

Pyrenees. It is also cultivated extensively in Germany. Its usual retail price in powder is from 30 to 40 cts. per lb., and an ounce is sufficient to mix with a pail-full of water, which, when mixing, to avoid its being lumpy, should first be stirred with a small quantity of water. The readiest way of applying it is with a watering-pot, showering the bushes well when it will be found to act promptly and effectually. The following "notes and experiments" which we published in the second volume of the *Canadian Entomologist*, p. 13, will serve to show what constant watchfulness is required to prevent these creatures from getting the upper hand of us, and also the value of hellebore as a remedy. The larvæ of the gooseberry saw-fly has been very abundant in the neighbourhood of London during the past season, 1869, and in our own garden it has been a continual fight as to who should have possession of the currant and gooseberry bushes, the worms or their rightful owner. During the early part of summer, anticipating their attacks, we were on the look-out for them, and by timely doses of hellebore, preserved the foliage with but little damage. About a fortnight later, having omitted inspection for a few days, we were surprised to find the bushes being stripped again; and this time the enemy had got so far ahead as to damage their appearance considerably, but another prompt dosing of hellebore brought relief. After this we hardly ever found all the bushes entirely free from them. A walk around the garden would reveal a few here and a few there, and we were perpetually brushing off and hand-killing these smaller detachments. During the middle of August, being occupied with other matters, the garden was neglected for a few days when, on visiting it again, many of the bushes were found entirely leafless, and the foliage remaining on the others rapidly disappearing. Feeling discouraged, we began to have some misgiving as to whether the hellebore was, after all, such an unfailing panacea for this pest as we had supposed, and resolved to test the matter by careful experiment; so, having mixed about 1½ ounces of the powder with a pail full of water, we were ready to proceed. Selecting a leaf each from two bushes, we marked them, and counted the number of their inhabitants, and found that one was occupied by *forty-four* larvæ of different sizes, crowding it above and below, while the other had twelve on it, all nearly full grown. Having transferred the mixture of hellebore and water to a watering-can, the bushes were sprinkled with it. In three-quarters of an hour we returned to examine the results, and found that the leaf which at first had forty-four on it, had now only two, and these were so far exhausted that they were unable to eat, and could scarcely crawl; while on the other leaf, out of the twelve there remained three, but in the same enfeebled condition. All around under the bushes the ground was strewn with the fallen foe; and we felt perfectly satisfied that entire reliance might be placed on this means of defence. We did not anticipate such speedy action on the part of the hellebore, or we should have returned to the examination sooner; the bushes were so entirely cleared that, excepting on one which had been reserved for another experiment, there was no occasion for repeating the dose.

There was one thing here that appeared remarkable, the portion of leaf on which the greatest number were feeding, appeared to be about the same size as before the hellebore was applied, or if smaller the diminution was scarcely perceptible. When the leaves which have been sprinkled with the liquid, dry, a very thin coating of the powder more or less regular, is found over them, and we had always supposed, that death resulted from eating a portion of the leaf thus coated. Such is undoubtedly the case, when the hellebore is applied dry, but in this instance, a meal, however small, made by *forty-four* caterpillars on half a leaf, must have materially diminished it; hence it is probable, that the death of most of these resulted from their imbibing or absorbing some of the liquid as soon as applied. Many of them showed symptoms of the violent cathartic action of the remedy, by their having a mass of soft exuvia, hanging to the extremity of their dead bodies.

The bush before mentioned, which had been reserved for other experiments was well stocked, and to this, attention was next turned. It sometimes happens, especially with those who live in the country, that hellebore is not at hand when the larvæ are first observed at work, and a few days' delay in procuring it is perhaps unavoidable. In such cases, the bushes may be entirely leafless before the remedy can be applied; and here hot water suggested itself as likely to be of some service as a temporary measure, and being also an article readily procured in every home. It is well known that many plants will bear such an application without injury, provided the heat is not too great; so taking some in a watering can a little hotter than one could bear the hand in, it was showered plentifully on the affected bush, and it was amusing to see how the caterpillars wriggled and twisted, and quickly letting go

their hold from the leaves, and they remain on the ground for some few days. We would not be procured on the ground with the spade, but bushes again, interesting to us by; lugging them to market had got into prey along; furnish them are the tiger running about.

It has been made again, and the public quite true to the manner from it. A quantity of rain would es where they using, which many thousands of people of destruction from its use.

Carboline is a dark-coloured composition, such preparation, use, we hold and in economy so much more hellebore.

summer will larvæ plentifully sprinkled it, number of larvæ the carbolic 24 on it still number fell the remaining and soon we is possible to we got the themselves. is to be had

Hand-picked any size, and feeding in grass usually on the ready means has the satisfaction otherwise ac