

ries, J. Granger, G. Tattle &c. The Judges of Plants and Flowers were Messrs. J. A. Bruce, Gray, and T. Buchanan, of Hamilton; of Fruits and Vegetables, Messrs. Robert Beard, and B. Defries, of Toronto.

The Pear Blight.

EDITOR AGRICULTURIST.—Can you give any information on the cultivation of Pear Trees, more especially on the prevention of the blight, I got some trees from a nursery at Toronto, some time ago, and some of my Pear trees are attacked by the blight. As I am but a novice fruit culture, you will confer a favour on one of your readers if you would give some information on the above subject. A. E.
Hope, July 1861.

[REMARKS.—We find the subject of diseases of the Pear treated pretty fully in Downing's "Fruit and Fruit Trees of America," and as the remarks of that distinguished horticulturist will doubtless be interesting to many of our readers, do not possess his book, we here subjoin them.—EDS.]

DISEASES. As a drawback to the, otherwise, successful cultivation of this fine fruit, the pear tree is unfortunately liable to a very serious disease, called the *pear tree blight*, or *fire blight*, appearing irregularly, and in all parts of the country; sometimes in succeeding seasons, and, again, only after a lapse of several years; attacking, sometimes, only the extremities of the branches, and, at other times, destroying the whole tree, producing occasionally, little damage to a few branches, but often, also destroying, in a year or two, an entire large tree; this disease has been, at different times, the terror and disaster of pear growers. Some parts of the country have been nearly free from it, while others have suffered so much as almost to deter persons from extending the cultivation of this fine fruit. For nearly an hundred years, its existence has been remarked in this country, and, until very lately, all notions of its character and origin have been so vague, as to lead to little practical assistance in removing or remedying the evil.

Careful observation for years past, and a detailed comparison of facts with accurate observers, in various parts of the country, have led us to the following conclusions;

1st, That what is properly called the pear-blight is, in fact, two distinct diseases. 2nd, that one of these is caused by an insect, and the other by sudden freezing and thawing of the sap in unfavorable autumns. The first, we shall therefore call the *insect blight*, and the second, the *weather-sap blight*.

THE INSECT BLIGHT. The symptoms of insect blight are as follows: In the month

of June or July, when the tree is in full luxuriance or growth, shoots at the extremities of the branches, and often extending down two seasons' growth, are observed suddenly to turn brown. In two or three days the leaves become quite black and dry, and the wood so shrivelled and hard as to be cut with difficulty with a knife. If the branch is allowed to remain, the disease sometimes extends a short distance further down the stem, but, usually, not much further than the point where the insect had made its lodgment. The insect which causes this blight, was first discovered by the Hon. John Lowell, of Boston, in 1816, and was described by Professor Peck, under the name of *Scolytus pyri*. It is very minute, being scarcely one-tenth of an inch long, and it escapes from the branch almost as soon as, by the withering of the leaves, we are aware of its attack; hence, it is so rarely seen by careless observers. In the perfect state, it is a very small beetle, deep brown, with legs of a paler colour. Its thorax is short, convex, rough in front, and studded with erect bristles. The wing covers are marked with rows of punctured points, between which are also rows of bristles, and they appear cut off very obliquely behind.

This insect deposits its egg some time in July or August, either behind or below a bud. Whether the egg hatches at once, we are not aware, but the following spring the small grub or larva grows through the sap wood or tender albumen, beginning at the root of the bud, and burrows towards the centre of the stem. Around this centre or pith, it forms a circular passage, sometimes devouring it altogether. By thus perforating, sawing off, or girdling, internally a considerable portion of the vessels which convey the ascending sap, at the very period when the rapid growth of the leaves calls for the largest supply of fluid from the roots, the growth and the vitality of the branch are checked and finally extinguished. The larva about this time, completes both its transformation, and its passage out, and in the beetle form, emerges, with wings, into the air, to seek out new positions for laying its eggs and continuing its species. The small passage where it makes its exit, may now more easily be discovered, below or by the side of the bud, resembling a hole bored with a needle or pin.

It is well to remark here that the attack of this blight insect is not confined to the pear, but in some parts of the country we have observed it preying upon the apple and the quince in the same manner. In the latter tree, the shoots that were girdled, were shorter, and at the extremities of the branches only; not leading, therefore, to such serious consequences as in the pear.

The ravages of the *insect blight*, we are inclined to think, do not extend much below the point where the insect has deposited its egg, a material point of difference from the *frozen-sap blight*, which often poisons the system of the