

The Trinity Park Association's (environmentally friendly) War on Cankerworms

(adapted from Elizabeth Neighborhood Cankerworm Project,
with gratitude)



What Is The Fall Cankerworm?

The fall cankerworm or just cankerworm (*Alsophila pometaria*) is an extremely destructive insect native to North America. Adult cankerworms emerge from the ground in late October through early December and the females (as wingless moths) crawl up tree trunks onto higher branches, where they mate with male cankerworms. They then lay masses of eggs on limbs and trunks. In the spring, these eggs hatch and tiny green inchworms spend the next couple weeks eating their way through the new leaf canopies while dropping into the ground on silken threads to pupate in the soil to renew the cycle for the next generation of

worms.

These worms are so voracious in the Spring, that they can chew through an entire mature oak canopy in 36-48 hours. The chewing causes extreme stress to the tree as it will try and re-leaf. The stress caused from a cankerworm can be so severe, that it can lead to the premature death of trees, especially an older tree. Our tree banding efforts will focus on catching these wingless females as they crawl up the trees by trapping them in a sticky wrapping of a tar paper band covered with a layer of sticky Tanglefoot.

Entomologists can not explain why the infestation of the cankerworm in Charlotte has become the worst in the nation.¹ We are facing a similar problem in some areas of Durham. In order to save our beautiful trees and canopies, each Fall we ask that neighbors band their trees. However, simply banding a tree does not mean that tree is safe. Because the inchworms are highly mobile and will move from one tree canopy, to a nearby or touching tree canopy, tree banding is only effective when all canopies that touch are banded. In other words, if you band your trees, but your neighbor doesn't, and your trees and their trees canopies touch, your tree is at risk. Alex Johnson, urban forestry manager for Durham, will be banding select city trees.

Therefore 100% neighborhood participation is needed to ensure that all trees are protected and banded. If each resident bands 3-5 trees, which should only take an hour or so of their time, we could have every tree in Trinity Park banded! What an accomplishment.



Images of tree leaves that
cankerworms have destroyed.

¹City arborist Don McSween, who oversees Charlotte's thousands of street trees, says the Queen City has the worst cankerworm infestation in the country. The only other place with anything like Charlotte's problem is Regina, Saskatchewan.



An image of what the female bug looks like in the Fall when they make their way up the tree trunks. (The male cankerworms have wings and the females are wingless.)

How and What to Band:

A common misconception is that cankerworms only like certain types of trees, however as we have seen over the years, their appetite has increased and just about every species of deciduous tree and shrub is susceptible to the cankerworm. Large trees are the most important to protect because of their size; however, small trees should also be banded as well, to ensure they will someday live to become large trees and replace those trees we have already lost.

Property owners should band all trees on their property as well as any common, shared trees and even “city” trees if their canopies happen to touch the canopies of the property owner’s trees.

Although there are different kinds of bands, the best and most frequently used include a batting layer covered with tar paper and a sticky spread called Tanglefoot.

Where to Get Supplies:

Thanks to generous donations and the hard work of volunteers, TPNA is offering kits at less than full cost.

Remember, the cost to band a tree can be as little as a couple dollars per tree, which is significantly less than the cost to remove a dead tree – which can be anywhere from \$1,000 - \$10,000 per tree. According to the experts, trees which are infested two or more years can be so weakened that they die.

For large tubs of Tanglefoot (for banding several large trees), go to Stone Bros. & Byrd, 700 Washington Street, Durham.

You can also order supplies from Biocontrol Network, www.biconet.com.

Our profound thanks to

**Alex Johnson, Durham urban forester,
Steven Frank, Asst. Professor, NCSU,
George Davis, Stone Bros. & Byrd,
Biocontrol Network, www.biconet.com,
and TPNA volunteers.**

How to Band A Tree:

Step 1 EARLY FALL (early November)



A. Wrap approximately 4" wide foam insulation around the tree about 4-6 feet from the base of the tree. (fold it in half if it is wider than the tar paper)



B. Make sure all cracks and crevices are filled in with the foam.



C. Apply roofing paper on top of the insulation.



D. Then using staples, duct tape or plastic wrap, adhere the roofing paper to the tree at both the top and bottom of the band. Roofing paper should completely cover the batting. (Never use nails to adhere the roofing paper to a tree)



D-1. Staple Gun Method - Staples should be several inches apart. Use as few staples as possible. Small trees should not have staples used on them.



D-2. Duct Tape Method - Duct tape can be used as an alternative to staples, however you will probably need to wrap it around the tree several times to insure that the duct tape will hold to the tree.

D-3. Plastic Wrap Method - Plastic pallet wrap can be used in a similar method to the duct tape. The plastic wrap should be pulled tightly and then securely tucked under itself when done wrapping the tree.



Step 2 LATE FALL (Approx. Mid November – December. Step one and two can happen at the same time if it is already late fall and step one has not been completed). Wait until at least 80-90% of the leaves have fallen from the tree or before the first hard freeze; usually the middle of November or beginning of December).

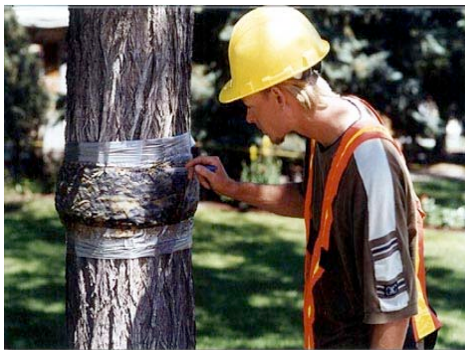
A. Using a putty knife, spread the Tanglefoot on top of the exposed roofing paper. The Tanglefoot should be applied so that it is about a 1/8" thick. Apply it to the bottom half of the tar paper.



NOTE: Tanglefoot is an environmentally safe product, made of natural gum resins, castor oil and vegetable wax. It is extremely sticky, so wear old clothes and disposable gloves for this part! You might want to warm it slightly before putting it on.

Step 3 WINTER (December-March)

A. Maintain and check your bands every 3-4 weeks throughout the winter. Some trees will have an unusually high number of insects that try to crawl up them, so if the trap is already clogged with a lot of bugs or leaves, it may be necessary to scrape off the Tanglefoot (with dead bugs entrapped) and apply another layer of the Tanglefoot. (You can also spread another layer on top of an already full layer of Tanglefoot-i.e if you don't



want to scrape off a layer. Or, you can use the top, clear half of the tar paper to reapply.).

NOTE: This is necessary, because if the traps get clogged early in the winter and are not cleaned or reapplied, the bugs will be able to crawl on top of the traps (on top of the already trapped bugs) and get up to the canopy as there is no sticky surfaces left to snag them.

Step 4 SPRING (late April - May)

A. Remove the bands in the late Spring after all the worms have finished dropping from the trees. It is recommended that you leave the bands up until after the worms are finished dropping because as they drop, some will get caught in the residual stickiness left on the traps, which keeps them from being able to go into the ground to then reappear the next Fall.

NOTE: If you want to ensure that your trees are 100% protected, in the Spring, when you see the first worms start to drop, you can hire a tree company to come spray your trees. Most tree companies listed above will come with high powered hoses and spray pesticides into the canopy which will almost instantly kill all worms in the sprayed area. This is extremely effective and recommended for those who

are motivated to do so. Below are images of the worm as they look in the Spring (most are bright green or black) when they drop from the tree canopies.



Alternative Diagram

To Trap Crawling Critters

Several types of traps are available to catch the female moth that will produce leaf-eating caterpillars. Shown below is the Tanglefoot (glue) method. The female moth will get stuck in the Tanglefoot material while trying to climb the tree.

SOURCE: City of Charlotte

The diagram shows a cross-section of a tree trunk with a Tanglefoot trap installed. The trap consists of a white batting layer (1) attached to the tree with staples (2), and a grey tarpaper layer (3) covering the batting. The Tanglefoot material is the sticky surface of the tarpaper. An arrow points to the trap with the text 'Install approx. 4 feet above ground'. Labels include 'BATting', 'STAPLES', 'TARPAPER', 'TANGLEFOOT', and 'TREE TRUNK'.

1. Install cotton or fiberglass batting to tree trunk.
2. Use small staples to attach tarpaper on top of batting.
3. Apply Tanglefoot material on the outside of tarpaper.

Remove bands in early spring.

DAVID PUCKETT - dpuckett@charlotteobserver.com