

THE WORST ENEMIES OF THE APPLE TREE.

ATTACKING THE FOLIAGE.

1. THE EYE-SPOTTED BUD-MOTH (*Tmetocera ocellana*).—Small, dark brown caterpillars, $\frac{1}{4}$ of an inch in length, with black heads and collars, destroying the buds when just unfolding, and sometimes boring down the centre of the twig. *Remedy*: Spray early with a strong Paris green wash (Paris green 1 pound, fresh lime 1 pound, water 100 gallons).

2. THE CIGAR CASE-BEARER (*Coleophora fletcherella*) and

3. THE PISTOL CASE-BEARER (*Coleophora malivorella*).—Small yellow caterpillars in curved cases, which pass the winter on the twigs of apples and cluster around the opening buds, injuring the foliage and flowers. *Remedy*: Spray early with the wash mentioned under No. 1 above, or with kerosene emulsion (Formula I).

4. LEAF-ROLLERS.—The caterpillars of several small Tineid moths, when full-grown from $\frac{1}{4}$ to $\frac{1}{2}$ inch in length, which bind together the young leaves and flower buds, forming a tent inside which they feed. *Remedy*: The same as for No. 1.

5. TENT CATERPILLARS (*Clisiocampa*).—Two kinds attack the foliage of the apple as well as of many other trees. The Apple-tree Tent Caterpillar forms a tent in the fork of two twigs; the Forest Tent Caterpillar does not make a conspicuous tent, but spins a flat mat of silk on the side of a branch or on the trunk; to these resting places the young caterpillars resort when not feeding. The mature insects are thick-bodied, reddish brown moths expanding about $1\frac{1}{2}$ inches across the wings, which are crossed obliquely by two bands. These bands are pale in the first-named, but dark in the moth of the Forest Tent Caterpillar. During July the females lay rings of about 200 eggs on the twigs of trees, in which state the insect passes the winter. *Remedies*: Collect and destroy the egg clusters during the winter. Spray the trees with poison (Formula II or VI) directly the young caterpillars are noticed. All tents should also be cut off and destroyed early, before the leaves hide them.

6. GREEN FRUIT WORMS (*Xylina*).—Green caterpillars dotted and lined with yellowish white, $1\frac{1}{2}$ inches long, occasionally attacking the foliage and the forming fruit. *Remedy*: Spraying regularly with Formula VI will prevent injury from these insects.

7. CANKERWORM (*Anisophteryx pometaria*).—Silver brown caterpillars about an inch in length, with only six pairs of legs, occurring sometimes in large numbers, attacking the leaves so severely as to give the trees the appearance of having been scorched with fire. The wingless female moths appear only in autumn and climb up trees to lay their eggs in flat patches on the bark. From these the young caterpillars hatch in spring. *Remedies*: Spray as soon as caterpillars appear with Formula II or VI. In autumn, place mechanical contrivances or bands of thick paper painted with a mixture of castor oil 2 pounds, rosin 3 pounds; or with printer's ink, or some other viscid substance to catch the females when ascending the trees to lay eggs.

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