

Mohawk College Horticultural Apprenticeship

Proud of My Pruning

By Sean James NPD & MG

Safety Gear!

- Safety glasses
- Gloves
- Hard hat (when pruning trees)
- Steel toes (always!)

The ‘Don’t’s’...

- DON’T open old wounds
- DON’T use tree paint
- DON’T top trees
- DON’T leave stubs
- DON’T remove more than $\frac{1}{4}$ of a tree at a time.

Which way to hold your secateurs (snips)?

- You want the ‘big’ blade toward the big wood.
- Another way to put it, the cutting blade, (as opposed to the bed against which the cutting blade cuts) should be on the inside of the tree.



The 3 D's

What are the first three things we want to remove when pruning?

- **Dead**
- **Diseased**
- **Damaged**

And then we look for...

- **Interfering wood – wood that's rubbing up against other wood, opening wounds allowing infection to invade.**

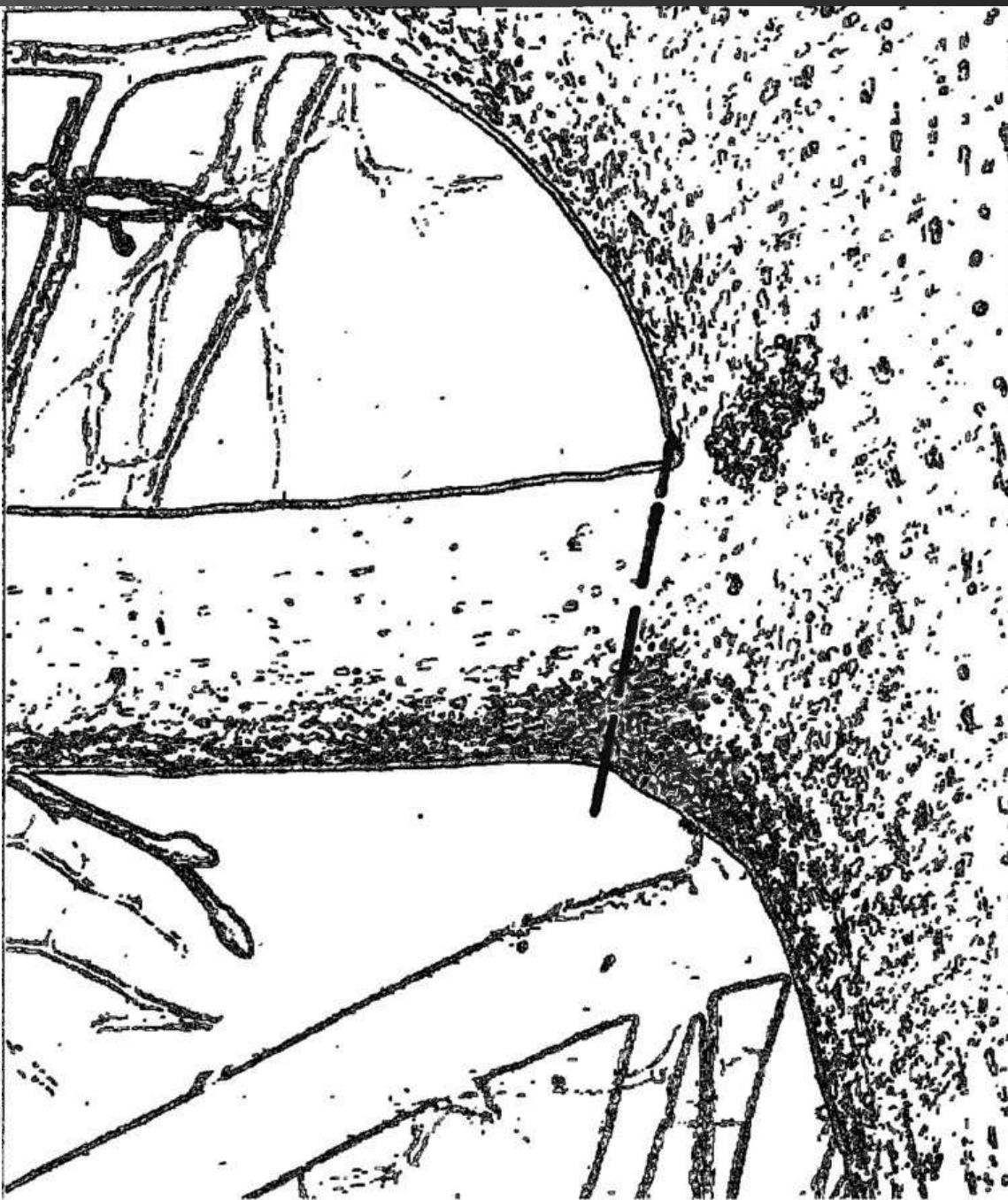


**So how do you tell
when it's alive?
The simple scratch test
shows green if it's
alive.**



Growth Collar

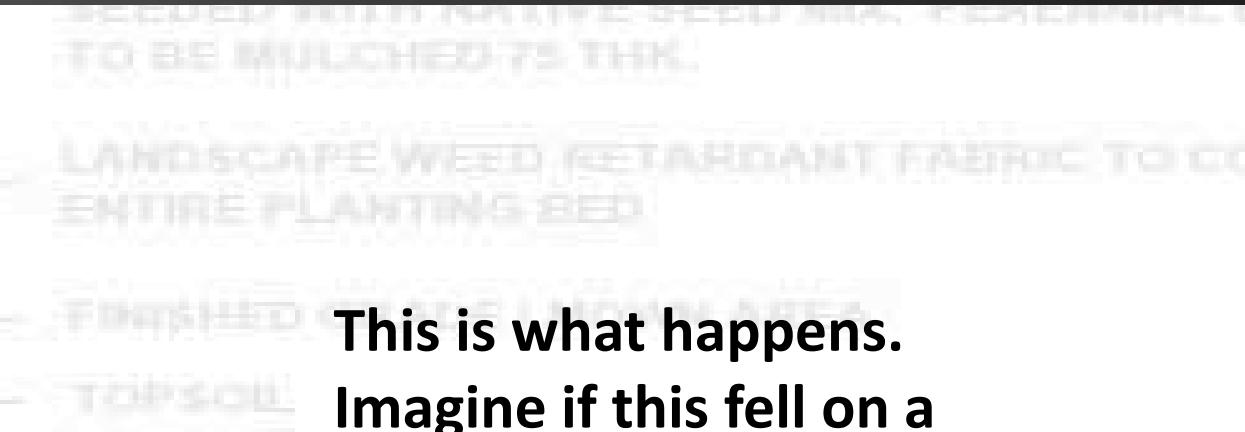
This 'knuckle' is where cuts should be made. It's where all the hormones are to heal the wound.



= Weak Union

The terms 'double leader' or 'codominant leaders' means that there are two (or more) branches that go roughly straight up. The union between them will be weak and prone to breaking.





**This is what happens.
Imagine if this fell on a
bedroom!**

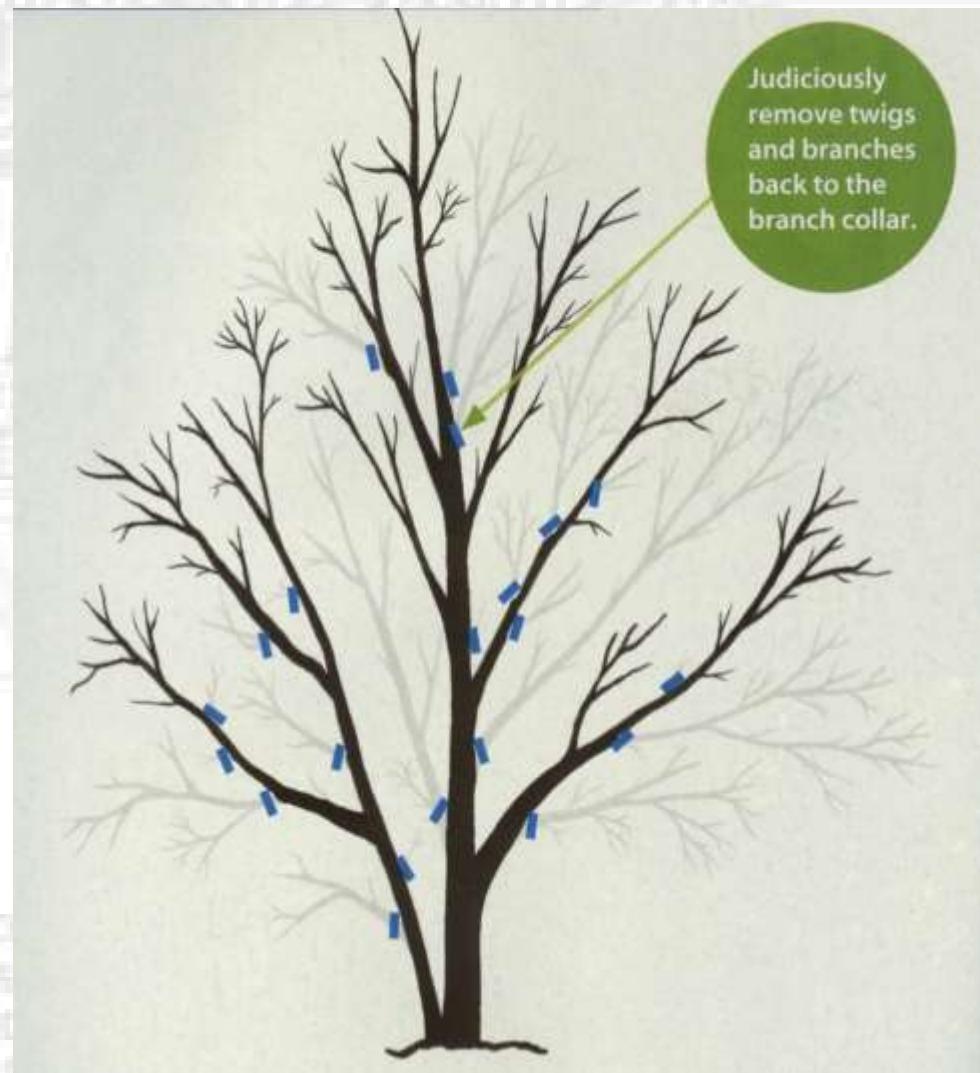




Reduction Pruning

Thinning a tree and cutting back branches to a smaller ‘side’ branch allows one to down size a tree and reduce ‘sail’ (the amount the wind can push on the tree).

Pruning - Thinning



Enhance plant structure with THINNING CUTS

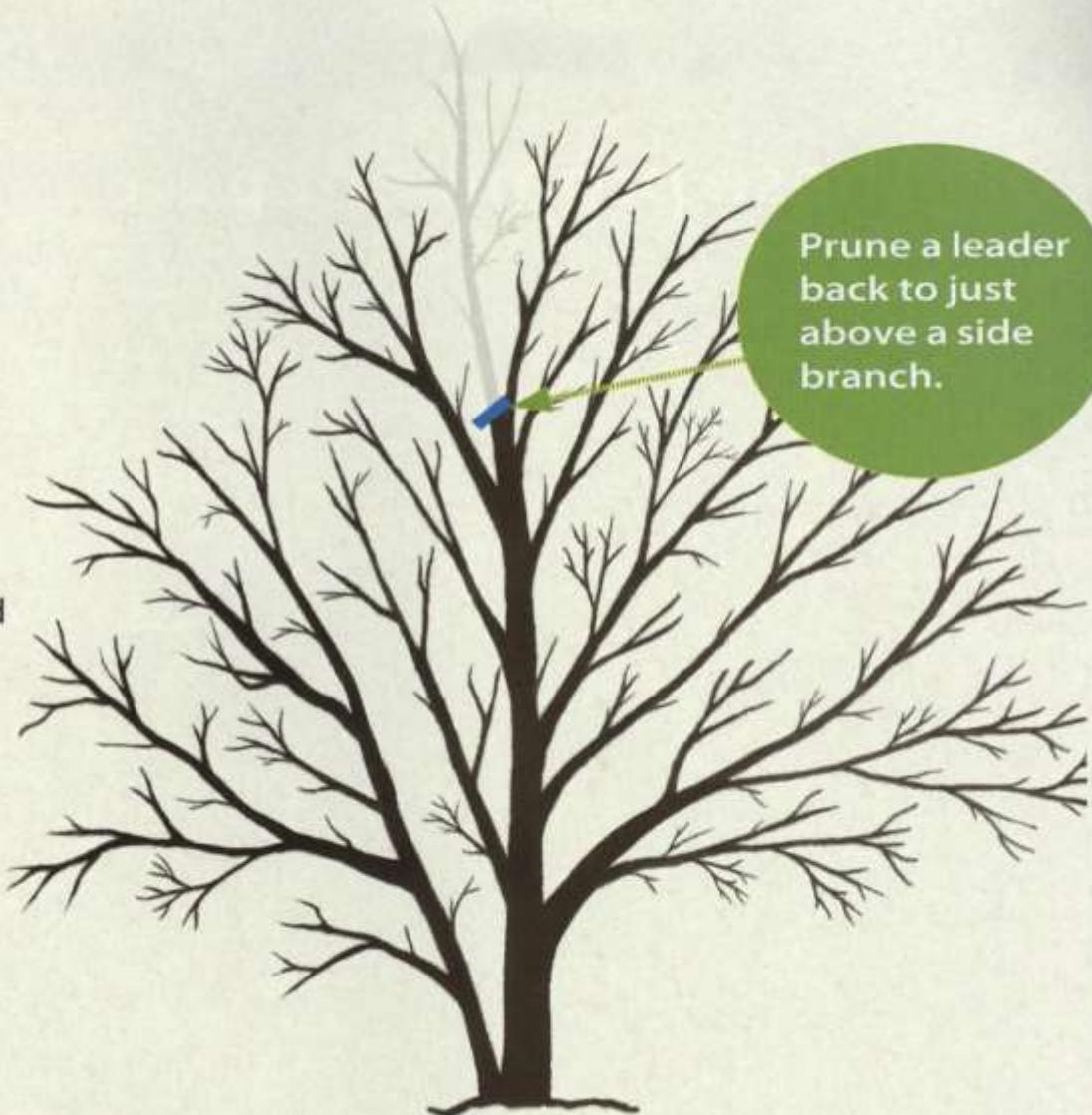
The thinning cut, which is defined as taking the branch off where it begins—at the branch collar (the swollen area where a branch joins the trunk of a tree)—is the coarsest and most radical cut in aesthetic pruning. The object of this cut is to reveal and enhance the architecture of the plant, while allowing light and air to penetrate its interior. Resist the temptation to start pruning at the front of the plant or at eye level. Go to the back and start at the base, where the plant's structure begins. This practice opens the plant up from the inside out, which leaves more room for mistakes. Any "oops" cuts that you happen to make are likely to go unnoticed from this perspective.



Pruning – Releadering

Keep plants to scale by RELEADERING

Releadering involves removing a coarse central leader and letting a side branch assume its role. This cut is made to keep plants in scale by controlling their height, a popular goal in the land of big trees and small yards. Prune the existing leader just above the side branch that will replace it. Try to do this when the point you wish to cut on the leader is relatively young (less than 3 inches in diameter) so that the cut will heal properly and grow to be less noticeable.

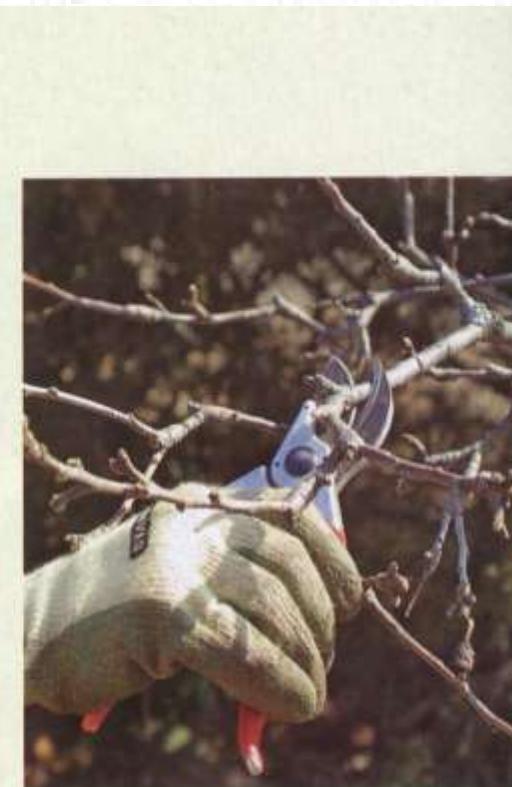


Pruning – Heading Cuts



Give plants a desired form with **HEADING CUTS**

The heading cut, which involves cutting the tips of branches back to a bud or leaf node, is the finest of all cuts. This technique allows you to shape a plant into a desired form and also helps you keep a plant in scale by controlling its perimeter and reducing its overall size. As you prune, keep in mind how much plant material you have already removed, especially if you have already thinned and reloaded. Pruning away more than one-third of the plant in one growing season can stress and harm the plant. In the end, if your plant resembles a whirligig gone mad, take heart that this is a forgiving art form and that you can be sure that next year you will be able to mitigate any past egregious errors.



Pollarding – downsizing & for kindling & wattle



Always cut back
to the growth
collar, in the
spring *before*
the leaves
emerge.





Pleaching

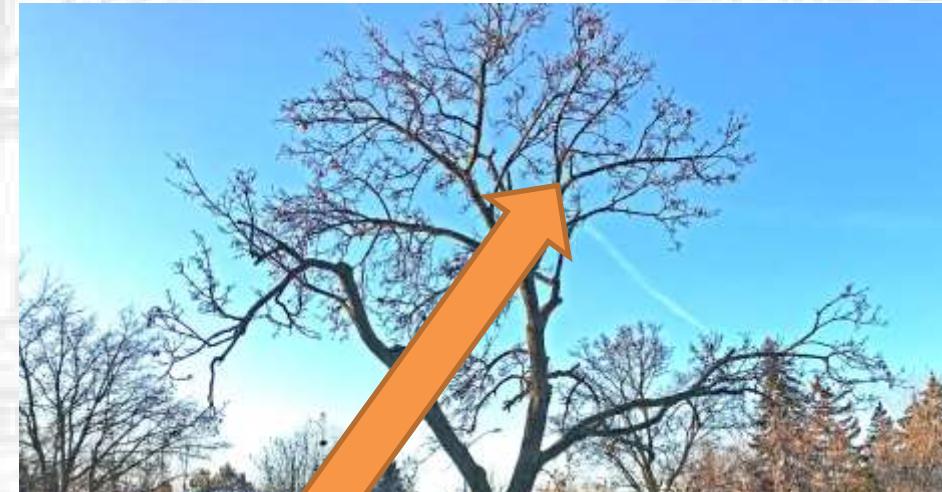
Like pollarding, but
to a shape – used
in formal
landscape.



**Thanks to Jen
Miroslolin for this
photo of
pleached lindens
at the Hermitage
in St. Petersburg.**



Girdling Roots: Symptoms



Crown Dieback

Girdling roots are those that wrap around the trunk and, as the root grows and the trunk grows, they strangle each other.





Carefully excavate to find where the root is constricting around the trunk. Use a hatchet to cut away the root, trying not to damage the trunk.

Girdling Roots: The Cure

Thanks to Dave Rustonberg for these photos.





**Cedar Apple Rust: freaky
and ugly but takes years to
kill a plant**



Filbert Blight: Fatal

**Bit by bit, learn your diseases and how and
WHEN to treat them.**



**Some like
gummosis on
plums/cherries
cannot be
treated... but kill
very slowly.**



Also black knot, which *only* affects cherries

Step 1: Learn the life cycles. Then you can learn when to control them.

Prune black knot out in AUGUST when it won't/can't reinfect.



Fireblight

A bacterial disease affecting members of the ROSACEAE family, esp. *Pyrus*, *Malus*, *Cotoneaster*



UGA5301096

Photos courtesy of
University of Georgia



UGA0590002b



Fireblight Control (Yes, it CAN also be sprayed with horticultural antibiotics)

Nectria Canker

It's a symptom, not a disease.



This is a saprophytic fungus. It feeds only on dead or dying tissue. It tells us that maybe something is wrong (so maybe we need to look deeper) or that a branch is weak and should be pruned out.



**Diplodia Blight
on 2-needed
pines such as
black pine.**

**No cure, but will
live for years.**

Quince Rust on Serviceberry (note the orange powder)



Verticillium Wilt is soil-borne, but very rare.



UGA2251099



Frost damage to vascular tissue is often mistaken for Verticillium Wilt.



Verticillium Wilt



**When samples are being
taken, take them from
the edge of the infection.
Why?**

Because the infection has died out where the plant is dead, and hasn't infected where the plant is healthy. You want to sample from the transition zone.



**The problem
with the
'remove 1/3 of
the eldest wood
every year'
rule...**





**Conventional wisdom is
to cut out 1/3 of the
eldest growth, but how
are you going to get ALL
the way DOWN so the
new growth comes from
below the soil so it can
root and rejuvenate?**

Coppicing: Cutting a multistem
deciduous shrub ALL the way to the
ground to rejuvenate it. Aim for
slightly below the ground.

When? Early spring!

Coppicing – clear the loose bits and pieces



**Coppicing – Used to rejuvenate over-grown or diseased shrubs.
Can be done in late March, every 3 – 5 years.**



Coppicing – Use loppers or a reciprocating saw to cut material **RIGHT** to the ground.



Coppicing – clean up as you go so you can see what you're doing.



Coppicing – final touch-ups



Some shrubs you can coppice...

- Weigela
- Spirea
- Elder
- Privet
- Beautybush
- Snowberry
- Hydrangea
- Honeysuckle
- Mock orange
- Viburnum
- Shrub roses
- Dogwood
- Willow
- Blue Mist Spirea
- Sparkleberry
- Buttonbush
- Serviceberry
- Barberry
- Chokeberry
- Flowering Quince
- Prickly Ash
- Clematis vines

Trees crowding the house or drive?



They need to come out, right?

**Slowly limb them up
OVER the landscape!**

**Big trees give
elegance and scale
and are worth saving!**

Topping: Don't do it!!!

'Topping' is when someone cuts a tree way back to a random point, leaving large open wounds that the tree cannot heal. Eventually this tree needed to be removed. ☹





Topping leads to rotting and removal



Candling 2-needed Pines

'Candling' is a technique to make dwarf evergreens like mugo pine more dwarf. Where you *would* have had 1 long point of growth, you'll have 3 or 5 much shorter ones. Hover your mouse over the picture for a video demonstration.

Fun fact?

If you get sap on your hands, mix cooking oil and sugar to remove it!

Shear evergreens lightly before winter to avoid snow damage



Shearing
helps
avoid
this...

Octopus
Syndrome



© Sean James



Hedges

Hedges are a whole different type of pruning.

Hover your mouse over the picture for a video demonstration.



Pleaaase avoid use of invasives

- They do terrible damage to the environment.
- There are **ALWAYS** better options! E.g.: Norway Maple vs. Ruby Lace Honey Locust)



JOIN NOW!**NEWS****EVENTS****TRAINING/EDUCATION****MEMBER'S AREA****CHAPTERS****SECTORS****TRADE SHOW****MAGAZINES****FOUNDATION****CAREERS****RELATED ARTICLES:****Certification branding request for proposal**

Canadian Nursery and Landscape Association (CNLA) is seeking proposals from qualified entities for branding and developing a strategy for promoting the new Canadian nursery and landscape industry certification program.

In Memoriam - Luigi Pignatelli

Luigi Pignatelli, one of the founders of Tree Valley Garden Centre in Stouffville, Ont., passed away peacefully on Sept. 8, 2019.

CONTACT US 1-800-265-5656

My profile

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June 12, 2019

Ontario Landscape Tree Planting Guide



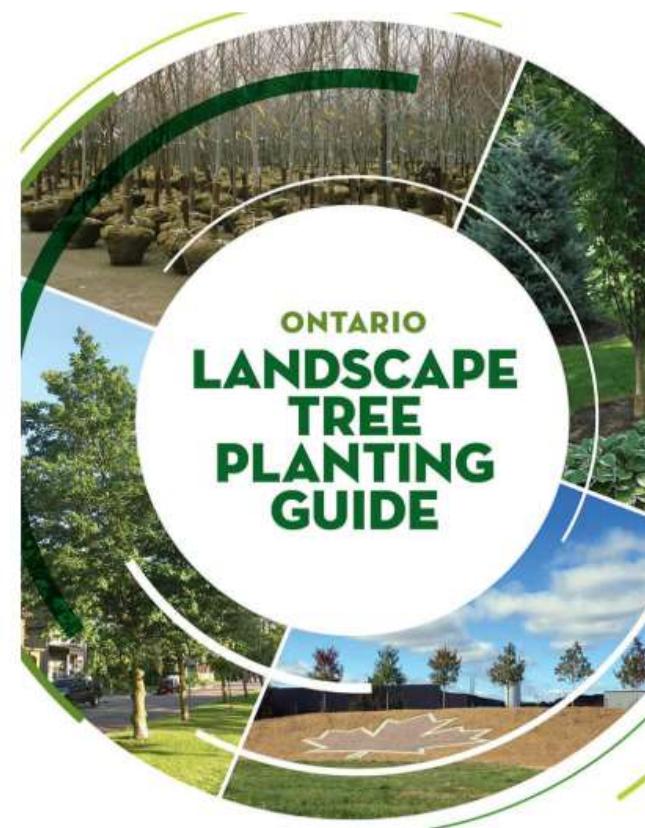
It's here!

Landscape Ontario and Vineland Research and Innovation Centre are proud to announce the release of the *Ontario Landscape Tree Planting Guide*.

The *Guide* is intended for landscape architects, landscape designers, landscape contractors, urban forest managers, horticulturists, and other professionals who understand tree attributes and tree requirements, and who have a working knowledge of terms commonly used in the horticultural trades. The recommendations in this guide are intended to be specific to Ontario and are consistent with the *Canadian Landscape Standard*. All landscape trees should be nursery-grown and in compliance with the current edition of the *Canadian Nursery Stock Standard*.

The guide was reviewed by a committee established through Landscape Ontario. Prior to publication, it was submitted to horticulture professionals in Ontario for review and endorsement in order to develop industry consensus. The information contained in this *Guide* reflects best practices of the landscape horticulture industry. The *Guide* is subject to periodic review and may be updated at any time.

Comments and suggestions for improvement are welcome. All recommendations should be sent to Landscape Ontario.



Click the image to learn about the tree planting guide.

Bigggggg rabbit hole! ☺

Rose Pruning

Hybrid Tea Roses (the classic!)

Roses

Just before winter, when danger of it warming up is past, cut them down to knee height first to stop the wind from rocking them.



Then, in the Spring...



Remove oldest growth. It'll have bark or stripes, as opposed to green or red smooth skin.

is to be removed.



Use your pruners as hands to avoid thorns.



Switch to loppers or a saw!





Take old wood back to the crown.



Definition: The ‘crown’ of the plant is where the above-ground stems meet the below-ground roots. Upward growth from here becomes branches. Downward growth becomes roots.

**There won't be much left when you're done.
Don't be scared!**



Cut to an out-facing bud



3 – 5 buds per stem





Some parameters...

- Nothing smaller than a pencil
- Nothing with stripes
- Left with 3 – 5 stems per plant



Rose Pruning

When?

After danger of hard frost is past!

Is this method for all roses?

Nope! Multiflora and grandiflora roses:

5 – 7 stems per plant

5 – 7 buds per stem

Shrub roses? Prune them as you would shrubs.

Some tips for the following video links:

- There are good things in each of the following videos!
- Video one:
- Pretty darn good, especially for our climate. Chicago is **VERY** similar to our climate. It could have a bit more detail.

Rose Pruning: none of these are perfect.

See thoughts in following slides.

<https://www.youtube.com/watch?v=bHCe2aehNbU>

Tools? PPE? Video 1 is pretty good and the climate in Chicago is similar to here.

Here's a better one...but not perfect:

<https://www.youtube.com/watch?v=KRn2CyjxP0c>



Climbers:

<https://www.youtube.com/watch?v=gNiOW1kBNGo>

More thoughts:

- Video two:
- Powdery Mildew and Black Spot are NOT viruses. They are fungal.
- This is Seattle. It's MUCH warmer in the winter there and so the roses can stay alive much higher above the ground.
- In Ontario, winters are much more harsh and so the graft union (which the instructor refers to as a 'bud union' at 3:06min) must be below the ground to protect it from the cold. In warmer areas it can be above the ground. The graft union is where a hardier and more vigorous root stock (a rose from the roots down) is grafted to a prettier, but weaker bud stock (buds of a rose from the roots up) to transfer some of the root stock's vigour and hardiness to the prettier bud stock.

More thoughts, still on video two:

- Perhaps make the cuts a bit closer to the bud; around 6mm.
- At roughly 6 minutes, the instructor talks about hormones. We're still learning about how hormones work. The latest wisdom states that the hormones that govern how plants grow UP come from the top bud, actually retarding the growth of the lower buds. He also mentions cutting the buds on an angle to shed water. Much debate, but it seems to equal out, a flat cut has less surface area for infection. An angled cut sheds water, keeping it more dry, reducing disease. Translation? Don't worry about it.



Still More Thoughts:

- Video three:
- Instructor is a bit aggressive for Ontario's climate.
- Perhaps if he had tied the canes that stuck out towards the path back against the trellis, he would have had more bloom in the current year. If the cane has green skin, try and find a way to keep it. Remove it if it has lots of stripes on the skin or bark.
- Think about using a softer tie such as an organic material instead of a plastic one. Less damage to the canes!

Still more thoughts on the 3rd video:

- Be gentle removing the material that's cut away. Pulling too aggressively can damage the remaining canes.
- Sometimes, the instructor breaks the rule about how to hold the secateurs: keep the big blade toward the big wood. This allows more precision in your cuts.

Many pests affect roses, such as Rose Chafer Beetle





Rose Sawfly – look for damage & prune it out whenever you see it!

Look for scaring to find egg laying sites. The larva LOOKS like a caterpillar but is actually a wasp!



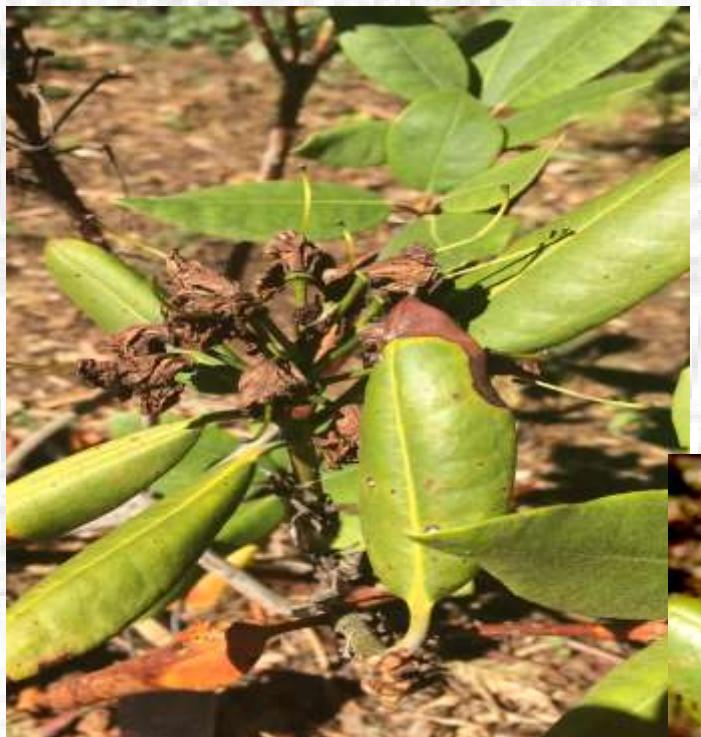
Rose Sawfly uses it's ovipositor (a tool on it's butt that's for laying/positioning eggs. The word 'ovipositor' means 'egg placer' or 'egg positioner'). In this case, it's like a little saw that allows the insect to cut into the new soft skin of the plant and place the egg underneath the skin. Insects have an incredible array of ovipositors!

Dead-heading Rhododendrons

Dead-heading prevents seed formation, allowing more energy for next years flower show.

Hover your mouse over the picture for a video demonstration.





Deadheading Rhodos & Azaleas



Also note the leaf rolling. This is a sign of what?

Drying out, or ‘desiccation’! By rolling the leaves the plant can protect the ‘stomata’ through which it breaths, reducing ‘evapotranspiration’ (plant sweat).



Pruning

- Pruning is as much art as it is skill and science. We can do terrible damage when we prune poorly. We can do terrible things...QUICKLY when we use power tools.
- Some prune to harshly. (Sean's looking at YOU, men.)
- If you're having trouble pruning harshly, remember 3 little words:
- Pruning promotes vigour!
- Take a moment to strategize before starting. Maybe you can find a few big branches to remove, solving a lot of problems before you fiddle with the little bits.
- Think FIVE years down the line when pruning. What is this going to do later?

And just because you made it through the whole thing... a pruning reward!

- <https://www.youtube.com/watch?v=KJnnnDSK378>



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email: sdjames@on.aibn.com

Visit www.seanjames-consulting.ca and subscribe to my newsletter (under the 'Educate' tab)



905.699.2197

sdjames@on.aibn.com

**469 Woodward Ave
Milton, ON
L9T 3B7**