

## FARM AND FIELD.

## INSECTS INJURIOUS TO THE HOP PLANT.

The hop aphid (*Aphis humuli*) living on the juices of the plant, attacking the tender foliage and twigs, and blighting and withering up the plant, is thus referred to by Mr. Bethune:—

"In England, the growth of the hop is almost dependent, from year to year, upon the appearance or absence of the 'fly' or aphid, known as *Aphis humuli*, though in this country we are not troubled by it to the same extent. It is not necessary to give an account of the life-history of this insect, as that given of the grain aphid will also apply to this variety. It has probably come to this country from England, though the hop is an indigenous plant here, as I have observed it growing on the Kaministiquia River, where it is not at all probable it had been planted, and it is also found growing wild in many parts of the North-West. It is, therefore, not impossible that the insect may have existed here before its introduction from England."

It is to parasites we are indebted for a defence against this pest.

The hop-vine snout moth (*Hypena humuli*) is described as follows:—

"There is another insect very destructive to the hop, viz., the hop-vine snout moth, or *Hypena humuli*. Hops were, and are, grown in the county of Peel to a considerable extent, and while living there I found this insect very abundant indeed.

"Occurring in large numbers, it destroys the foliage of the plants, and so injures them that sometimes no hops fit for market are produced. It is a pale green worm, which appears in June, the moth appearing in July to lay its eggs, and another brood appearing later on, so that there are two broods in the year. When disturbed, it lets itself down by a silken thread a short distance, and if let alone, climbs up again."

Strong tobacco water, lime dusted on the plant, and hellebore, are useful remedies against this insect.

Some cut worms, and a caterpillar very much resembling the cut worm in appearance, but not very precisely identified by the witnesses, are also found among the hop's assailants.

Two butterflies (*Grapta interrogationis* and *Grapta comma*) also feed on the hop, and are occasionally so numerous as to be a nuisance. They are described as—

"Of a reddish colour on the upper surface of the wings and dull on the under surface, with some silvery markings in the form of a semicolon (the Greek mark of interrogation), or a comma, according to the variety."

Their parasites will be noticed with others in due course.

A small butterfly, and its caterpillar (*Thecla humuli*), and a moth (*Plusia balluca*) with wings of "a very brilliant metallic green colour," and of which an illustration is also given (see Fig. 19), feed on the hop, but not to a damaging extent.

The Io Emperor moth (*Hyperchiria varia*) and its caterpillar are also illustrated, the male moth being the smaller and the female the larger insect. (See Figs. 20, 21 and 22.) The insect remains in its chrysalis state during the winter, and the moth appears in the spring. They are not so numerous as to be destructive. The caterpillar has a curious faculty, which is thus described by Mr. Bethune. He says:—

"The caterpillar has won some distinction over our other caterpillars by being possessed of a stinging property. It is covered with bands of bristles, and when they pierce the tender skin of the body they produce an irritation similar to that caused by nettles. It grows to a considerable size, and when coiled up, somewhat resembles the burr of a chestnut. It has a rich reddish-coloured stripe extending on each side of the body throughout nearly the entire length, rendering it, in combination with the yellow spinings, a remarkable insect, and one that can be

PLUSIA BALLUCA.



Fig. 19.

THE IO EMPEROR MOTH AND CATERPILLAR—*Hyperchiria varia*.

Fig. 20.



Fig. 21.



Fig. 22.

easily identified. It feeds upon a very large variety of trees, shrubs and plants; amongst others, upon the hop."

## AN IMPROVED STONE BOAT.

A correspondent of the *Country Gentleman* describes a novel form of stone boat in use in Monroe county, N. Y. Instead of having the boards composing the "boat" extend under the entire surface, and only slightly turned up at the forward end, the improvement is a stone sled, with runners six to eight inches broad, composed of two three-inch planks, sawed so as to give a rise of six inches or more at the front. On each of these runners is placed a piece of 3x4 inch

scantling, and three lengths of the same four and a half feet long connect the two sides of the boat and form the platform on which good inch boards are laid. The whole is then spiked with wooden bolts extending through the bottoms of the runners. Wooden pins are better than iron, because as the boat wears, iron would tear up the soil. There need not be a particle of iron in the boat, if wide enough boards are used, though it is better to put in a few nails to hold down the centre. This form of boat is very strong, and can be used where an ordinary stone boat would be impracticable. It is decidedly improved by putting in a tongue, so as to be more readily guided. With even the slightest fall of snow it is quite as convenient as a sled.

## A POTATO BUG TRAP.

The *Troy Press* tells of a farmer who tried a new remedy for potato bugs with success. He procured a number of boards and placed them here and there among his potatoes, and on these boards were placed raw potatoes sliced. At noon on the first day of the experiment he and his hired men found every piece of potato covered with bugs. The men killed this crop, and at night another crop was killed, though not so large, and in a week not a bug could be seen, and his trouble with bugs after this was comparatively small. In the spring, he says, is the best time to attend to bugs, as a spring bug, he understands, breeds from 200 to 300 during the potato season. He thinks it would be a good plan to dip the pieces of potato in Paris green, as it would save the work of killing the bugs.

## IMPROVED GRASSES.

In many respects grass-culture has not kept pace with improvements in other branches. We are continually getting new plants, new trees, new fruits, new vegetables, new grains, but a new grass is never thought of. We have the same orchard-grass, the same red-top, the same timothy, that we had over a hundred years ago, and so far as the drift of thought goes, we shall have the same grasses for a hundred years to come. And yet there is no reason that we can see why there should not be improved grasses, as well as improvements in any other thing, and there doubtless would be if public attention was drawn to the matter as it should be.

## VALUE OF AN ACRE.

An acre of wheat will sustain three and a half individuals for a year; an acre of potatoes, ten persons. In Ireland the introduction of the potato has been followed by a decline of every Irish industry excepting agriculture. The small amount of labour required for obtaining sustenance from the potato is taken as the measure of necessary labour, and the time gained is not profitably spent in developing other industries, but is apt to be passed in idleness. It is so the world over, where the earth yields of its abundance almost without toil.—N. E. Farmer.

## PEAS AND OATS TOGETHER.

The pea is very rich in muscle and bone-building elements, and oats are also superior to corn in this respect. The oats, also, assist in holding up the pea vine, so as to prevent early lodging, and thus cause it to retain its succulence longer. The crop should be sown in the proportion of two