



QUILLS

Queen's University Indigenous
Land-Based Learning STEM

DUTCH ELM DISEASE

What to Know

Background

Dutch elm disease is caused by a fungus (*Ophiostoma ulmi*) that has been killing native elm trees in North America. The disease is spread by both a native elm bark beetle (*Hylurgopinus rufipes*) and an introduced European bark beetle (*scolytus multistriatus*). Both native and introduced beetles create galleries through the bark of trees, allowing the fungus, (*Ophiostoma ulmi*) to colonize in these galleries. In the spring when beetles emerge from the trees, fungal spores are transferred to the beetle's bodies and introduced to new trees when they feed on the branches. The fungus can also spread by the trees root system to adjacent trees and by the movement of elm firewood or logs.

Impacts

- High mortality rate by rapidly spreading and killing trees.
- Fungal disease attacks and blocks the water system within the tree.
- All native elms are highly susceptible, creating a loss of common urban trees.



Range

Dutch elm disease can be found throughout the United States as well as Canada. In Canada it has become established in every province except British Columbia and Alberta. In northern and eastern Ontario the disease is found in scattered locations but in southern Ontario the majority of elm trees have been almost eliminated.



Content adapted from:

<http://www.invadingspecies.com/invaders/forest/dutch-elm-disease/>



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How to Identify

- Symptoms can first be seen in June and early July.
- Leaves wilt and curl, turning yellow and brown in the summer.
- Branches begin to dieback and then result in death.
- Brown staining can be seen on the side of the tree when bark is peeled back.

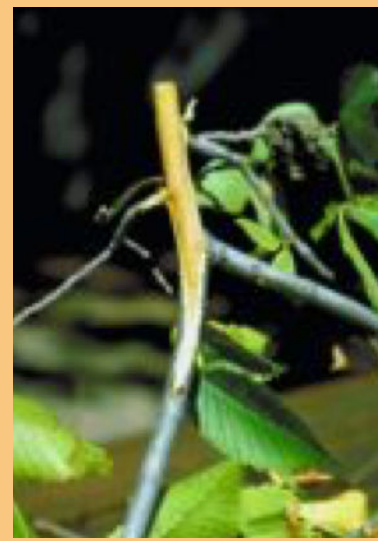
Where to Learn More

A. Invasive Species a Threat to Ontario's Biodiversity

<https://www.ontario.ca/page/invasive-species-ontario>

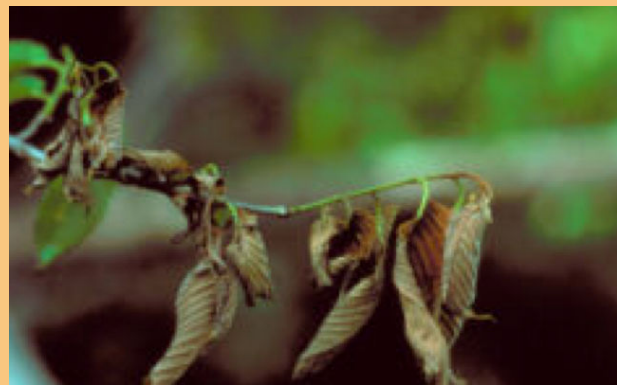
B. Invasive Species Centre

<https://www.invasivespeciescentre.ca/>



What you Can Do

- Learn how to properly identify the signs and symptoms of dutch elm disease.
- Never transport elm wood or wood products with bark to new areas.
- Buy firewood locally when travelling or camping. Never bring unused wood home with you.
- If planting elm trees, buy from a local and reliable source.



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