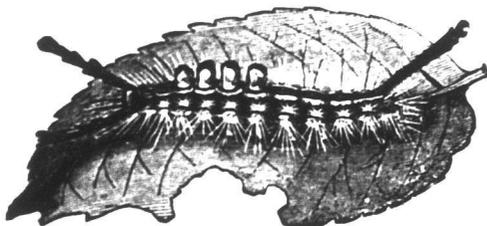


FERNDALE SCHOOL.

No. XIX.—THE TUSSOCK CATERPILLAR.



ORGIA LEUCOSTIGMA (SH. & ABB.)

Cold news for me;
Thus are my blossoms blasted in the bud,
And caterpillars eat my leaves away.

—Henry VI., Pt. II., Act III., Sc. I.

T. How many have seen the caterpillar sketched here?

(A number of scholars raise hands.)

T. Where?

S. On the leaves of the apple trees.

ANOTHER S. And on plum and pear trees.

T. I suppose you have. They have sometimes been too numerous in parts of our province and have been especially injurious to the apple trees. Compare the drawing with these specimens preserved in the small vials which you will please pass along the class. How long is the caterpillar?

S. About an inch.

T. Describe its tussocks or tufts of hair.

S. Two long black tufts stand out slanting like straight horns from near its head, and a single one from the other end. Four yellowish white brush-like tufts stand up vertically on its back; and there are long, fine, yellowish hairs in clustered loose groups all along each side.

T. Very good. Describe the color of its skin.

S. Yellow, with the head and two tubercles on the hind part of the back, red. There is a narrow blackish stripe along the back; and a broader but fainter one along each side.

T. Correct enough. They were hatched from eggs about the end of May, and the young ones immediately commenced to eat the opening leaves.

S. Yes, and if you shook the leaves they would fall off and hang to them by a fine thread of silk like a spider's web.

T. Correct. About the middle of July they are full grown, and proceed to spin their cocoon inside of a leaf or in the crevices of the bark of trees. By the first of August they are hatched. The female is simply a huge ugly body with feet but no wings. It

gets out of its cocoon and remains upon it until it deposits its eggs, from 300 to 500, in a frothy mass like spittle. This frothy substance very rapidly becomes hard and firm, and the insect dies.

S. If it has no wings it cannot fly?

T. True. The female cannot fly. But the male is a gaily winged moth. Here we have him pinned in our collection.

A second brood is soon hatched; they complete their growth about the end of August. The moths from the second brood deposit in autumn the egg masses which are hatched next May.

S. Will the frost freeze the eggs and kill them?

T. Not "kill them" under ordinary circumstances, as the frothy parchment by which the eggs are covered up is a good protection from sudden changes of temperature and wet. How would you fight them?

S. I would search for the empty cocoons with the egg masses upon them during the winter when the twigs of the tree are bare and destroy them.

T. Very good. But don't on any account destroy the cocoons of *this* moth which may have no egg mass upon them. Can you guess why?

S. Perhaps the moth has left it for good and all.

T. Not exactly. The female chrysalis is likely to be yet within the cocoon in such cases.

S. Then they should be killed before they come out.

T. No. Any female chrysalis which does not come out and deposit its eggs before winter must be dead already, and therefore need not be killed again.

S. But why should we be so careful about not destroying what is destroyed already?

T. Because the chrysalis was probably destroyed by small parasitic flies which laid their eggs in or on the body of the caterpillar. When those minute eggs were hatched the small larvæ fed on the substance of the body of the chrysalis of the caterpillar and probably ate it all up. The parasitic larvæ then went themselves into the pupa state, thus leaving a number of minute cocoons within the larger one, all ready to burst out as flies next May to hunt for more Tussock Caterpillars to deposit their eggs upon.

S. Then the cocoons found in winter *without* egg masses, are either empty male cocoons, or destroyed female cocoons filled with the pupa of next summer's enemies of the caterpillar.

T. Correct. Our great Canadian entomologist, William Saunders, says there are no less than *nine* different species of four-winged and two-winged flies parasitic on our Tussock Caterpillar.



THE MALE MOTH.