly quickly after taking in the Bt.

It works fastest on small caterpillars and takes longer with husky big guys. You should see definite results (such as a lack of moving caterpillars) within two to three days of spraying.

Like most botanical pesticides, Bt doesn't last very long, so you may need to spray several times if you have a bad infestation. This may be especially true this year, as fluctuating spring temperatures cause caterpillars to hatch out in flushes.

To control an outbreak effectively, timing is critical. Watch your plants, and notice when the caterpillars emerge from the webs. Until they do, nothing is going to kill them, however deadly. Once the babies emerge and begin to feed, you can start your spray program.

Choose a calm, windless day and a time when bees and other pollinators are not present (early morning or late afternoon). Spray only the trees and shrubs that are hosting emerged and feeding caterpillars. Usually, spraying Bt every 2 or 3 days for a week will take care of even a severe caterpillar attack. Carefully targeted and timed Bt use minimizes or eliminates accidental non-target caterpillar kill. Because Bt dissipates so quickly, it won't persist to be a problem for the later-appearing caterpillars of Painted Ladies and other handsome butterflies.

Take time to examine your caterpillars to see if they really are tent caterpillars. Tent caterpillars
are about 2 inches long, dark brown and very fuzzy, with a white stripe down the back and linear or blobby red or blue side markings.

If your caterpillars look like this and are emerging from baggy tents, you can be very sure about your identification.

Before spraying with Bt, examine the caterpillars for signs of parasitic wasps. Typically, the tiny wasps lay a single egg on each caterpillar’s head, though an egg may appear anywhere on the body. The white eggs are about the size of a pinhead. Dotty caterpillars are already doomed.

If you find plenty of white-dotted tent caterpillars, you may decide to do nothing to the caterpillars that are not eating your garden favorites. Tolerating a little damage will encourage the parasitic wasps, which are an excellent natural control.

If the caterpillars are feeding on precious plants, you may want to spray Bt anyway, or do some hand picking. However, instead of squishing them, consider tossing tiny caterpillars into an area of weeds or long grass, so they remain available to their natural parasites.

If you do nothing, the caterpillars will pupate, then emerge as moths. In a month or so, you will notice rusty reddish-brown moths fluttering frantically around outdoor lights at night. The moths will soon lay their eggs for next year’s generation of tent caterpillars. You can strip these egg sacs off very easily when they are fresh or any time during the year. You also may release tiny trichogramma wasps that parasitize the eggs.

Tent caterpillars are most likely to be found on fruit trees, from Indian plum and wild cherry to apples, pears and peaches. They also enjoy alders, cascara and birch trees.

You will need a trombone sprayer (and good water pressure) to reach tents that are high up in large trees.

In high population years, the caterpillars can pretty well defoliate these trees. Healthy trees are rarely killed, but trees that are already struggling can be pushed over the edge by a bad attack. Evaluating where the caterpillars are and how many there are can help you decide your course of action.

If you use Bt, check the label on the bottle to be sure you have a fresh solution. Usually, the shelf life is a year or two for unopened bottles and about three months for opened bottles. Wettable powders may be good for two years if unopened. Bt that has frozen and thawed is probably no good.

Another way to deal with Gypsy moths is to plant the right trees, like: ash, dogwood, lilac, sycamore, arborvitae, honeylocust and catalpa.