



What's Bugging Your Trees

BugFinder



Welcome to
BugFinder

The ultimate visual scouting aid

Start Demo



GET IT ON
Google Play



Download on the
App Store

-Site Evaluation Strategy-

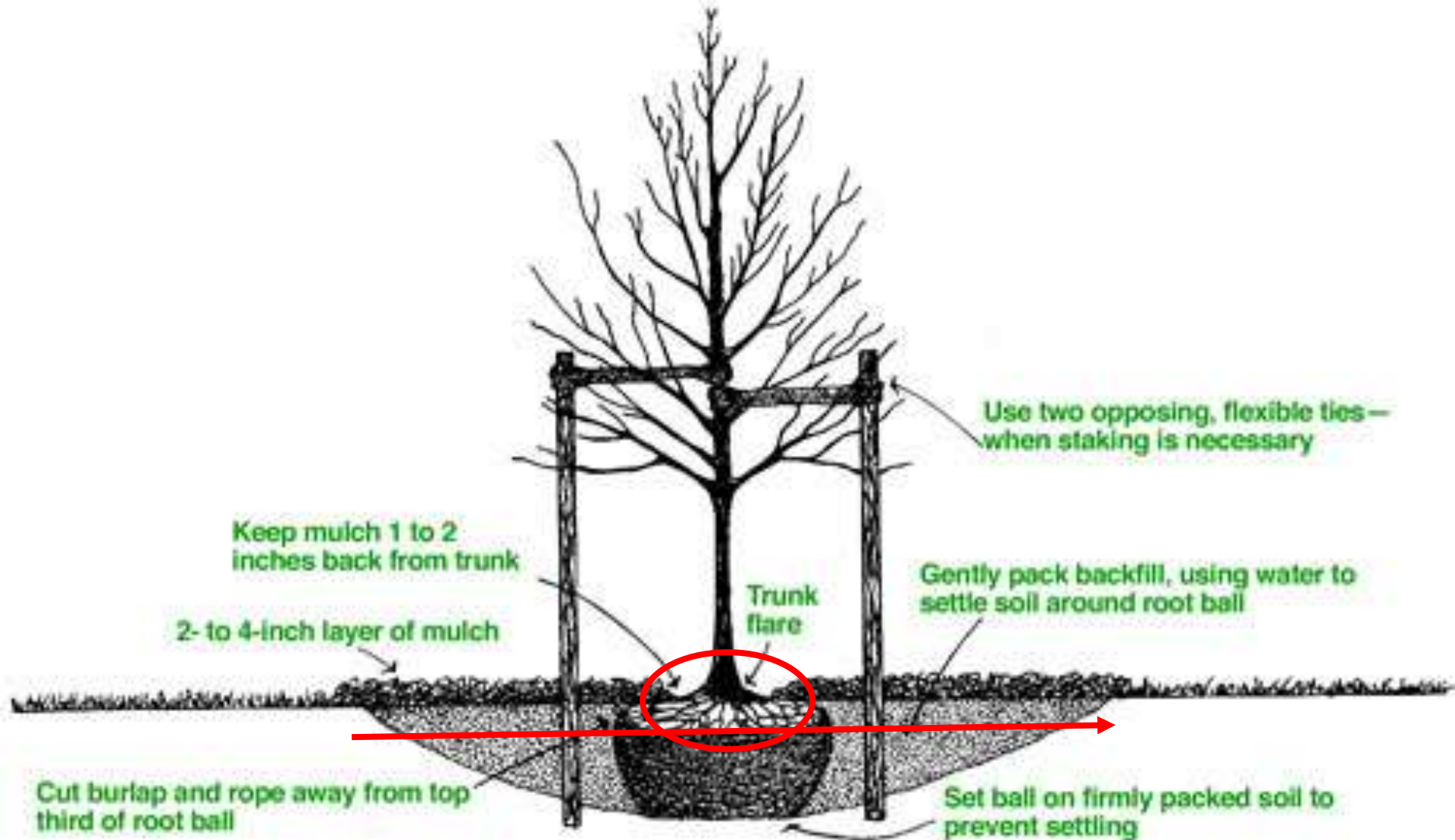
- **Identify the Plant**, Hardiness zone
- **Inspect**: Signs and Symptoms (Foliage, Stem, **Root Flare**, **Roots**)
- **Symptoms** on *other* plants in the area? (**Env?**)
- **Identify Pests** (BugFinder, Johnson, Sinclair & Lyon; Marshall)
- **Identify Beneficials**
- **Soil conditions** (**Texture**, Drainage, **Compaction**, Depth, Root Zone Area)
- **Moisture Levels**, Irrigation, **Leaf Wetness Periods**
- **Plant and Site History**
- **Exposure**: Sun, **Wind**
- **Competition**: Light, Water, Nutrients
- **Cultural Practices** (**Mulching**, Compost, Pruning)

A photograph of a tree trunk in a garden. A section of the soil around the base of the trunk has been removed, exposing the root flare and the roots below. The trunk is light-colored with some bark texture visible. The soil is dark brown and crumbly. The background is more soil and some roots.

1. Remove
soil above
Root Flare

2. Inspect
for Girdling
roots

Tree Planting - heavy soil





What is in Triple Mix?



Was that really SOIL?

Tools for IPM





Exotic Pest Updates

Oak Wilt

Hemlock Woolly Adelgid

Box Tree Moth

Oak Wilt – not in Ontario

- *Ceratocystis fagacearum*
- Red Oak group
- 1 season – death
- Root grafts
- Beetle vector



• Beetle vector



Red Oak Group

Xylem infected

Death: top down

Spread: root grafts

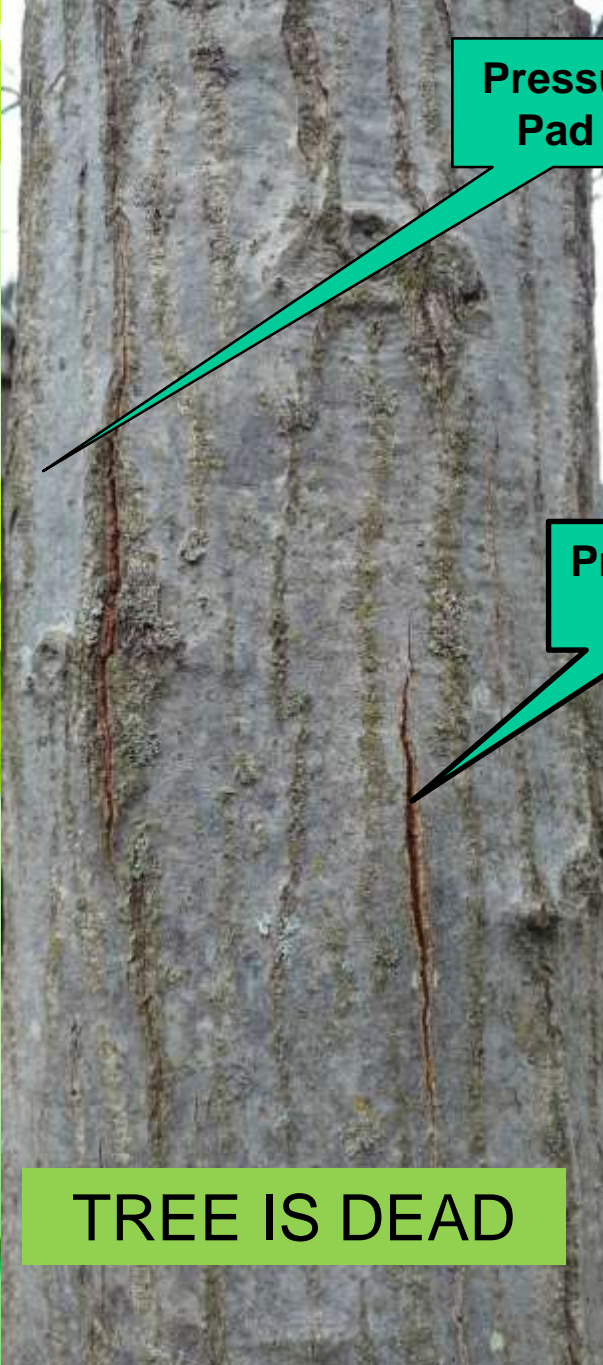






Photos: Julie Holmes

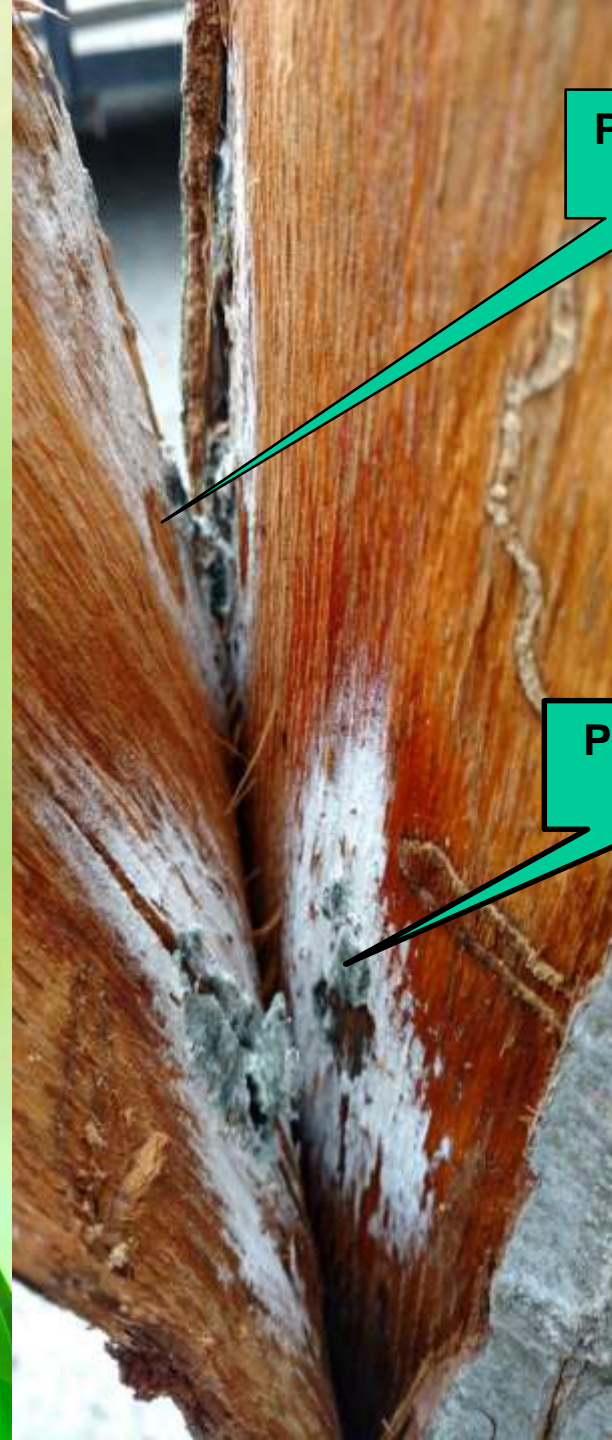




Pressure Pad 1

Pressure Pad 2

TREE IS DEAD



Pressure Pad 1

Pressure Pad 2



Photos: Phillip Kurzeja



Photos: Phillip Kurzeja

Oak Wilt Summary of Symptoms

1. Infection of xylem (root graft, wound in canopy)
2. Canopy dieback, leaf drop, branch death
3. Tree death
4. Months later....sporulation under bark (pressure pads) & vertical bark cracks

Oak Wilt Prevention

DO NOT PRUNE

.....IN MAY OR JUNE!

Or April

Or July...



Hemlock Woolly Adelgid



Hemlock Woolly Adelgid– Egg masses APRIL





HWA– Egg masses APRIL (J. Holmes)

Call CFIA: 1-800-442-2342

31.05.2013 12:51

Hemlock Woolly Adelgid

2019: Wainfleet

Photo: Frank Varvoutis



Hemlock woolly adelgid nymphs in dormancy



Thank you!

TM012: New - **IPM FOR WOODY PLANTS: BLIGHTS AND OVERSIGHTS**

TM013: New- **IPM FOR WOODY PLANTS: BUGS AND THUGS**