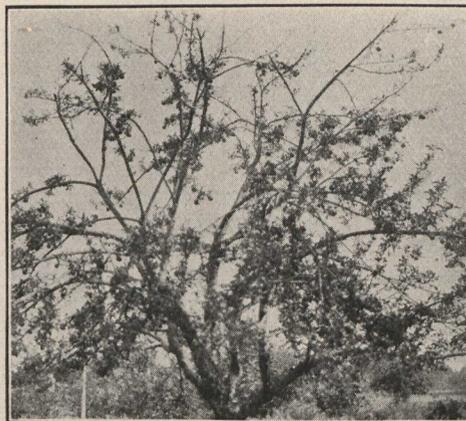


first it makes a narrow channel, but with the increase in the size of the insect and its appetite, the channel becomes wider and a trumpet-shaped mine is the result.

The full-grown caterpillar is not more than a quarter-inch in length. In color it is green with a brown head. It changes to a pupa about the middle of July. After about 10 days in this condition the adult, which is an inconspicuous brown moth, appears.

These moths soon commence depositing the eggs that produce the second brood. The second brood caterpillars are much more destructive than the first. They reach maturity about September 1, when they cease feeding and prepare for winter. After lining the mine with silk they settle down until spring when they change to pupæ. They remain in this condition only a few days when they become moths.

As the caterpillars feed beneath the leaf surface, application of insecticides



(2) A Badly-infested Tree

is useless. The most effective remedy is to gather up and destroy the leaves

in the fall. Where orchards are regularly tilled the early spring plowing will be equally effective.

A fully illustrated bulletin by Mr. C. D. Jarvis, giving the life history of the insect will be issued soon and can be secured by addressing The Storrs Agricultural Experiment Station, Storrs, Connecticut.

Central packing houses should be established in every locality where apples are grown, and all the fruit should be sent there to be graded and packed. In connection with the packing house, some means should be used to manufacture the culls into either evaporated fruit or jam. The apples should be delivered just as taken from the trees, graded into No. 1, No. 2 and culls, and be paid for by the barrel or box, according to grade.—A. E. Sherrington, Walkerton, Ont.

The Apple Industry in Ontario and its Future*

A. McNeill, Chief, Fruit Division, Ottawa

IN addition to the west there is another growing market available for the Ontario grower, namely, the market of Great Britain. It has formerly been an axiom of apple growers that Canadian fruit would be acceptable in Great Britain only when there was a failure of the English and European crop. This conception of the British market is not a true one. For a number of years a large quantity of early fruit has gone from Canada to Great Britain, and prices have always been quite satisfactory, and there appears to be no good reason why this market should not continue and, in all probability, increase even in the face of the competition with the apples of the home market. It is quite true that the Canadian apples will not compete with the best early fruit of Great Britain, but there are certain features of the business that are distinctly in favor of the Canadian growers. First, we have an admirable system of ocean transportation and a fair degree of efficiency in the railway transportation. If the early fruit is cooled properly before being packed and then shipped in a refrigerator car, there is almost an absolute certainty of its reaching Great Britain in the best of order. The question, therefore, of losses in transshipment is reduced to a minimum. During the last two or three seasons the cargo inspectors at Montreal and at ports in Great Britain have very carefully reported upon the condition of the apples at the time of shipment

and upon arrival in Great Britain, and in no case has there been a serious loss where it would be shown that the fruit was properly started from the orchards.

BENEFIT OF BIG SHIPMENTS

In the British markets the Ontario grower has upon his side the large



(3) Infested with Leaf-Miners

An apple leaf with both a trumpet mine and a serpentine mine. The latter is caused by a different species and is not so abundant.

brokers and fruit merchants. The Canadian apples reach the brokers and fruit merchants in uniform packages, uniformly graded, and in large quantities compared with English fruit of one or

two varieties. This element of uniformity in grading packages and variety will, itself, almost offset all the disadvantages that we have in the matter of transportation. It is easier for the fruit merchants to buy and distribute Canadian apples than it is to buy and distribute the home-grown fruit. The English orchards have the disadvantage of being planted with a great many different varieties, and no two portions of England put up their fruit in the same kind of packages. It is very difficult for the dealer in Great Britain to get the same varieties or the same packages of home-grown fruit twice. This makes all transactions in English fruit a retail affair, and naturally the large sales all go to the Canadian or American product. As compared with the American apples, I quote from the latest number of an English market paper, *The English Grocer*, to show that Canadian apples have a preference of two shillings per barrel, which effectually protects them from any serious competition from states to the south of us.

Taking these two markets then, the markets of the western provinces and the British markets, I see no reason why the present stock of apples should not be sold at good prices if proper means are taken to place them upon the markets.

One word more with reference to this southern division, No. 1. If, then, the market for early fruit is to be a growing one, I should strongly recommend that the growers confine themselves very largely to the early varieties. The Red Astrachan can be shipped from the county of Essex the third week in July, the Duchess the last of July and the first of August; the Wealthy, of course,

*The continuation of an address delivered before the recent convention of the Ontario Fruit Growers' Association and published in the last issue of *The Canadian Horticulturist*.