

Ready, Set, **GROW!**

Webinar Gardening Series

Today:

"Tree Pruning Basics"

with
Dr. Marisa Thompson
NMSU Extension
Urban Horticulture
Specialist

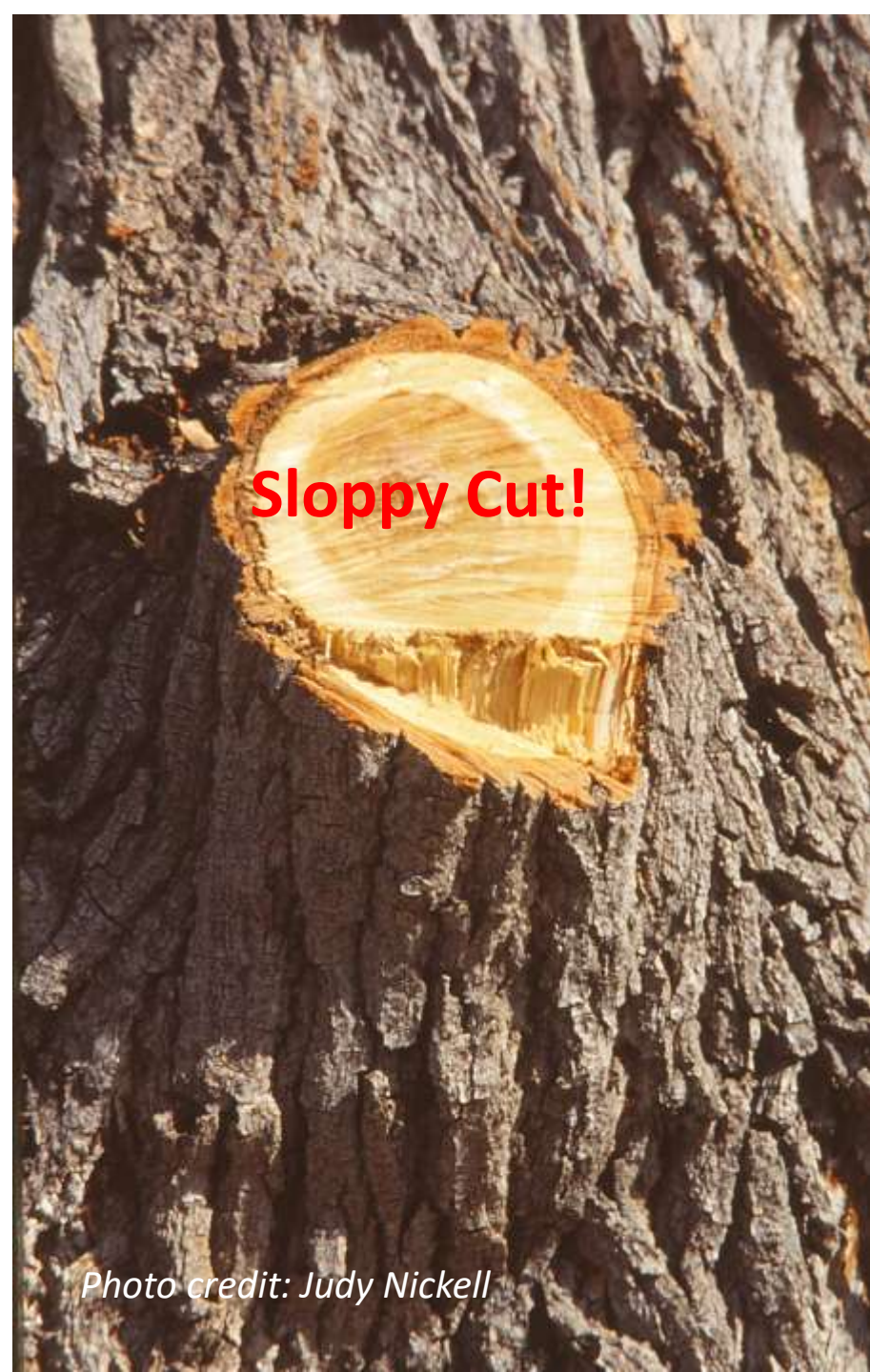


Photo credit: Judy Nickell

Ready, Set, GROW!

Webinar Gardening Series, Sept 2020 - *October 2021*
& *BEYOND!*

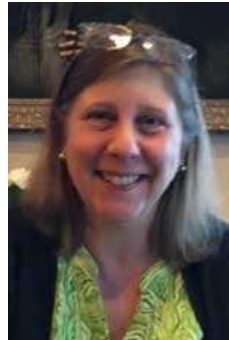
Hosts from NMSU Cooperative Extension



Marisa Thompson
Urban Horticulture
Specialist



Sara Moran
Bernalillo County



Suzanne Cole
Mora County



Lynda Garvin
Valencia County



Amanda Skidmore
Integrated Pest
Management Specialist



John Garlisch
Bernalillo County

Ready, Set, GROW! Gardening Webinar

Tree Pruning Basics

Beginner Techniques and What NOT To Do



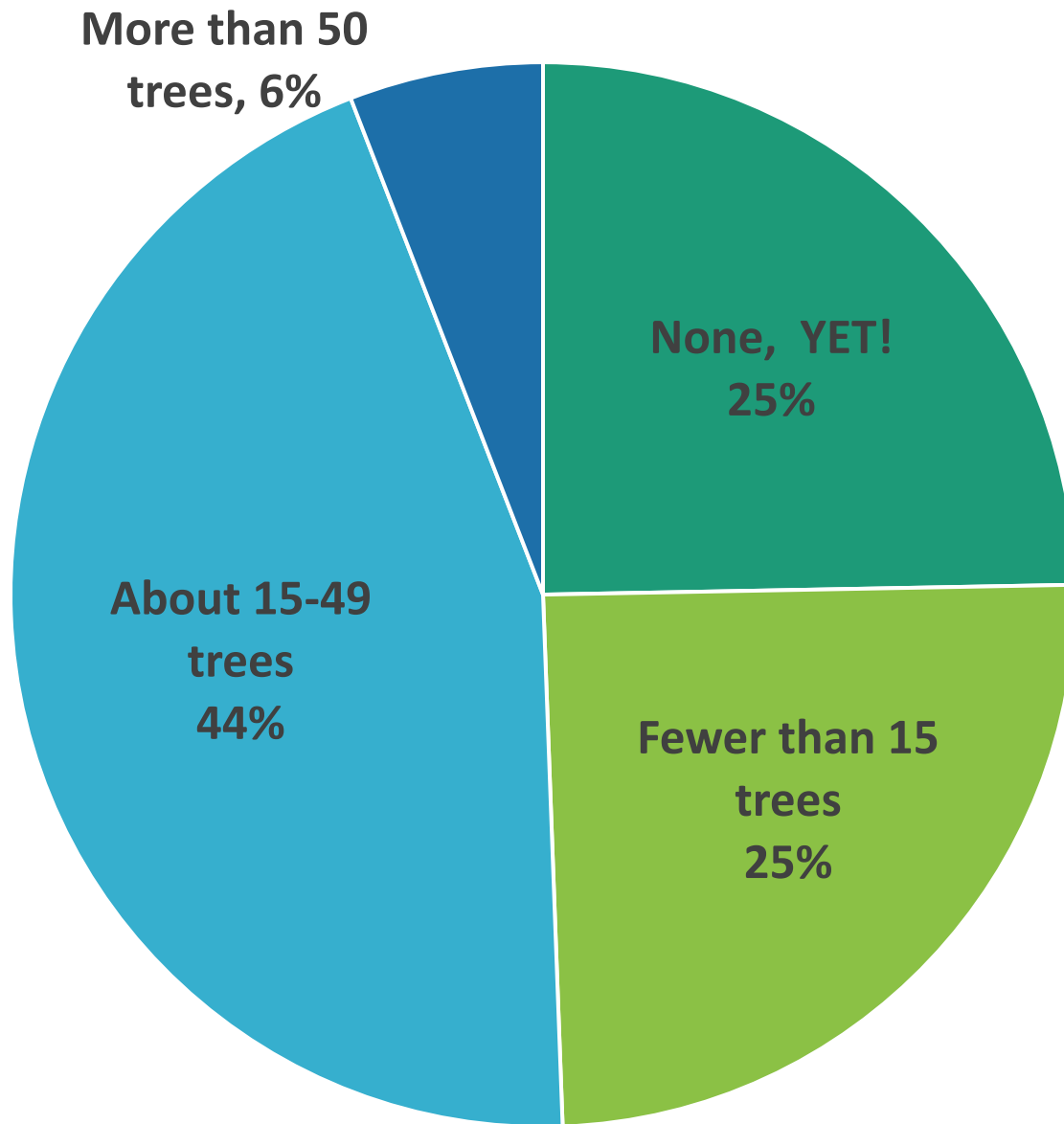
Dr. Marisa Thompson

NMSU Cooperative Extension

Urban Horticulture Specialist

March 17, 2021

How many trees have you pruned before?



Outline

- Why
- When
- How
- More Important Things to Worry About



Pruning Trees for Sustainability:

Why, When, and How

And Why NOT



Why Prune?

- 1) To improve the appearance or health of a plant.
- 2) To control the size of a plant.
- 3) To prevent personal injury or property damage.
- 4) To train young plants and **AVOID** co-dominant stems!
- 5) To influence fruiting and flowering.

RIGHT TREE, RIGHT PLACE



WHY NOT?

Recommendations Change Over Time



Fall Webworms



- September 10, 2017

Southwest Yard and Garden: Fall Webworms



Pruning Trees for Sustainability: Why, When, and How

IT DEPENDS!

When to Prune

- Always a good time to prune branches that are
 - Dead
 - Diseased
 - Damaged
 - Dangerous
- What are your goals?
 - Fruit Production – late winter, early spring
 - Reduce canopy size – summer
 - Maximizing bloom (*it depends!*)
 - Overall tree health – late winter, spring, or summer

Peak Fire Blight Season



- July 09, 2020

Southwest Yard & Garden

by Dr. Marisa Thompson



The drooping branch with dead leaves on this pear tree is exhibiting classic shepherd's crook symptoms and was diagnosed with fire blight by the NMSU Plant Diagnostic Clinic.

What To Do When Wind Damages Trees



- September 10, 2020

Southwest Yard & Garden by Dr. Marisa Thompson



Strong wind gusts in Albuquerque on Sept. 8, 2020, caused several major branches in the middle of this

Lilac It or Not: Hold Off On Pruning Until Flowers Fade



- October 31, 2018

Southwest Yard & Garden by Dr. Marisa Thompson



Pruning During the Summer is Okay... and possibly EVEN BETTER Than Waiting Until Late Winter or Early Spring



- August 27, 2020

Southwest Yard & Garden by Dr. Marisa Thompson



Mulberry branches pruned away from awning in August 2020



Oct. 29, 2020



March 17, 2021

Pruning Trees for Sustainability: Why, When, and How



“People who prune the old-fashioned way should be made to go to an old-fashioned dentist.”

-From Dr. Al Shigo's book, *Tree Pithy Points: Brief messages of tree biology, tree care, and philosophy*

General Pruning Guidelines

- Pruning should be the result of a definite purpose
- Pruning affects the entire plant
- Follow the natural growth habit
- Smaller cuts are better
- Proper tools
- Proper techniques
- No wound dressing or sealer
- **Timing** *late fall/early winter is the worst, but sometimes necessary!*

**PRUNING
INJURES
TREES**

WOUNDS DON'T HEAL, THEY SEAL



Deciding What to Cut First, if ANYTHING!

Marisa's ABCDs of pruning (*starting with D*)

D is for Dead. Dead branches go first

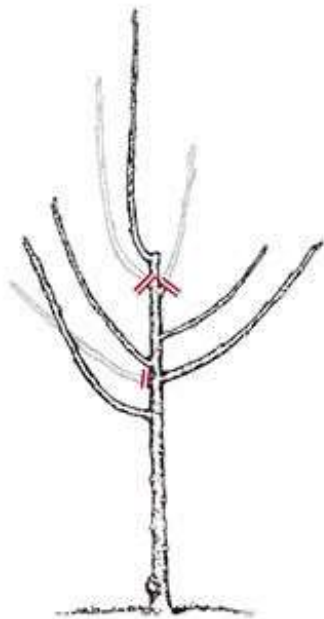
- It can be difficult to identify a dead branch in the winter
- It's always a good time to prune a dead branch



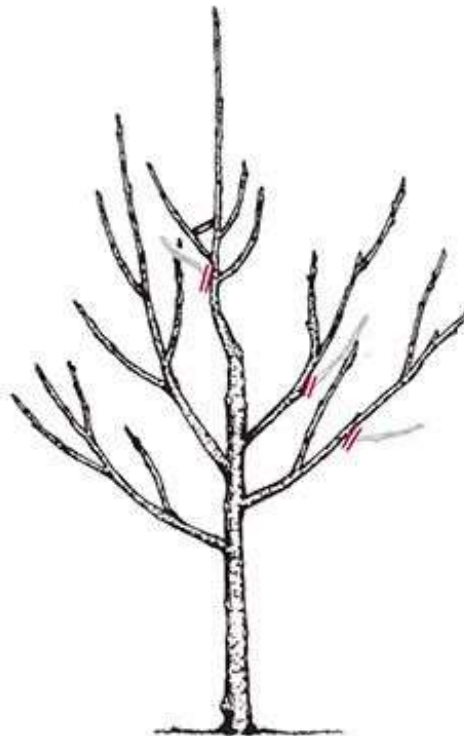
Deciding What to Cut First, if ANYTHING!

A is for Apical. Select and promote a central leader

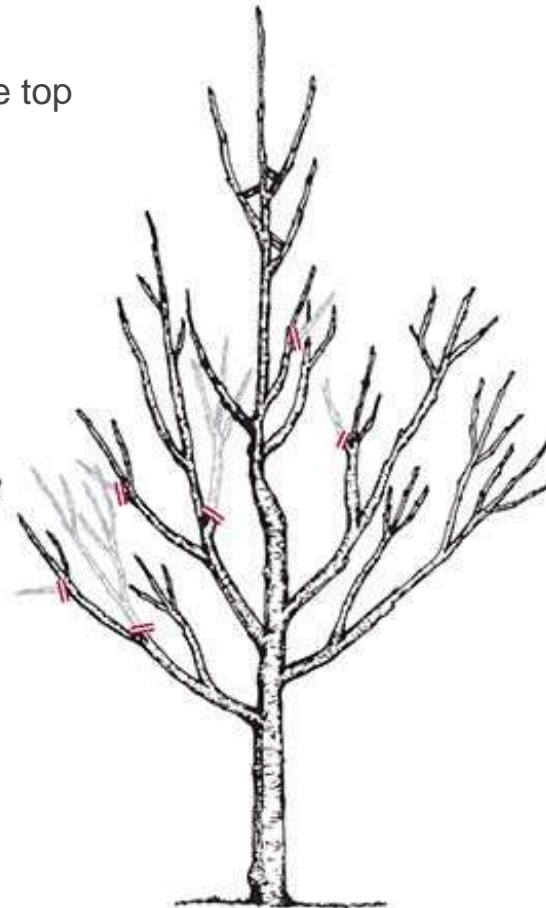
- Apex or tip
- Main stem from the trunk up through the canopy to the top of the tree



*First year
spring*



*Second year
spring*



*Third year
spring*

Central leader pruning

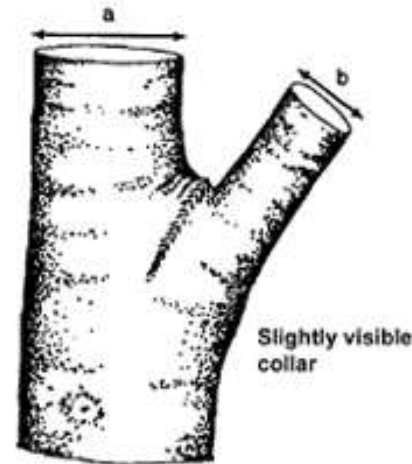
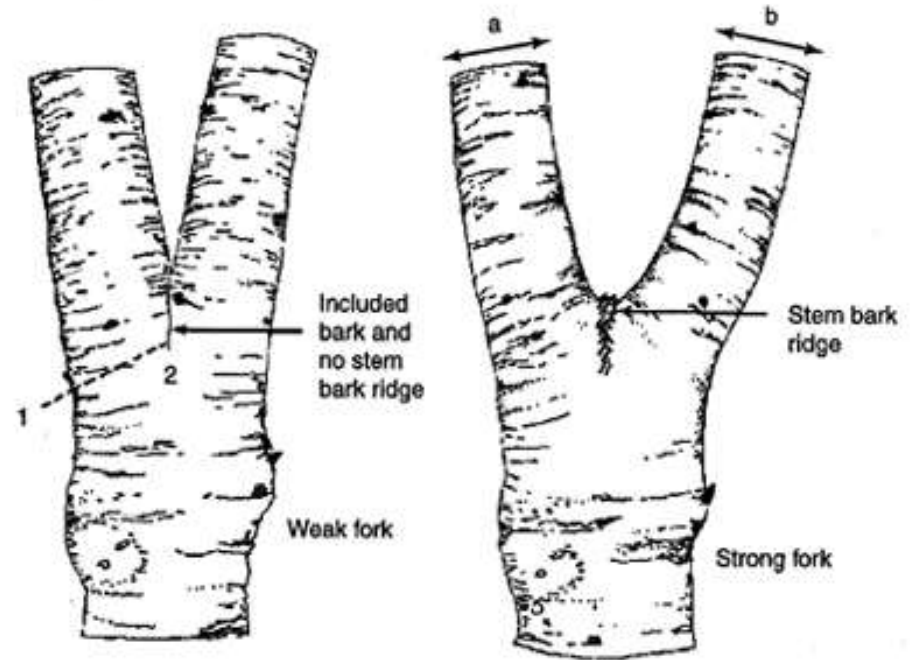
Deciding What to Cut First, if ANYTHING!



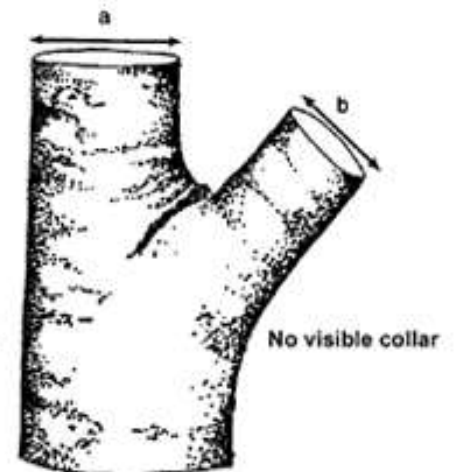
Deciding What to Cut First, if ANYTHING!



Two codominant stems



Most preferred branch size:
 $b < .5a$



Preferred branch size:
 $b = .5 \text{ to } .75a$



[Photos of BARK INCLUSIONS from Ed Gilman's Landscape Plants Website](https://hort.ifas.ufl.edu/woody/bark-inclusions.shtml)
<https://hort.ifas.ufl.edu/woody/bark-inclusions.shtml>

Deciding What to Cut First, if ANYTHING!



- C is for Competing.** Rubbing, growing the wrong way
- May not be competing yet, but the smaller the better

What's Wrong with MY Tree? PART 2: Oozing Stains on Tree Trunk



- April 30, 2020

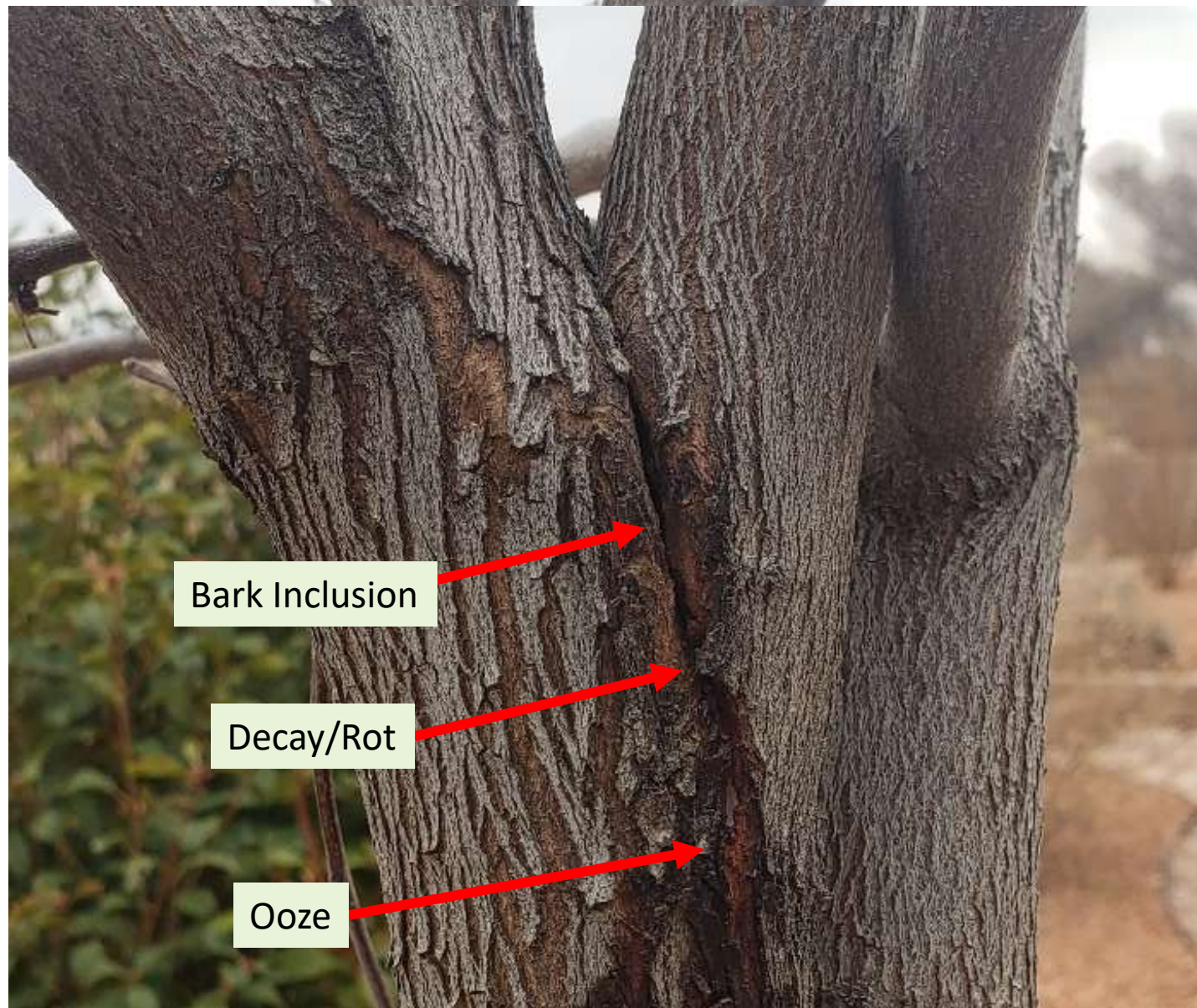
Southwest Yard & Garden by Dr. Marisa Thompson



The stained, oozing spot is slimeflux (aka bacterial wetwood), and I bet it stinks like strong chemical paint



Oozing Texas Redbud
Sandoval County Master Gardener



Bark Inclusion

Decay/Rot

Ooze

Oozing Texas Redbud
Sandoval County Master Gardener

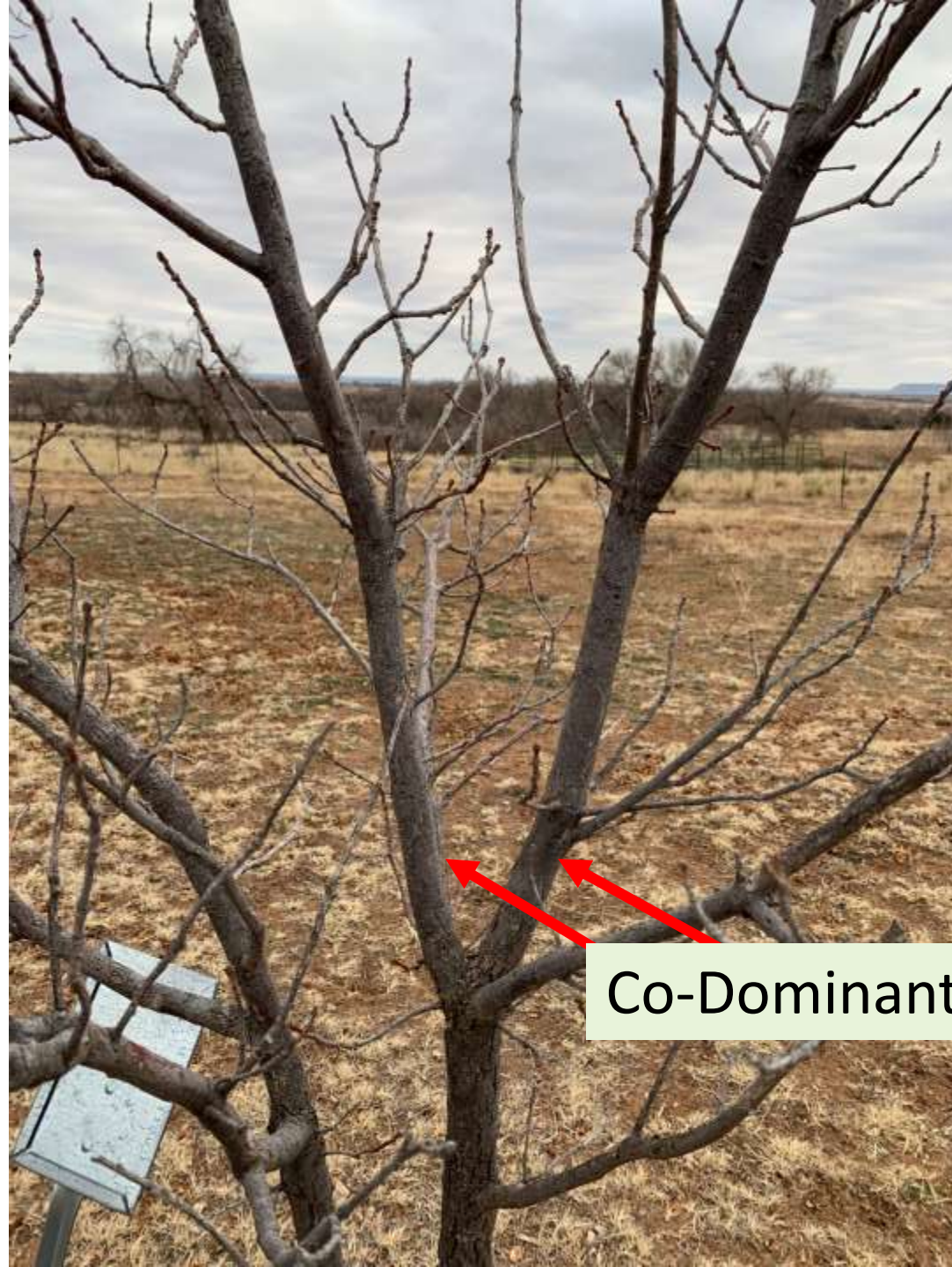
What can be done?

- Determine which of these larger branches should be the central leader
- Decide how much to cut back other branches
 - a) completely (thinning cut)
 - b) partially (heading cut)
- Pros and cons to both
- While you're there... What ELSE?!
- Take a LOOK at surroundings
 - Is this tree planted too deep!?
 - What can be improved for tree health?
 - How is the tree irrigated?
 - What other trees (and shrubs! and grasses!) can be added to this landscape?



Compare branch diameters

FUTURE Bark Inclusion??



Co-Dominant Stems



Before Pruning
Feb 2020



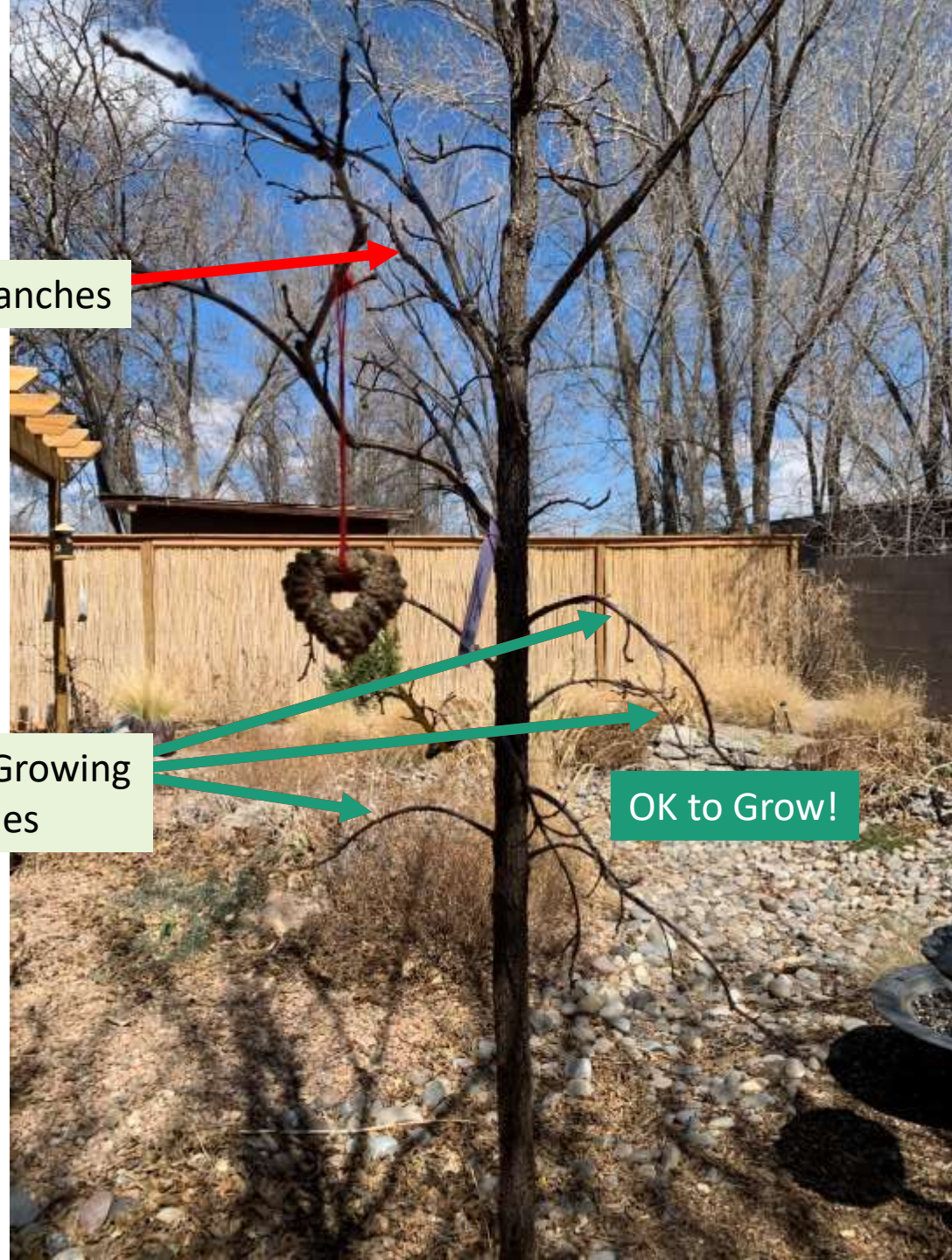
1 Year After Pruning
March 2021

Deciding What to Cut First, if ANYTHING!

Rubbing Branches

Downward Growing
Branches

OK to Grow!



Bur Oak in my backyard
(1.5 years)

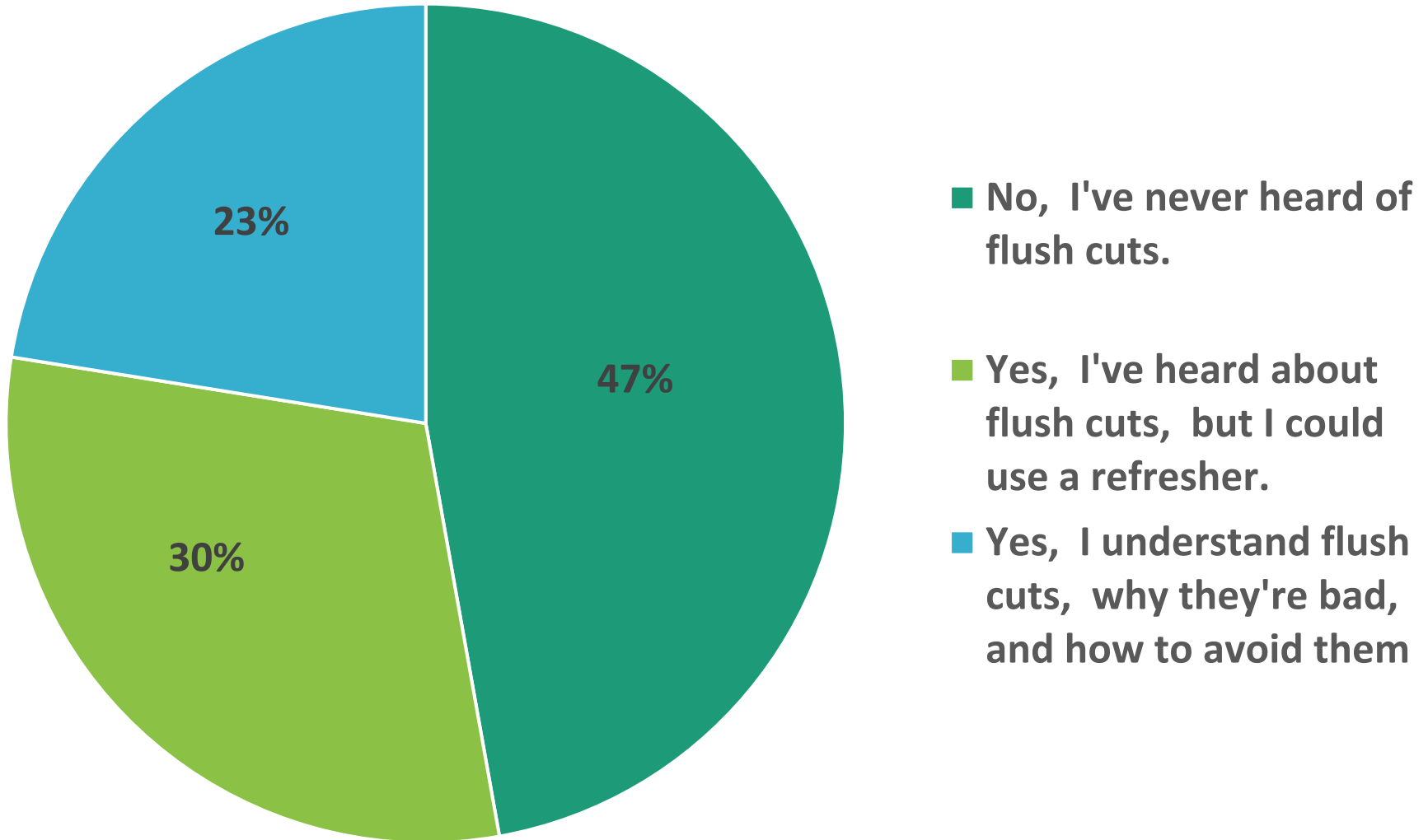


Ack!? Planted too deeply??

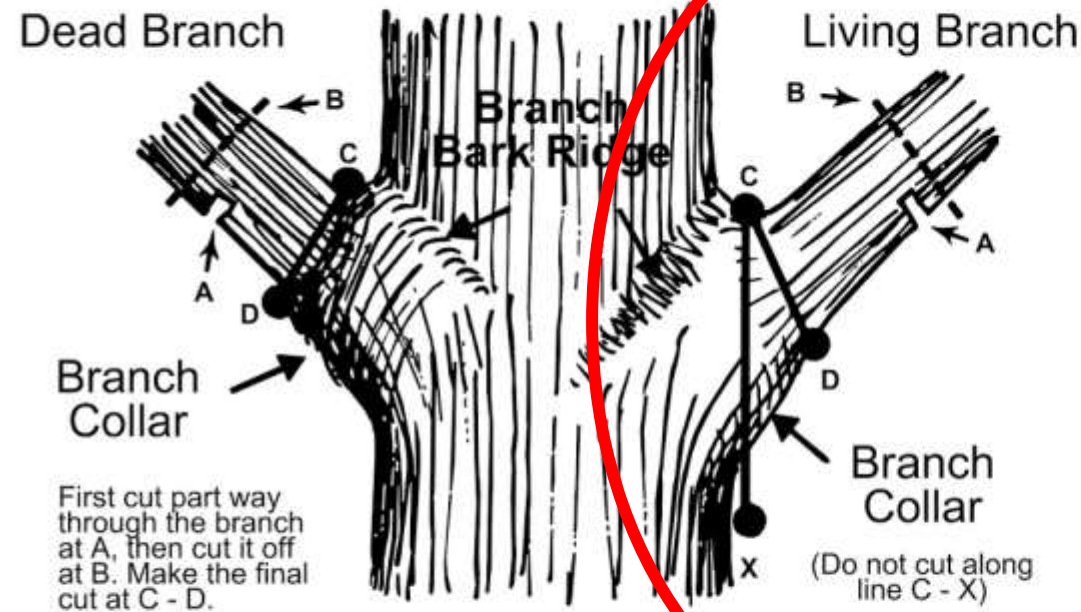


**YES! TOO DEEP! Soil settled in the past year!
Notice ADVENTITIOUS roots...
*NOT ADVANTAGEOUS!***

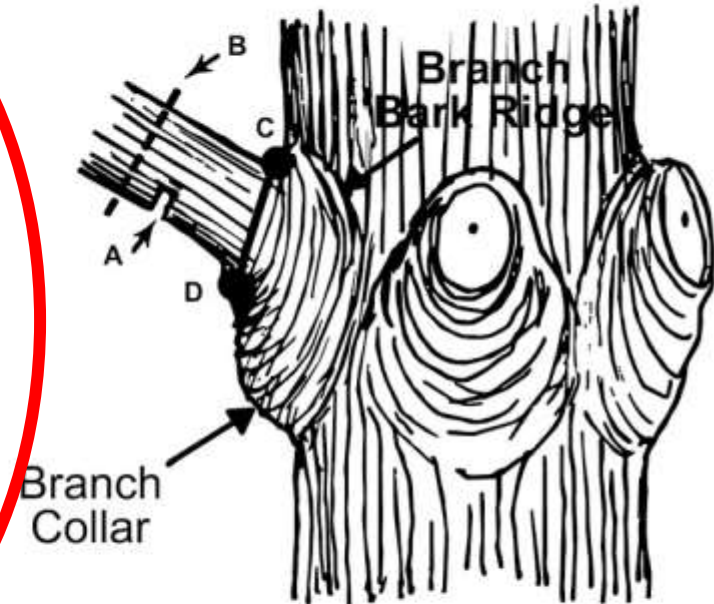
Do you know about "flush cuts"?



Proper Pruning Principles



Hardwoods



Conifers

Flush Cuts are THE WORST



Dirt Doctor - Library Topics
dirtdoctor.com



Topping Trees and Flush Cu...
content.ces.ncsu.edu



Flush cut - Maintenance - L...
hort.ifas.ufl.edu



Dirt Doctor - Library Topics
dirtdoctor.com



Flush cut - Maintenance - La...
hort.ifas.ufl.edu



Pruning cuts - Tree Quality -...
hort.ifas.ufl.edu



Tree Pruning | Trimming | C...
sarasotatreeserv.com



Wrong way to prune a tree: Flush cut ...
alamy.com



Topping Trees and Flush Cuts | NC State ...
content.ces.ncsu.edu



Pruning Trees ...
treetrust-news.blogspot.com



flush cut on Norway maple (Acer ...
forestryimages.org



**Outer Bark &
Inner Bark (Phloem)**



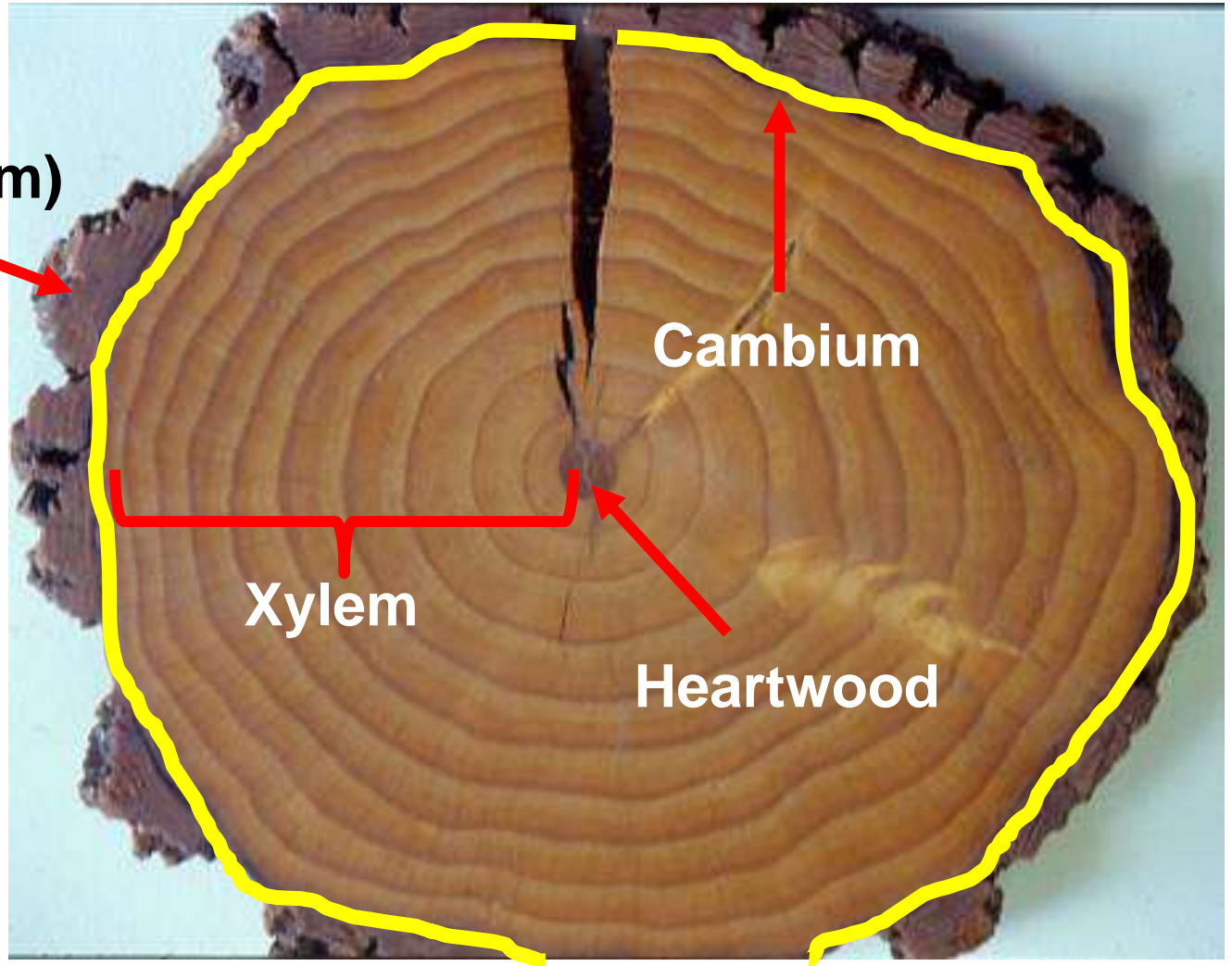
Cambium



Xylem



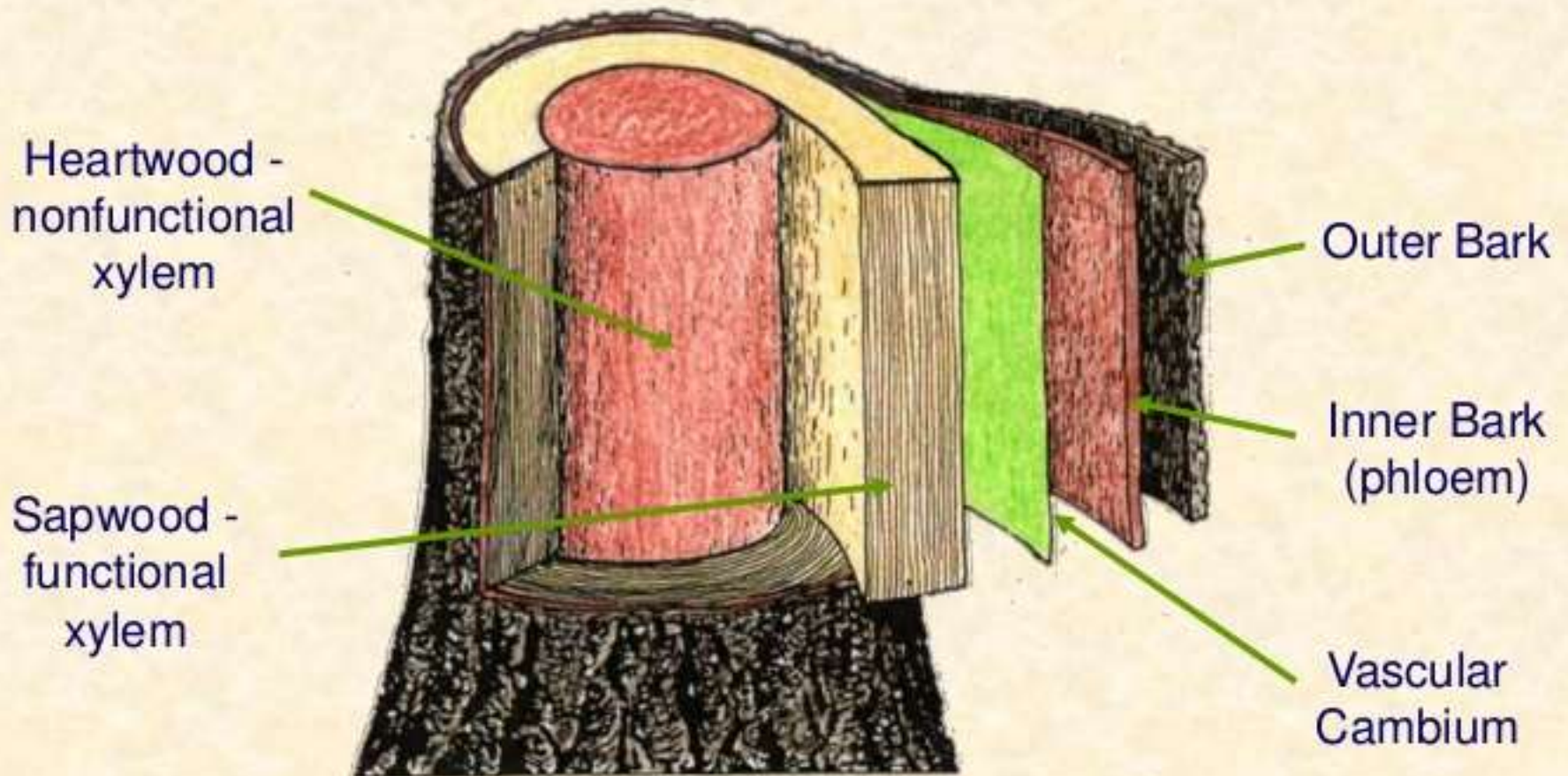
Heartwood



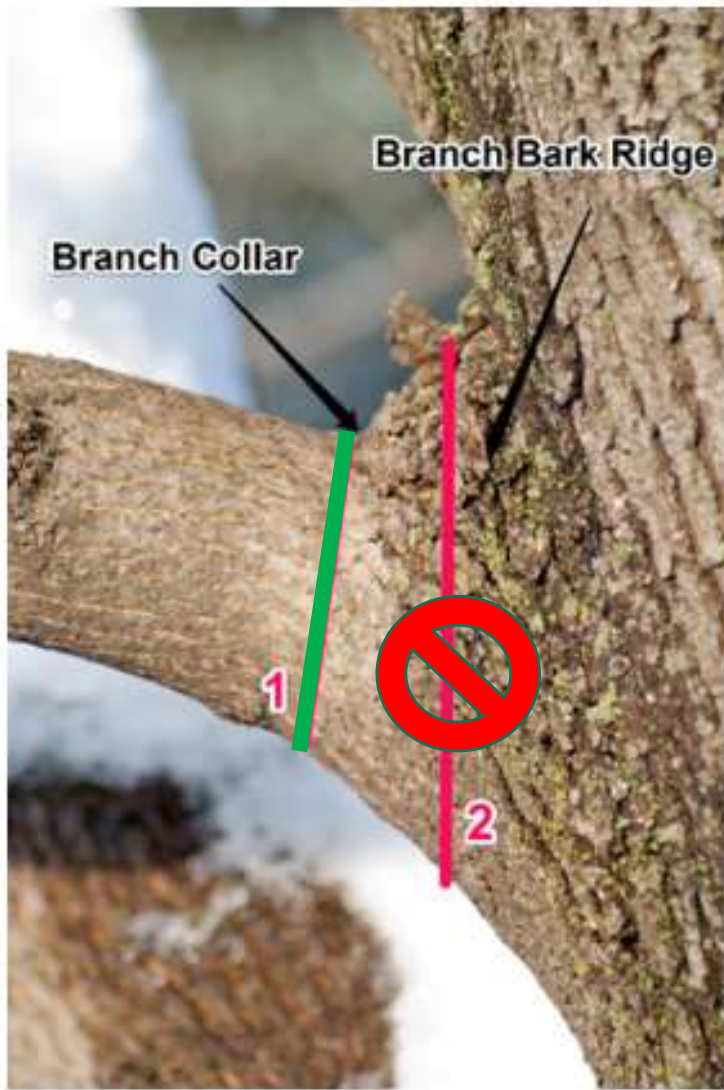


Living cambium layer beneath bark. Image Credit UF IFAS Pinellas County, Florida

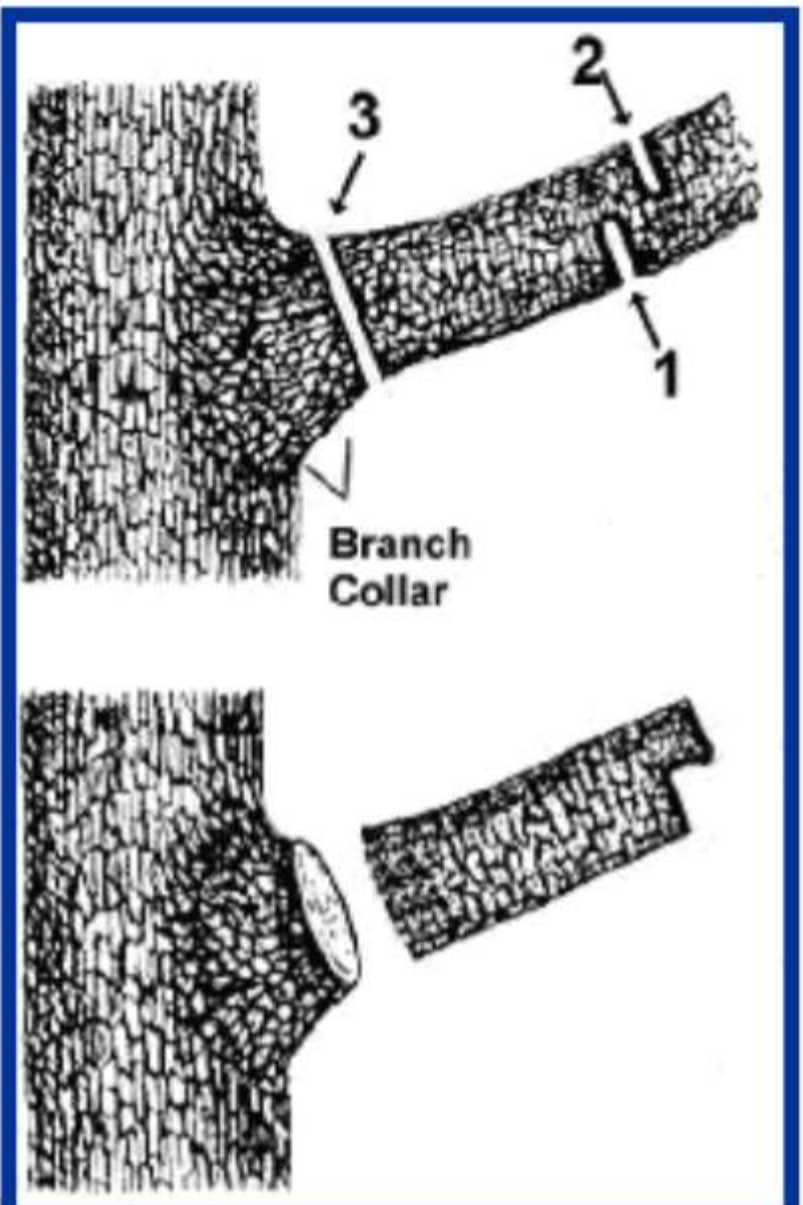
Woody Stem Anatomy







Making the Cut



The three step method of pruning large limbs.

Excellent cut from previous year has completely sealed over the wound



In a few years this scar will barely be visible.





BAD



GOOD



Tool Rules



Bow Saw
For removing limbs, about 2" thick or more.

Hand Pruners
Making cuts up to $\frac{3}{4}$ " in diameter.



Hedge Shears
Shearing plants into shapes.



Pole Saw
Making cuts that are out of reach.



Lopping Pruners
Making cuts up to 2" in diameter.



Pruning Saw
Making cuts 2"+ in diameter.



RECAP!

- Why
 - Deliberate pruning for tree health
 - Recommendations Change Over Time
 - Why NOT
- When
 - It depends!
- How
 - The issue of codominant stems is bad news, and one needs to be removed or reduced
 - When it comes to branch angles, peace signs are bad and loser signs are good
 - Ripping bark is BAD, use the 3-step method
 - Proper tools and keep them clean
- More Important Things to Worry About
 - Irrigation timing, depth, and area
 - Protecting trunks from winter sunscald
 - Fruit thinning
 - Magic of mulch
 - Tree Planting
 - Mis-Staking

Pruning Gra Four-Arm Kn

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Tree Pruning Techniques

Guide H-156

Revised by Curtis W. Smith
Extension Horticulture Specialist

Cooperative Extension Service • College of Agriculture and Home Economics



This publication is scheduled to be updated and reissued 9/10.



WHY SHOULD I PRUNE?

Proper pruning creates more beautiful, healthy trees and can increase the life span and productivity of fruit and shade trees (fig. 1). Unpruned or poorly pruned trees can often be safety hazards that endanger people and property.

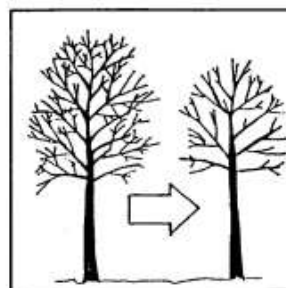


Figure 1. Proper pruning

Pruning is both art and science. Topiary, the art of pruning plants to achieve unusual shapes, and bonsai are good examples of "plant art" requiring special pruning techniques. However, even these unusual plant forms use the same basic scientific principles of pruning. This publication will provide you with the knowledge to begin pruning properly. With this knowledge, you can develop a more artistic pruning style based upon your personal preferences and experience.

low the proper pruning information provided in this publication to minimize reduction in tree health and prevent development of hazardous branches and poor branch attachment that can result in property damage or personal injury.

WHAT DO I LOOK FOR?

Consider pruning a branch if it meets any of the following criteria (fig. 2):

- dead, dying or severely diseased branches
- sprouts forming at the base of the trunk
- branches growing toward or across the tree's center
- crossed limbs that rub together or may rub in the future
- V-shaped crotches (when possible to prune)
- multiple leaders (upright branches that compete as secondary trunks or may develop into additional trunks)
- nuisance growth (interfering with power lines, sidewalks, buildings, traffic or traffic visibility, etc.)

WHEN DO I PRUNE?

You may prune deciduous trees in the dormant season once leaves have fallen in October or November, but January to March is preferred. Finish pruning in the spring, before color is evident in swelling leaf and flower buds. During the dormant season, much of a tree's carbohydrates and nutrients are stored in the roots and wood, so few of the food resources needed for growth and overall health will be lost when a limb is removed.

Thanks!

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- Website
www.DesertBlooms.NMSU.edu
- Email desertblooms@nmsu.edu



Ready, Set, GROW!

Upcoming!

April 7th at 3:00 pm
"The Spring Veggie Garden" with John Garlisch

NEW topics for April thru September

Grapevine Management	Container Gardening
Composting	Fall Veggie Gardens
Gardening with Kids	Growing Fruits
Preserving Your Harvest	Backyard Cover Crops
Plant Diagnosis	Healthy Soils
Medicinal Plants	Permaculture for the Home Garden
	Home Garden Pest Management

