

Entomology.

Entomological Gleanings.

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With a fruit farm in the country frequently visited, and a fruit garden in town, my opportunities for observing the times and doings of insect foes and friends are sufficiently ample to satisfy the desires of the most active and enthusiastic "bug-hunter" that ever carried a net. Now a swarm of caterpillars disfigures the form and mars the beauty of a handsome tree, by consuming a considerable part of its foliage; again a host of aphides, by their constant sucking of the juices of the leaves, will cause them to shrivel, curl up, and often change colour, and the enormous rate at which these creatures increase adds much to the difficulty of their extermination; or some unwelcome "little Turk" sits down uninvited to feast on our finest fruits, and, not satisfied with appeasing its own appetite, leaves its progeny behind to complete the work of destruction; or it may be some rascally borer insidiously undermines one's fondest hopes by girdling and thus destroying trees or shrubs whose growth has cost years of toil and watching. With the desire of helping fellow fruit-growers and others to a better acquaintance with these expensive insect guests, I propose in this, and probably some subsequent papers, to record observations made from time to time as the season advances.

On the 6th of May the first foe was met. A lot of dwarf pear trees arrested attention from the backwardness of some as compared with others, the unequal way in which the leaves were expanding, and the dark colour, almost black, of some of the buds and younger leaves. No caterpillars were to be seen, but on jarring the trees down came the enemy to the ground in considerable numbers, partly falling, partly flying. It proved to be a small bug, belonging to the true bug family, *Hemiptera*, and a species named *Phytocoris (Capsus) linearis*. I never remember having seen this creature doing damage before, so a careful examination of its work was made. Our foe "linearis" is not a "big bug;" it does not measure more than one-fifth of an inch. It is rather variable in colour, from dull dark brown to greenish brown, or sometimes dirty yellowish brown. The males are usually darker than the females. The head is yellowish, and has three narrow reddish stripes. The beak or sucker is about one-third the length of the body, and when not in use is folded under the breast. The thorax has a yellow margin and several yellowish lines running lengthwise. Behind the thorax is a yellow V-like mark, sometimes more or less imperfect, but usually sufficiently clear to help one to a ready recognition of the species. The wings

are a dusky brown, and the legs of a dull, dirty yellow.

This enemy ensconces himself within the young leaves of the just opening buds, puncturing them about their base and along the edges, and extracting their juices with its beak. The result was to disfigure and sometimes entirely destroy the young leaves, causing them to blacken and shrivel up. They were also somewhat partial to the unopened buds, piercing them from the outside and sucking them nearly dry, when they also withered and blackened. Sometimes a whole branch would be thus affected, becoming first stunted, then withered, next dead. Dr. Harris, in his "Insects Injurious to Vegetation," mentions this bug as occurring in Vermont in large numbers in 1851, attacking almost every green thing and doing a great amount of mischief throughout the summer. In our own case they disappeared in about a fortnight, but left the trees in a very dilapidated state. Press of other work prevented any remedies being used. Probably a solution of soft soap or dry unslacked lime would have lessened their numbers.

On the 10th of May I was astonished to see the young larva of the gooseberry sawfly, *Neodatus ventricosus*, commencing its depredations on the freshly expanded leaves. This was nearly a month earlier than its usual time of appearing, the leaves having expanded about three weeks earlier than usual. On examining the under side of the leaves rows of white eggs were found in abundance in different stages of development. Those newly deposited were very much smaller than the others, and appeared to be but slightly attached to the surface, not let into a slit made in the leaf by the female, as is commonly supposed; at least I could find no traces of such an operation, although I examined them carefully with a microscope. The gooseberries were now in full bloom. In the second volume of the "Canadian Entomologist," p. 16, and also p. 48, an opinion is expressed that a cocoon of this insect found freshly made on the 29th of May was the work of larva which had wintered over. The observations made this spring do not in any way upset this idea, for the earliness of the season will account for the apparent discrepancy. They will certainly prove very troublesome this season, they are so very abundant, and now, at the last of the month, when many of the full-grown larvæ have gone into chrysalis, freshly laid eggs or larvæ just hatched may be found on almost every bush. Remedy—patience and plenty of hellebore, an ounce or two to the pailful, and shower lightly on the bushes with the watering pot.

There is a small caterpillar, a leaf-roller or case-maker, which is very troublesome. It probably passes the winter in the caterpillar state, for almost as soon as the buds begin to burst it begins its mischievous operations, and when first observed is not usually

more than half grown. It is a very small thing even when full grown, being then half an inch in length, with a small shining black head and a dirty brown-coloured body, with a few small brown dots and fine hairs scattered over its surface. Its tenement consists of a dried-up, blackened leaf, portions of which are drawn together so as to make a rude case, the centre part of which, where his highness resides, is lined with silk. It is very fond of going just where you do not want it. It is partial to the blossoms and newly-formed fruit. If you have a new pear or apple fruiting, with a single bunch of blossom on it, which you are anxiously watching, by-and-by you find that several of the blossoms have set, and while you are flattering yourself that they are doing well, along comes this mischief-maker, pitches his tent alongside this very spot, and drawing the young fruit together with silken threads, holds high carnival among them and frustrates your hopes. Another of its tricks is to gnaw a hole into the top of the branch from which your bunch of blossom issues, and, tunnelling it down, cause the whole thing to wither and die. Often it contents itself with damaging the leaves only, and this one does not mind so much, drawing one after another around its small insidious case, until it forms quite a little belt of withered and blackened leaves.

Hand picking is the only remedy suggested for these, unless you can employ small birds, such as sparrows, in hunting them up for you.

The moth which this caterpillar produces is rather a pretty little thing. Its name we are not yet able to give. It measures, when its wings are expanded, about half an inch. Its fore wings are greyish brown, with a shining white, almost silvery band across the middle, widest on the front margin. The hind wings are plain pale blue, and both are prettily fringed with fine brown hairs, those on the hind wings longest. It appears on the wing from the middle of June until the early part of July. It probably lays its eggs on the leaves, and when the young worms appear, which is most likely early in the fall, they make their small inner silken case, and, attaching themselves to some part of the tree, remain unobserved, and in this condition probably winter, awakening to new life and energy with the opening spring.

CATERPILLAR ON APPLE TREES.—Miss J. S. K., Cookstown, Ont.—We regret very much that the specimen you sent us some little time ago has disappeared without affording us an opportunity of examining it carefully. It was sent at a time when the editor of this department was in the midst of the operation of moving from his former residence to Port Hope. No doubt it escaped or was lost in the confusion and disarrangement that unavoidably take place at such times. We beg that our correspondent will accept our apologies for the mishap.