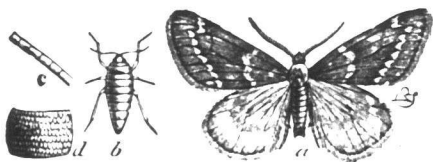


next fall from the branch to the earth by means of a silk spider web-like thread, go from two to six inches into the soil, spin a cocoon, change to the pupa, and come out as perfect moths with the first warmth of spring. The male is winged. The wingless female can deposit no eggs on the tree if a band of paper and tar, or other obstruction, be placed around the stem near the ground to prevent its ascending.

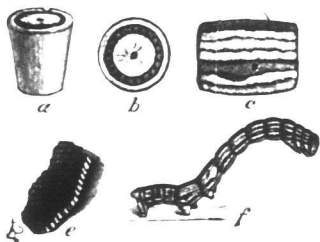
4. THE FALL CANKER WORM.

Anisopteryx vermata (the Fall Canker Worm), has a similar appearance and history. The principal difference being its habit of emerging from the pupa state in the fall, when the female deposits its eggs on the trees, all ready for the influence of the spring sun.

The difference between the species is most readily shown by a comparison of the following cuts with the former ones.



Male Moth, a. Female, b. Portion of antenna magnified, c. Segment of body magnified, d. e. Portion of antenna magnified.



Side and end view of Egg magnified, a and b. Segment of body magnified, c. A sheet layer of eggs, d. The larva, e.

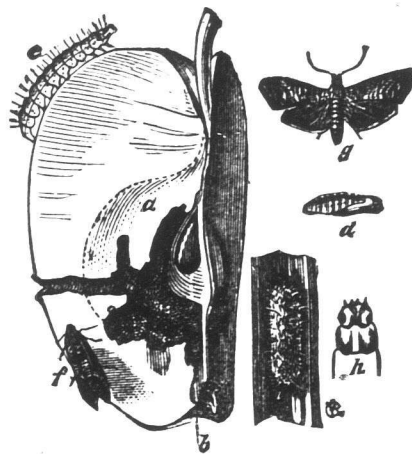
Prevention: Bands covered with sticky tar around base of trunk, tar filling crevices of bark so as to admit of the passage up of neither the female nor minute lately hatched caterpillars from below. If they are already in possession, spray the tree in May when the buds commence to open (and the eggs to hatch), with paris green (one ounce to fifteen gallons of water). Repeat the spraying as the petals fall from the blossoms in June.

5. THE CODLING MOTH.

Carpocapsa pomonella (the Codling Moth) is another destroyer. Here is shown a specimen of its work and a sketch of its stages. It has destroyed \$10,000,000 worth of fruit annually in America. Came across from Europe about 90 years ago.

Life History: Moth, with fore wings streaked with grey and brown, and a brownish spot and streaks of gilding on the inner hind portion. Hind wings and body are of a satin yellowish brown. Just as the apple-blossom opens the female deposits a tiny yellow egg right in its centre. One moth may treat fifty blossoms in this manner in a week or two. In one week the egg is hatched, and the larva begins to dig its way into the core of the apple, where it stays for about a month. It then eats its way out, swings itself to the ground by means of a fine thread of silk, or perhaps crawls down the trunk. It then selects a crevice or shelter, spins a minute cocoon; in a fortnight the moth comes out and proceeds to deposit the second crop of eggs. Many of the second brood do not leave the apples until after they are barrelled, where their cocoons may in a short time be found in crevices and under the hoops.

Prevention: Spray the tree with a well stirred paris green mixture of one ounce of the poison to fifteen gallons of water, just as the blossom is falling. The eggs are just then being



The Moth at f and g. The Larva at e. Its head magnified at h. The Cocoon at d. The Chrysalis at c; and its work at a.

hatched and the smallest particle of the poison eaten by the larva is death to it. Put bands of cloth around the tree for the larva to place their cocoons under. Take the bands off weekly and destroy the cocoons.

HYMENOPTERA.

6. THE CURRANT WORM.

Nematus ventricosus (the imported Currant Worm) is very destructive to our currants and gooseberries. It came from Europe in 1858. It is a four-winged fly about as big as a house fly (Our cuts, we regret, did not arrive in time to go to press.) The body of the fly is black, with a few dull yellow spots above, the under side of the abdomen being yellowish, and the legs bright yellow. The veins of the wings are blackish. The female is yellower and larger than the male. They are active only during the hot portion of the day. The female deposits the eggs on the under veins of the leaves in rows only 1-30 of an inch in length. They afterwards increase in size, and in a week and a half are hatched and appear about 1-12 of an inch in length. They soon become about 1/4 of an inch in length, and of a green color, with black dots. They then form brown papery cocoons on or under ground, or under leaves, from which they emerge in early July as the perfect four-winged fly, ready to repeat another cycle of insect life. This caterpillar must not be confounded with the currant span-worm, which is known by its "looping," and is the larva of a geometrid moth.

7. THE LARCH SAW FLY.

Nematus erichsonii (the Larch Saw Fly) is the newest immigrant into our province. It is very much like the last, as would be expected from its belonging to the very same genus *nematus*. In 1880 it was noticed first in the vicinity of Boston; in 1882 in Quebec, then in Maine and New Brunswick; in 1888 in western Nova Scotia; in 1889 it made further progress westward; and in the September REVIEW of last year, its arrival in the larch forests of central Nova Scotia was predicted. Its presence will be first announced by defoliated larches, which will look as bare as if their leaves were scorched off by fire. In the absence of our cut, we can only refer our readers to a four-winged fly of about the size of a small house fly. The larvæ are not unlike those last discussed,