

an article, entitled "Ants and their Cows," which appeared in the CANADA FARMER of Feb. 1, 1867, page 47. We are always glad to find our statements corroborated by the descriptions of independent witnesses, and also to learn that the many strange and wonderful habits and instincts of insects attract the attention of numbers of our readers all over the country. We can assure them that the more they investigate these marvels of nature, the more they will find to wonder at and admire, and the more pleasure they will derive from the contemplation. Plant-lice, or aphides, are of course injurious to any tree that is numerously infested by them, inasmuch as they draw away from it an immense amount of sap—the tree's life-blood. In the case of the apple and cherry, however, we think that where the plant-lice attack only the terminal shoots or new wood, they do more good than harm, as they act as a natural summer pruning, and by checking the excessive growth of the ends of the boughs cause more fruit spurs to be put forth lower down. Where it may be deemed needful to destroy these insects, we would recommend watering with strong soap-suds—a remedy we have found very efficacious ourselves. Our correspondent will find a short account of the natural history of the aphides in the CANADA FARMER of last year (Aug. 15, page 252), and a description with figures of their natural enemies in the same volume (Sep. 2, page 268). (2) These caterpillars were dead and shrivelled up when they reached us, and therefore hard to determine, but we believe them to be specimens of the yellow-humped caterpillar (*Notodonta concinna*), of which we have given descriptions and figures in a foregoing article. This makes another locality for the insect.

(3) This is one of the oddest specimens that we have ever seen: a leaf with great nicks eaten into it, and on its under side seventeen—we hardly know what to call them. They are apparently the dead bodies of caterpillars, killed in the very act of eating, and enclosed in an ashy white silken shroud, through which appear the black warts and spines of the caterpillar's skin, and thus forming rather tough cocoons, fastened to the leaf with silken threads. They are all empty, and have each an irregular hole, apparently eaten through, near one end; inside them are the remains of a brownish chrysalis skin. We fancy the whole is the work of an ichneumon, which has eaten the original caterpillar, formed a cocoon of his skin, completed its transformation inside, and then eaten a hole through when ready to emerge as a perfect winged insect.

(4) This is another curious specimen, differing from anything we have seen before. On the under side of a portion of a leaf are grouped together in an irregular circle, with their tails on the outside and their heads pointing inwards, thirty-two empty chrysalides, probably of some tiny moth. Each one is about one-tenth of an inch in length, of a brownish color, and attached to the leaf by its tail, the head being free. The hole at the head, caused by the exit of the insect, gives them very much the appearance of a shoe or slipper, as observed by our correspondent. The empty condition of these, and the specimens referred to immediately above, prevents one being able to trace out the insect author of the work.

(5) This bunch of eggs is the first stage of the only too well-known tent caterpillar (*Cliocampa Americana*), to which we have often referred in this journal. Our correspondent will find a full description, with illustrations of the insect in all its stages, in Vol. I. of the CANADA FARMER, 1834, page 237, he will also find a notice of it in Vol. II., 1865, page 31.

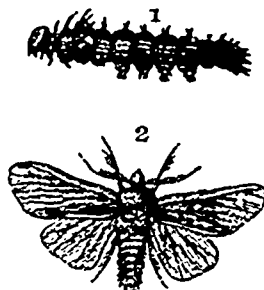
The Red-humped Apple Tree Caterpillar.

"A Subscriber," writing from Whitfield, Township of Mulmur, has sent us some of the above-named caterpillars, which he states "are busy cutting the leaves off his apple trees," and asks for information

respecting their "origin, name, and habits, and how to get rid of them."

Nearly two years ago (Oct. 1, 1866), we briefly noticed the occurrence of this insect at Sidney, Co. of Hastings, but we have not met with it since, nor have we even seen the parent moth; we hope, however, to raise some specimens from the larvæ before us, and thus know for ourselves, and not merely from others, the whole history of the insect. As it has now appeared in such widely distant localities as the Counties of Simcoe and Hastings, it will probably be found in other parts of the country, and may prove a trouble-some as it often has in the neighbouring States. We are inclined to think, however, that it has found its way to the localities mentioned on some imported trees, like many other plagues of our orchards and gardens. Should this prove to be the case, it will furnish another argument for encouraging the many highly satisfactory nurserymen that we have in this country, and buying our fruit trees exclusively from them instead of procuring them from the neighbouring States.

We now proceed to describe the appearance of the insect, that our readers may be able to recognize it wherever it is met with. The specimens before us are about three-fourths of an inch in length, but when full-grown they attain to nearly double the size; their general colour is yellowish-red above and below, and white on the sides, with thirteen narrow black stripes (six on each side, and one on the middle of the back) extending from the head to the tenth segment, interrupted only on the fourth segment, there are also two rows of black prickles along the back, and a number of shorter ones on the sides, each of which terminates in a fine hair, the head is shining red, with black jaws, the fourth segment has a prominent hump of an orange-red colour, on which, as well as on the two preceding segments, the prickles are lengthened into spines, the eleventh and twelfth segments are entirely yellow, with the various prickles, but without any black lines, the last segment is black. The eggs from which these caterpillars are hatched, are laid, according to Harris, in July, in clusters on the under side of a leaf, generally near



the end of a branch. When first hatched they eat only the substance of the under side of the leaf, leaving the skin of the upper side and all the veins untouched; but as they grow larger and stronger, they devour whole leaves from the point to the stalk, and go from leaf to leaf down the twigs and branches. When full fed, they leave the trees and form a cocoon under leaves upon or slightly under the earth, where they remain all winter, the moth coming out the following July. It is called *Edemasia* (*Notodonta concinna*), and was first described by Smith and Abbott in their work on the insects of Georgia, where it is said to have two broods in a year. It is described as "a light brown moth, with its fore-wings dark brown on the inner, and grayish on the outer margin, with a dot near the middle, a spot near each angle, and several dark brown longitudinal streaks along the hind margin." It expands about an inch. In the accompanying illustration, fig. 1 shows the Caterpillar, and fig. 2, the perfect Moth.

The easiest way to destroy this pest would be to shake off the caterpillars, by a quick jarring blow on the limb, into a cloth or vessel below, and then put an end to their existence with hot water. When they

are collected on a small branch, it might be cut off and burnt without any injury to the tree.

CURRENT WORMS.

The above correspondent also states that "there is a small green worm, about three-fourths of an inch long, busy cutting the leaves off the red currant bushes, it does not appear to touch the black ones. Please tell us how to get rid of them. I dusted slacked lime over them, which seemed to check them for a few days, but they were soon as bad as ever; they do not touch the fruit, but strip off the leaves and pass on." These insects are the larvæ of either the well-known Saw-fly or the Currant Moth; not having received specimens of them we cannot say which. The remedy that is now acknowledged to be best is a mixture of white hellebore, powdered fine, and alum in water; the worms should be well watered with this when they first appear, and from time to time as fresh broods come out; of course care should be taken not to use the mixture when the fruit is about to be gathered. Soot dusted upon the insects when the dew is upon them, and also placed upon the ground beneath, is highly recommended by one of our American exchanges, but we have not yet tried ourselves.

The Squash Bug.

(*Coreus tristis*.)

To the Editor of THE CANADA FARMER.

SIR,—Enclosed you will find specimens of something, I know not what. But this I do know, it is committing fearful ravages on some mock oranges and gourds which my wife planted for ornament. It is extremely prolific. It lays an egg very similar to that of a sheep tick, but not so large. The egg requires but a brief period to hatch. I believe it will live more than a week shut up in a box. I send a good supply because I have enough and to spare. The leaves it infests wither and die. I have killed it until I am sick of the sight, to say nothing of the smell. I find coal oil sufficient for it, provided it can be got on the thing. I should like to know its name, &c.

E. J. YORKE.

Wardsville, Ont

NOTE BY ED. C. F.—Mr. Yorke certainly did send us a good supply of specimens of the disgusting Squash Bug; the moment we opened the box, about a couple of dozen crawled out with tremendous activity, and we had no little ado to get them all disposed of again. Being only too familiar with the insect, and having no desire to re-introduce it into our garden, in which we succeeded in exterminating it, for the present, after a considerable period of warfare we speedily consigned these lively specimens to an ignominious fate. In last year's volume of the CANADA FARMER (June 1, page 173), we gave a short description of this insect. The remedies that we there prescribed were picking off and burning the leaves on which the bugs are collected, examining closely the under side of all the leaves of an affected vine, and destroying any eggs found attached to them, and watering with hot water. The means that we have since found most effectual are picking off the leaves on which eggs are deposited, crushing under foot all the mature bugs, and watering frequently with strong soap-suds. The surplus product—soap-suds—of that domestic nuisance "washing day" we always have kept for us during the gardening season, and find it most useful for destroying a large number of insects, such as these squash bugs, plant lice, slugs on rose-bushes, etc.; it is also a valuable manure for almost any kind of vegetables and vines. Mock oranges or gourds, as well as squashes, belong to the same family (*Cucurbitaceæ*) as melons, cucumbers, and pumpkins; while these bugs abound on the former, we are glad to say that we have never yet met with them on the latter most valuable plants.