

FIG. 1757. FOREST TENTLESS CATERPILLAR—*a*, egg mass; *b*, moth; *c* and *d*, eggs; *e*, fiery hunter beetle, which preys upon the eggs and caterpillars; *f*, caterpillar.

soon follows. The grubs complete their full growth in one year. Much can be done in the winter to rid the trees of these and like borers by cutting off all dead and dying branches, and burning them before the insects have a chance to escape.

Maple trees are often troubled with borers (*Plagionotus speciosus*), which are closely allied to the Locust Borer. This beetle is a very pretty creature, being marked with yellow and black stripes. The eggs are laid in summer, and the grubs bore into the wood, where they may be destroyed by a stout wire in spring.

2. The chief Leaf-Eaters which infest shade trees are the *Tent* and *Tentless caterpillars*, the *Tussock caterpillar*, the *Fall Web-worms*, and the *Bag-worms*, all of which are larvæ of moths.

The American *Tent* and the *Forest Tentless Caterpillars* (*Clisiocampa Americana* and *distriata*), are doubtless familiar to most readers. The accompanying figures (Figs. 1756 and 1757) show the characteristic features of the eggmasses, larvæ, tent, and moths. Much may be done to lessen the ravages of the *Tent*

caterpillars by the destruction of the egg-masses in the fall, winter, and spring, and by burning the tents as soon as they appear in the spring, but there seems no practicable method of dealing with the *Tentless caterpillars*, which come from the woods to the orchards and lawns. These make their home primarily in the forests, where it is impossible to clear off the egg-masses.

All shade trees should be sprayed, as soon as leaves are opened, with arsenate of lead solution, made by dissolving in a wooden pail three ounces of acetate of lead in one quart of water, and in another wooden pail dissolve

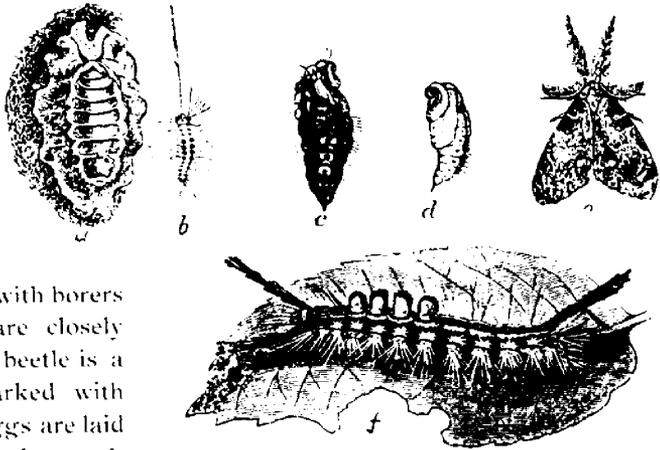


FIG. 1758. TUSSOCK MOTH—*a*, wingless female on mass of eggs; *b*, caterpillar; *c*, female pupa; *d*, male pupa; *e*, male moth; *f*, full grown caterpillar.

one ounce of arsenate of soda in one pint of water; empty the contents of each of the pails into a barrel of water (40 gallons.) Stir well and add one quart of glucose. Tar bands, moreover, should be placed around the trunks, and pyrethrum powder may be used to advantage about the tree.

The *Tussock caterpillar* (*Orgyia leucostigma*) is very destructive some years, but with care the trees may be kept quite free from its ravages. (Fig. 1758.) The white, froth-like