

HOME GROUNDS FACT SHEET



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Nassau County



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Cankerworms

Cankerworms by any other name (inch worm, measuring worm or loopers) are voracious pests of fruit and shade trees of Nassau County and many other parts of the United States. They are caterpillars, the larvae of moths, *Paleacrita vernata* (Spring cankerworm) and *Alsophila pometaria* (Fall cankerworm). While their preferred food is the foliage of apple, elm and oak, they also attack cherry, plum, apricot, maple, birch, linden and other shade trees. Sometimes they also feed on roses, rhododendrons and other shrubs.

Cankerworm population growth exhibits a cyclical pattern. They become abundant and active in tree defoliation for two or three years and then almost disappear - only to recur after a period of some years. Influential factors in this periodic population reduction are probably the lack of food after extended cankerworm infestation and the build-up of their predators. Trees defoliated for two or three years in succession may display poor growth, greater

susceptibility to disease or other pests, and may even die.

Cankerworms are small, slender caterpillars that move in a looping or loping movement. They crawl by arching their bodies high and pulling their back legs (prolegs) up to meet their true forelegs. They can suspend themselves on a fragile thread of silk and spread by swinging from one tree to another with the help of the wind.

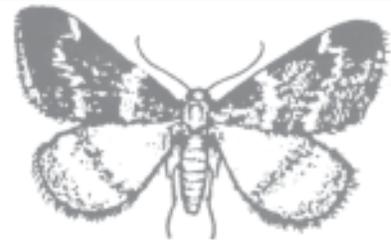
Both the spring and fall cankerworm hatch from eggs in May at 148-290 GDD to feed on newly developing leaves at the tips of branches. As they approach full growth, they destroy all leaf tissue, leaving nothing but the midribs and larger veins. The crowns of trees so damaged often appear ragged. Both cankerworm species can be found at the same time and on the same trees. In early June, when caterpillars are full grown, they drop to the ground to enter the pupa stage of development.

MAGNIFIED 2 TIMES

The Fall Cankerworm pupates one to four inches in the soil within a tough silken cocoon into which particles of earth have been woven. The adult moths emerge in late fall, after frost, usually in November and early December. Some continue to appear during warm periods throughout the winter. The male moth is brownish-gray with a 1 1/2 inch wing spread. The female is 1/2 inch long and is wingless.



female moth



male moth



larva

After fertilization, the female moth climbs up the tree trunk to deposit cup-shaped eggs in a compact, single-layered mass on trunk branches and small twigs. The eggs over-winter until early spring when the leaves unfold. The caterpillars that hatch out are brown on top and green underneath with three narrow stripes along the side and yellow stripes lower down. This species, the Fall Cankerworm, has three pairs of prolegs (false legs) on the rear of the body, whereas the Spring cankerworm has only two pairs of prolegs.

E-1-14 DWM reviewed RT 1/03

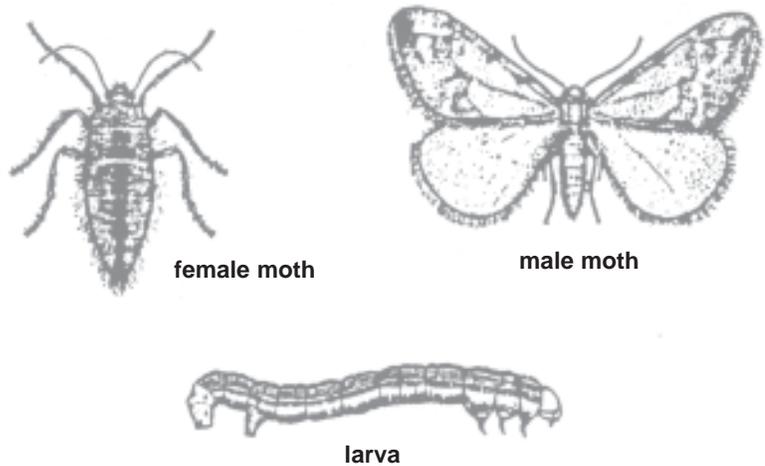
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MAGNIFIED 2 TIMES

The Spring Cankerworm also pupates during the first or second week of June, but no cocoon is formed. The pupa overwinter, sheltered in an earthen cell. In early spring, usually in March when the frost is out of the ground, the adult moths emerge. The wingless female resembles her fall cousin, but has a dark stripe down the back and stiff reddish spines on the abdomen. The male moth is silky gray with three dark lines on the forewings. Loose clusters of oval eggs are laid under bark scales of the main trunk and branches. The eggs hatch in about a month or more into caterpillars that vary in color from green to brown to almost black with a green stripe along the side.



Management Options

Integrated Pest Management (IPM) Considerations

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide* that is least toxic to people and natural predators, can be considered. Prior to using any pesticides, plants should always be monitored for the degree of infestation and a sensible control measure considered.

* A pesticide is a substance that kills, or attempts to kill, a particular pest, e.g. **insecticide**, **fungicide**, **herbicide**, etc.

Mechanical Controls

Sticky bands placed around the trunk to trap the female as she climbs up to lay her eggs have not proved very effective. "Tanglefoot" and other sticky substances used to trap the female moth may be injurious if applied directly to the bark. A band of cotton cloth is wrapped around the trunk and the sticky material is smeared on the cloth. The sticky material has to be renewed too often for convenience, and the tree may still become infested by small caterpillars swinging on their silken threads from other trees.

Sprays

Eggs may be killed by horticultural oil sprayed to trunk and branches. Apply *Bacillus thuringiensis* (Bt) directly to the foliage in the spring at the first signs of cankerworms on new foliage. Chemical pesticides may be

available. If you choose to use a chemical pesticide, contact your local Cooperative Extension office for specific recommendations. Spray from 148 to 290 GDD when ruby horsechestnut blooms.

Do not use a hose-end sprayer!

Hose-end sprayers do not dissolve, mix or apply pesticides accurately or evenly. The changing rates of water pressure, different hose diameters and water temperature provide variables that prevent accurate mixing and delivery. A hand-pump or powered tank sprayer, where the pesticide is pre-mixed to the proper dilution, allows for the application of a known mixture as per label instructions.



WHENEVER YOU USE A PESTICIDE,
ALWAYS READ THE LABEL AND FOLLOW
THE MANUFACTURER'S INSTRUCTIONS
AND RECOMMENDATIONS.

"This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office (631) 444-0341. Read the label before applying any pesticide. Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied."