THE MORE IMPORTANT NURSERY INSECTS IN NEW JERSEY, CIRCULAR, NO. 26

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The more important nursery insects in New Jersey, Circular, No. 26 by Harry B. Weiss

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HARRY B. WEISS

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The More Important Nursery Insects in New Jersey

By Harry B. Weiss

This circular is intended primarily for nurserymen, and, in view of the fact that at least 90 per cent of the nursery area of New Jersey is devoted to the growing of ornamental plants, only those insects injurious to such plants have been treated. All of the species mentioned herein have been found in nurseries.

THE LEOPARD MOTH

(*Zeuzera pyrina* Fab.)

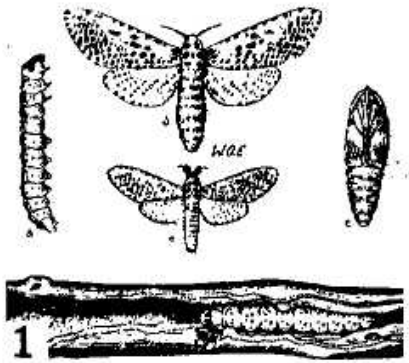

Fig. 1. Wood Leopard Moth
a, larva; b, larva in burrow; c, pupa; d, female moth; e, male moth
(N. Y. State Coll. Forestry Bul. 26)

General Appearance.—The boring larva which is responsible for the injury is a fleshy caterpillar, pale yellow with a pinkish tinge and having the body covered with large dark tubercles. The adults are striking moths with white wings spotted with black dots, the females being larger than the males.

LIFE HISTORY.—The moths appear in June and deposit eggs singly and in groups of three or four up to the extent of as many as 800. These are laid in crevices in the bark and hatch in about ten days. The larvæ then penetrate the wood and make tunnels in the heart of twigs and larger branches or trunks. When too large for one branch the larva enters another. Pupation takes place the second May after the eggs have hatched, thus the larva requires nearly two years to complete its growth. The presence of the larva in a branch is indicated by the frass, chips and excrement near the entrance of the burrow and by the wilting and breaking off of infested limbs.

FOOD PLANTS.—This pest attacks practically all kinds of suitably sized woody plants except evergreens, and in New Jersey nurseries near cities it has been found particularly in oak, lilac, mountain ash, maple, ash and apple stock.

CONTROL.—Infested twigs and branches should be cut and burned. Carbon bisulfide can be injected into the burrows where cutting is not possible or a pliable wire used if the larva has not made a long or crooked burrow.

THE BAGWORM

(*Thyridopteryx ephemeræformis* Haw.)

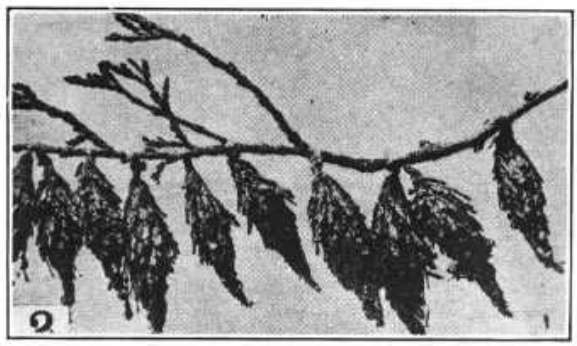

FIG. 2. BAGWORM CASES ON ARBOR VITÆ TWIG
(Ohio Agr. Exp. Sta.)

GENERAL APPEARANCE.—This pest is readily recognized by the bag-like coverings of the caterpillars hanging from the foliage. The bags are composed of bits of dried leaves and bark held together by a silken fabric and are conical in shape and from one to two inches long.

LIFE HISTORY.—The bagworm overwinters in the egg stage within the old female bag. In the spring the young hatch from the eggs and make their way to the nearest leaves and begin feeding and constructing cases or bags which they carry with them and which serve as a protection. Toward the end of the summer the larva is full grown and it then attaches its bag to a twig and within transforms to a pupa, which stage lasts about three weeks. The males then emerge and mate with the females which are wingless and which remain in their bags. The females then deposit eggs, work their way out and die.

FOOD PLANTS.—This insect is a general feeder but appears to be fond of evergreens, especially arbor vitæ. It feeds freely, however, on maple, willow, sycamore, poplar and many other trees.

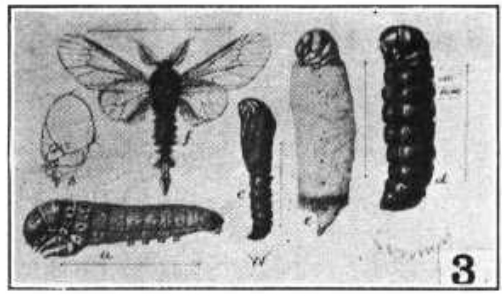

FIG. 3. BAGWORM
a, full grown larva; c, male pupa; d, female pupa; e, adult female; f, adult male
(From Howard)

CONTROL.—Hand-picking and burning the bags in winter will destroy the eggs. Spraying with arsenate of lead powder, 1½ pounds to 50 gallons of water, will kill the larvæ while they are feeding.

THE WHITE-MARKED TUSSOCK MOTH

(*Hemerocampa leucostigma* Sm. and Ab.)

GENERAL APPEARANCE.—In nurseries near towns these insects are sometimes quite abundant. The caterpillar is gray in general color and the back is ornamented with a row of 4 brush-like tufts of white hair. Behind these are 2 bright red elevations. At each side is a velvety black band bordered with yellow. The head is bright red and each end of the body bears 2 pencils of stiff black hairs. The male moth is ashy gray in color marked with black, while the female is wingless, with a thick, somewhat oval, light gray body.

LIFE HISTORY.—Overwintering takes place in the egg stage. The eggs are laid in masses of 300 or more and covered with a white, frothy mass secreted by the female. These masses are laid on trunks of trees, fence posts, sides of houses and other places. The young caterpillars appear about the last of May and feed on the leaves, at first skeletonizing them but later eating everything except the midrib and main veins. Very often the larvæ suspend themselves from the leaves by silken threads. They become full grown in four or five weeks, at which time they are about 1½ inches long, and then construct cocoons in crevices of rough bark. The pupal stage lasts about two weeks, after which the moths emerge. The wingless female then deposits her eggs on the outside of her cocoon in which stage the insect overwinters.

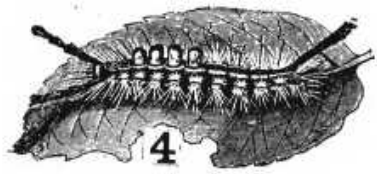

FIG. 4. WHITE-MARKED TUSSOCK MOTH
(Ill. Agr. Exp. Sta. Bul. 151)

FOOD PLANTS.—Almost every kind of a tree except an evergreen is subject to attack.

CONTROL.—Spray with powdered arsenate of lead at the rate of 2 pounds to 50 gallons of water. Trees from which the eggs have been removed during the winter or fall can be kept free of the caterpillars which may occur on neighboring trees by banding them with cotton batting or tanglefoot applied on paper. On trees with a thick bark, the tanglefoot can be applied direct.

THE APPLE-TREE TENT-CATERPILLAR

(*Malacosoma americana* Fab.)

GENERAL APPEARANCE.—Unsightly nests or webs occurring where the branches fork are evidences of the presence of this pest. The full grown caterpillar is about 2 inches long, black, with a light stripe down the back and dots of blue and white along the sides, and is clothed with fine yellowish hairs. The moths are dull, reddish-brown, marked on the front wings by two, almost parallel, oblique, whitish lines, and measure from 1¼ to 2 inches across the wings.

LIFE HISTORY.—The winter is passed in the egg stage, the eggs being laid in masses of several hundred, each mass being ½ inch or more in length and usually encircling a small branch as a band. Each mass is covered with a varnish-like material and has rounded ends. These hatch when the first buds open and the larvæ feed on the foliage and construct a silken nest which sometimes becomes quite large. During storms and the heat of the day the larvæ remain in the nest and feed as a rule only early in the morning, in the evening

FIG. 5. EGG MASSES OF APPLE TREE TENT-CATERPILLAR
(N. Y. State Coll. Forestry Bul. 26)

FIG. 6. NEST OF APPLE TREE TENT-CATERPILLAR
(Conn. Agr. Exp. Sta. Bul. 177)

or at night. When full grown they crawl to some protected place and spin their oval, white cocoons which are about 1 inch in length. The pupal period lasts about 3 weeks, the moths emerging the last of June and first of July and depositing eggs soon afterward. There is only one generation a year.

FOOD PLANTS.—This species is common at times on wild cherry trees, on trees in neglected orchards and will also infest beech, birch, oak, willow and poplar.

CONTROL.—Spraying with arsenate of lead (powdered) 1½ pounds to 50 gallons of water will kill the larvæ. This should be done while

the caterpillars are small. The nests can be destroyed by wiping them out or burning them while the larvæ are inside. The egg masses are plainly visible and can be pruned off and destroyed.

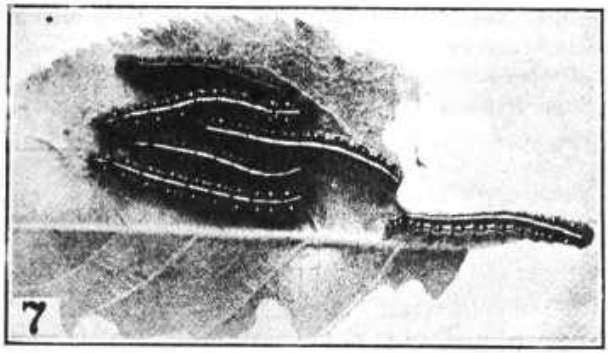

FIG. 7. PARTLY GROWN TENT-CATERPILLARS
(Conn. Agr. Exp. Sta. Bul. 177)

THE FOREST TENT-CATERPILLAR

(*Malacosoma disstria* Hubn.)

FIG. 8. FOREST TENT-CATERPILLARS ON TRUNK OF TREE
(N. Y. State Agr. Exp. Sta. Bul. 159)

GENERAL DESCRIPTION.—The caterpillar can be distinguished from the apple tent-caterpillar by the row of somewhat diamond-shaped, whitish spots down the middle of the back and by the fact that it feeds