

Many of your readers will remember the "monster," as it appeared at Kingston and other fairs, and will be gratified that the efforts of their countrymen, Messrs. James Harris & Co., of the Ingersoll Factory, have received so ready and full recognition from the people of the Old Country, who are so able to judge the qualities of Cheese, and quick to understand the mountains of difficulties to contend with, in bringing the manufacture of such an enormous mass to a successful completion.

JOHN T. DAVIES.

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The extracts are as follows:—"The largest cheese in the world, made in Canada, and brought over by the City of Antwerp from New York, was drawn in procession from the Huskisson Dock, by four richly-caparisoned greys (perhaps the finest draught horses in the world), kindly lent by Messrs. Thomas Rigby and Robert Blezard. It was accompanied by a band of music from H.M.S. Donegal, and followed by six carriages, with grey horses and postillions, containing the importers, Messrs. John Reynolds, Robert Price, and Henry Thompson, and several of their friends, forming an imposing cavalcade.

"THE 'SAMPLING' CEREMONY.—Yesterday, at the invitation of the importers, a large number of gentlemen attended for the purpose of viewing, inspecting, and sampling the mammoth cheese recently brought from Canada West, previous to its being open for public inspection. The gentlemen present having assembled round the monster cheese, the ceremony of sampling and tasting took place. An extremely unusual cheese-taster was employed for the sampling in the shape of an auger about three feet in length. Each gentleman tasted, and pronounced it to be of excellent quality. Several speeches were delivered very complimentary to the cheese and its makers and importers. After some remarks by Mr. Councillor Samuelson and Mr. J. Hastings, Mr. Alderman Woodruff thanked the gentlemen who had undertaken the speculation of importing the cheese, for their kind invitation. He expressed his surprise at seeing such a magnificent cheese before him, the production of one of our own colonies, and pointed out the advantages that must be derived by the mother country in having such enterprising people in her colonies. Mr. Picton also expressed his surprise at seeing such a wonderful cheese. Canada, he said, by its production, had shown itself to be one of the finest colonies that England possessed. Not only was Canada 'a land flowing with milk and honey,' but it was a place where many of the teeming population of this country might go and reap a handsome reward for their labours, if they only exercised the energies they possessed. Addresses were also delivered by Councillors M. Williams, Harrison and Rigby. Mr. Rigby said he was a man of few words, and all he had to say was that he wished every poor man out of employment about 'Change had a good slice of the cheese and a loaf of bread. (Applause.) He (Mr. Rigby), with the consent of the present owners, offered to make a present of the cheese to the poor of the town, providing a gentleman could be found who would supply the necessary bread to eat to it. (Applause.) Mr. Tarbuck, of the Rosehill Brewery, said if the offer just mentioned was accepted, he would supply the beer required to drink to it. (Renewed applause.)—Mr. J. Hastings proposed a vote of thanks to the gentlemen who had shown so much public spirit in securing the cheese for the 'good old town of Liverpool.'—Mr. J. Reynolds, one of the importers, in responding, said he hoped the gentlemen were perfectly satisfied the cheese was not a vain boast, but a thoroughly good British colonial production. The cheese is now on view to the public. The admission is sixpence, and the importers intend to hand over a portion of the proceeds, after the expenses of exhibiting are defrayed, to the public charities."—*Liverpool Mercury*. Nov. 30, 1867.

Entomology.

Insects Injurious to the Grape.—No. 3.

EVERY tree, shrub, and plant, every species of weed, and flower, and grass, every living green thing, indeed, has one or more species of insects that prey upon it. Some eminent naturalists have computed

that, on the average, there are six species of insects infesting each species of plant; if this be the case, we must regard the grape-vine as being particularly unfortunate, as it has far beyond the average number of insect enemies. In our two previous articles on this subject we have enumerated no less than sixteen species that live either entirely, or to some considerable extent upon the grape, and yet we have only gone through the Beetles and Caterpillars. We have still a long list of offenders belonging to the other orders, whose misdeeds we shall have to expose before we can complete the task that we have set ourselves.

Our last article was taken up with Caterpillars of various species of moths; we naturally turn from them to the False-caterpillars of Saw-flies, one kind of which oftentimes proves very destructive to the grape-vine.

THE VINE SAW-FLY, (*Selandria vitis*, Harris), has not yet, we are happy to say, been found in Canada, but as it is very common in various parts of the United States, it will be advisable to give some account of it, in case any of our readers should find it upon their vines. The larva which does the mischief, is, at first sight, very like an ordinary caterpillar, but a little inspection will show that it has too many legs to be a true caterpillar; these have, at most, sixteen legs, but this saw-fly larva has no less than twenty-two. Like most of its kind, it is very fond of company, and seems filled with brotherly love; for the whole brood from a batch of eggs keep together, feeding side by side, in regular order. By means of their "Co-operative Society" they are able to accomplish an amount of mischief that, individually, would be utterly beyond their fondest hopes; but after all, their "union is" not their "strength," for a whole family can be picked off with the leaf on which they



are feeding, just as easily as if there were but one. When fully grown they measure about five-eighths of an inch in length, and are round, tapering towards the tail. The two extremities are black; the body is light green, with two rows of black dots on each segment; beneath, the body is yellowish. After their last moult, like the larva of the currant saw-fly, they change their appearance very much, coming out in a complete new suit of yellow. July and August are their months for feeding, then they descend to the ground and make themselves earthen cells in which to pass the pupa state; and finally re-appear in the form of four-winged flies, with jet black bodies, red thorax, and yellowish legs; the wings are smoky white, with dark-brown veins. The females lay their eggs on the under side of the terminal leaves of the vine.

Many insects, such as the Weevil, Midge, Hessian-fly, Wire-worm, Army-worm, etc., have a wide-spread and well-deserved notoriety as destroyers of some of our most valuable products; to these may now be added a name that is fast acquiring an equally ill reputation, and that bids fair to become an alarm word to vine-growers; we refer to THE THRIPS. The name "Thrips," like the term "Bug," has been applied—or rather misapplied—to so many diverse insects, that for a long time it was exceedingly difficult to make out what particular kind was really meant. To Mr. Walsh, however, is due the credit of unravelling the mystery and distinguishing between the true and bogus Thrips; he, it is said, has solved the riddle, and shown that the Thrip is no other than the GRAPE-VINE TREE-HOPPER (*Tidigitia Vitis*, Harris). The above cut, (from the *Practical Entomologist*)

represents this insect considerably magnified; fig. 1, is the perfect insect with its wings expanded; fig. 2, the same with closed wings. This may be taken as the typical species, as there are half a dozen more leaf-hoppers of the same genus found in the United States and Canada, which only differ from each other in color. In the species before us the colors are pale yellow and red. This insect makes its appearance in June, in the larva state, which differs only from the perfect, in being destitute of wings. At first, of course, it is very small, and is not readily detected, living—as it does always—on the under side of the leaves, but it soon grows larger, and its work becomes manifest. It is furnished with a beak or sucker, through which it imbibes the sap of the vine, and causes the leaves to wither and shrivel, killing them frequently, and even sometimes destroying the vine. It generally appears in very great numbers, and makes up in that way for its diminutive size. It is very quick in its movements, and jumps from leaf to leaf with surprising agility when disturbed. About the month of August they obtain their wings, and become even more active than before. Being so small, and occurring in such great numbers, it is difficult to suggest a remedy; dusting with sulphur and lime, and fumigating with tobacco under a moveable tent, are recommended.

The Leaf-hoppers belong to the great tribe of Bugs properly so called (*Hemiptera*), and so, also, do the next enemies that we come to, the GRAPE-VINE PLANT LICE (*Aphides*). In their general appearance to the naked eye, and in their habits, these tiny insects bear so much resemblance to their kindred on the Hop, and other plants, that it is unnecessary to occupy our limited space with any special description of them. For an account of their natural enemies and the most effective remedies that can be employed against them, the reader is referred to page 268 of last volume.

Much akin to these aphides, but differing from them in living under cover instead of openly on the surface of the leaves, are the GAL-PRODUCING LICE of the vine; whether they belong to the *Aphis* or *Lococcus* family, or to some new family between the two, as Dr. Shiner suggests, is still a point of controversy amongst Entomologists. It is unnecessary for us to enter into the question here, as our work has more to do with the practical than the scientific part of Entomology.

Most observant grape-growers have, probably, noticed some vine leaves studded over with numbers of green excrescences, varying very much in size and shape, but for the most part rounded, and about as big as a pea. These curious bodies are galls, and each one is produced by a female louse. The mode of construction is as follows:—"The mother insect punctures the leaf on its upper surface early in the season, which operation being continually repeated in the same spot, causes an unnatural hollow, lined with white woolly hair. In this hollow the mother-louse takes her station, sucking away at the sap, and still further irritating the part, till finally the hollow enlarges, its mouth gradually closes, and you have a green fleshy bag, with its mouth tied up pretty tight, and the mother-louse inside. If you examine a leaf full of these galls, you will see on the upper side of the leaf a little woolly place opposite each gall on the lower side of the leaf. This is what remains of the woolly hollow which originated the gall." These galls are found sometimes upon the tendrils, leaf-stalks, and tender limbs, as well as upon the leaves. If sufficiently numerous at any time to become injurious, the most obvious way to get rid of them is to cut them off and burn them, and thus effectually prevent their increase.

A few other insects of various kinds are sometimes found upon the vine, but the injuries they inflict, if any, are so very trivial that it is needless to discuss them here. The account we have now given of "Insects Injurious to the Grape" we do not by any means consider to be perfectly complete, as observation and study are continually bringing to light new facts respecting the natural history of our insect enemies; but we have striven to give a brief account of the most injurious and notorious foes to the grape, in order that the cultivator, when he meets with them, may know to some extent with what he has to deal and how to deal with it. We shall always be glad to hear from any of our readers who meet with these or other insects on their vines, and shall endeavor always to give the best information in our power.