

THE ELM TREE



AND THE DUTCH ELM DISEASE

This picture of the Elm tree that stands so majestically will soon be past history. The elm has been considered one of Ontario's prominent beauty features of the landscape. The familiar vase-like form of unique beauty of the principal species. Of the three species that occur in Ontario, the commonest and largest is the White Elm, so well known by its characteristic and graceful branching habit; it is found throughout the province except in the extreme north. Its numbers have been greatly reduced since the introduction of the "Dutch Elm Disease". It is also a tree of impressive rate of growth and size when mature. Specimens with a trunk diameter of four feet and a height of one hundred feet are not uncommon. This species and the lesser native elms, the rock elm and the red (slippery) elm are also dying in alarming numbers as a result of infection by the "Dutch Elm Disease." "The Dutch Elm Disease" was first observed and identified in Holland and Northern France in 1919- at first it was thought that the trees were suffering from the effects of the war. The disease became known as the "Dutch Elm Disease" because Dutch pathologists first studied it, and it has no connection with a Dutch Elm because such a species does not exist. The disease soon spread over most of Europe although it has not been as devastating among European species of elms as it was with the white elm on this continent. The disease was first discovered on this continent in 1930 in Ohio, having been accidentally brought over on special elm burl logs imported for veneer. It was noticed first in Canada in 1944 near Sorel, Quebec but had been here a few years before being discovered. This was undoubtedly a direct introduction from Europe, possibly on packing cases. It first appeared in Ontario, in Prescott County near the Quebec border in 1946. However, the rapid spread of the disease in Southern Ontario developed from the west and south, as a result of its entrance from the United States at Windsor in 1950 and in the Niagara Peninsula about the same time. The disease now occurs throughout the natural range of the elm species in Canada.

The disease is caused by a fungus which gets into the sap stream and clogs the water conducting tubes, thus cutting off the flow of sap and causing the leaves to wilt, turn yellow then brown, and finally to curl and shrivel. In some trees the disease spreads rather slowly throughout the crown and a tree may take three or four years to die. However it is not unusual to see medium sized trees to die in a matter of weeks. The disease is also spread from tree to tree by being carried on the bodies of insects which penetrate through the bark. These are mainly two species of bark beetles, one native to this continent and one of European origin. Elm bark beetles are very small, approximately one-tenth of an inch long. The most important point in the spread of elm disease is that the beetles feed on the tender inner bark of healthy trees.

The native elms may not be quite doomed to complete extinction. In communities where tree values are high, the trees need not die because the cost of an overall control program is more than justified, but there is still no way of curing a tree once it has contracted the disease. The disease is fatal. There is no single injection, or any other treatment which will give a tree long-term immunity against the disease. Long distance spread of fungus is fungus transported on motor vehicles.

Throughout the countryside the Elms will be greatly decimated by the disease, and clean-up programs to remove unsightly and dangerous dead trees should be vigorously promoted.

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