

Pruning Basics

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for the Buck Mountain Garden Club

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Agenda

Welcome & introductions

Foundations of pruning

How to prune

Tools

Types of cuts

Other pruning techniques

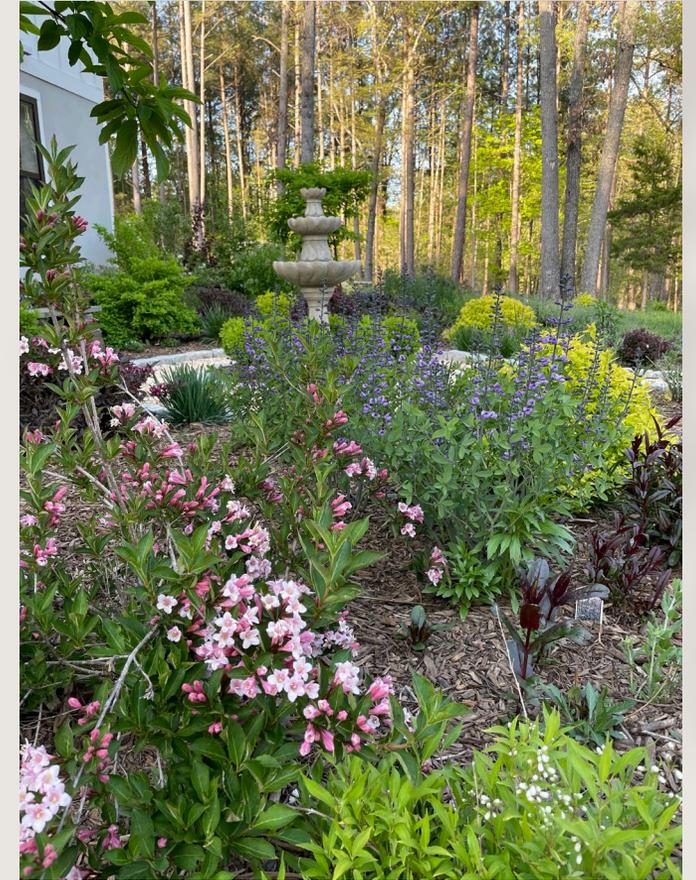
Pruning hydrangeas

Wrap up



Introduction

- Worked with my mother, a Master Gardener, since early childhood
- Learned to prune properly at an early age
- Worked in landscaping
- Received a minor in Horticulture from Virginia Tech
- During college, apprenticed with my Aunt, a prominent garden designer published in multiple books & magazines
- Avid collector of plants with a collection of over 1,000 different trees and shrubs
- Special interest in plant propagation



“You don’t know a plant until you have killed it once and moved it twice.”





"If you have a garden and a library, you have everything you need."

- Cicero



Why does pruning matter?

- Achieve a better shape and habit
- Keep a plant within the limits of its situation
- Remove parts of a plant that are in the way (and remove branches that are too low or sagging)
- Promote health (always remove what is dead, weak, or diseased)
- Encourage flowering
- Achieve more, better, and bigger fruit
- Rejuvenate plants

Why learn proper pruning techniques?

Proper pruning can lead to a healthier plant that requires less fertilizer and/or pesticide treatments, which benefits the plant's surrounding space, pollinators and wildlife, and the environment.



Foundations of good pruning:

- Pruning helps trees grow strong and look neat and attractive. One prunes a tree to remove damaged branches, allow for new growth or create a distinctive shape.
- It is important to use proper pruning techniques to prevent damage to the tree.

Today we will cover the basics of pruning.

- Question to consider: Why do you want to prune?
 - To shape a tree for shade or height?
 - Has the tree been pruned recently?
 - What are your goals for the tree/plant?

Assess:

Spend a few moments evaluating the tree's size and shape and imagine how it should look when you are finished.

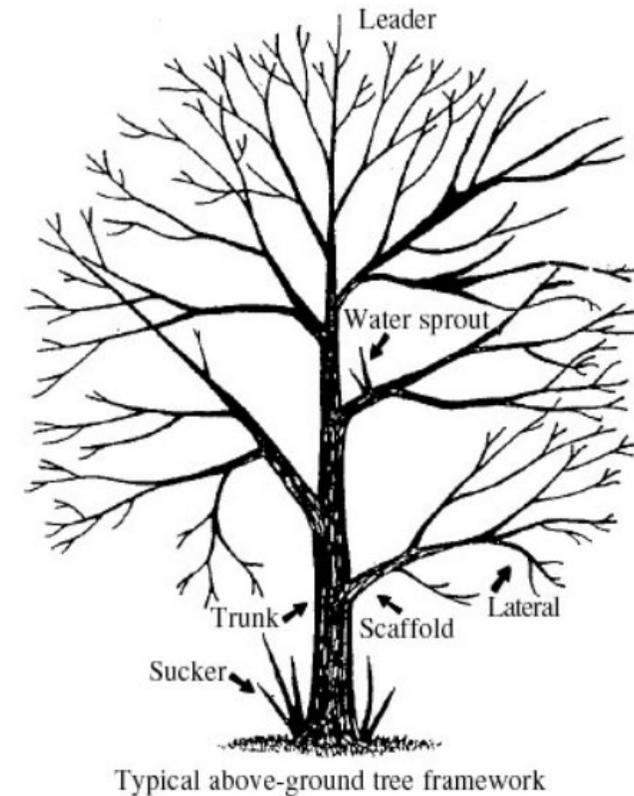
Different forms of trees:

- Branched-head standard
- Feathered tree
- Central leader standard
- Fastigiate tree
- Bush
- Multi-stemmed tree
- Weeping standard



Determine what to prune:

Identify the major branches of the tree that make up its "skeleton." Avoid removal of these branches.



Remove branches that show signs of damage first.

Whether they were damaged by a storm or some other event, broken branches should be pruned so that the water and nutrients they're still taking from the tree get redistributed to healthy branches



Thin out areas that are thick with branches.

- Remove branches that cross, then open the plant so air can circulate, and light can reach all parts of the plant. For trees to be healthy, they need good air circulation through and around the branches.
- Branches that are close together foster the growth of fungus and attract more insects.
- Eliminate branches that are growing inward, toward the center of the tree. These cause clutter and are not healthy.

Prune branches that act as obstructions or may cause damage.



- Low branches blocking your walkway
- High branches threatening your telephone wires
- Branches hanging over or touching your roof

Prune branches that help shape the tree.

- If you prefer your tree to have a more rounded or neat looking shape, prune a few branches that seem to stick out at odd angles; a few cuts will make a big difference.



Prune as little as possible.

- Each cut you make compromises the tree protection system and opens the tree to potential fungus and insect infestation. Prune only as much as you absolutely need to prune, and as a rule do not remove more than 25% of a tree's branches.
- For most deciduous trees, make sure there are living branches on at least 2/3 of the tree, though this varies by species. Be aware that the trunk alone is not enough to ensure the tree will survive. Removing all the branches is highly stressful for the plant.
- Don't prune heavily more than once per season. Unless a storm breaks more branches, you should not prune more than once, since the tree needs time to recover.

Take out your pruning tools in the dormant season.

- Pruning during the late fall or early winter puts less stress on the tree as it minimizes sap loss.
- In Zone 7, February is the optimal month for pruning most plants.
- Pruning during this time of year is better for the tree because it is less likely the "wound" you make will be infected by insects or fungus, which are also relatively active in the late fall and early winter.
- A good time marker is to prune after the leaves have fallen off the tree. This means the tree is dormant until early spring.
- If a storm during a different part of the year causes a branch to break, it's okay to prune it immediately instead of waiting for winter.

Tools

- Pruning shears (clippers or pruners)
- Loppers
- Pruning saws
- Hedge shears
- Pole pruner
- Pruning knife
- Flat shovel
- Axe



Caring for your tools

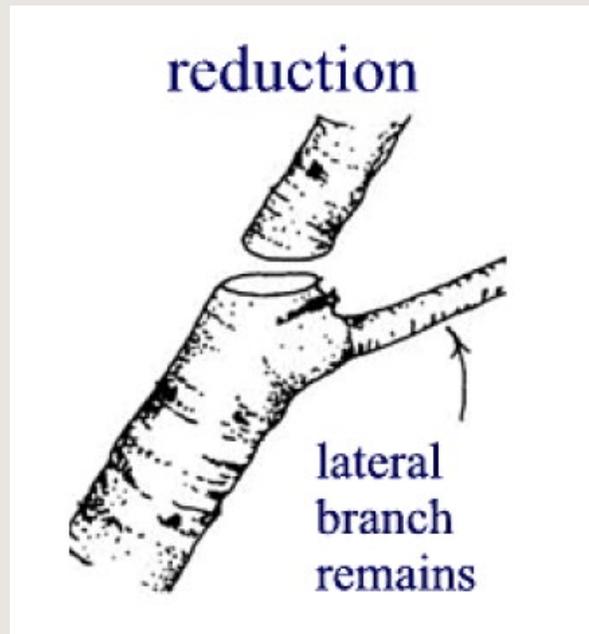
- Keeping tools clean is a top priority.
- Tree sap can gum up your tools.
- Diseases can spread from tree to tree.
- Carry a rag in your pocket to wipe down blades between uses.
- If you have been pruning diseased branches, wipe down the blade with alcohol before moving on to another plant.
- Always keep blades sharp.

Types of Cuts

- Reduction cut
- Removal cut
- Heading cut
- Removing dead branches

Reduction Cut

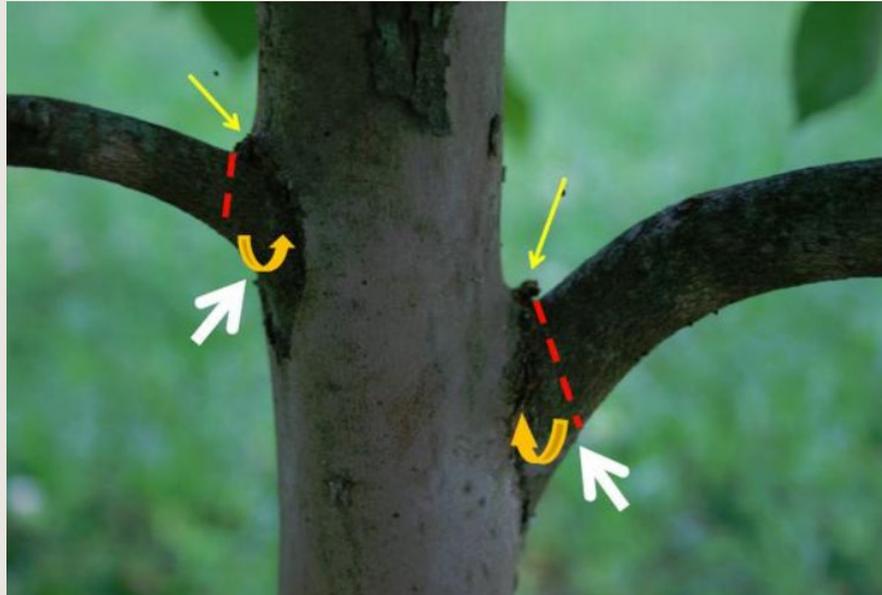
Reduces the length of the branch or stem. The key is that the cut is made just beyond a live lateral branch that's thinner than the stem you're cutting.



Reduction cut made back to a lateral branch

Removal Cut

Removes a branch or stem entirely. The cut is made just outside the branch collar (the junction where the branch you're removing is attached to the main trunk or stem).



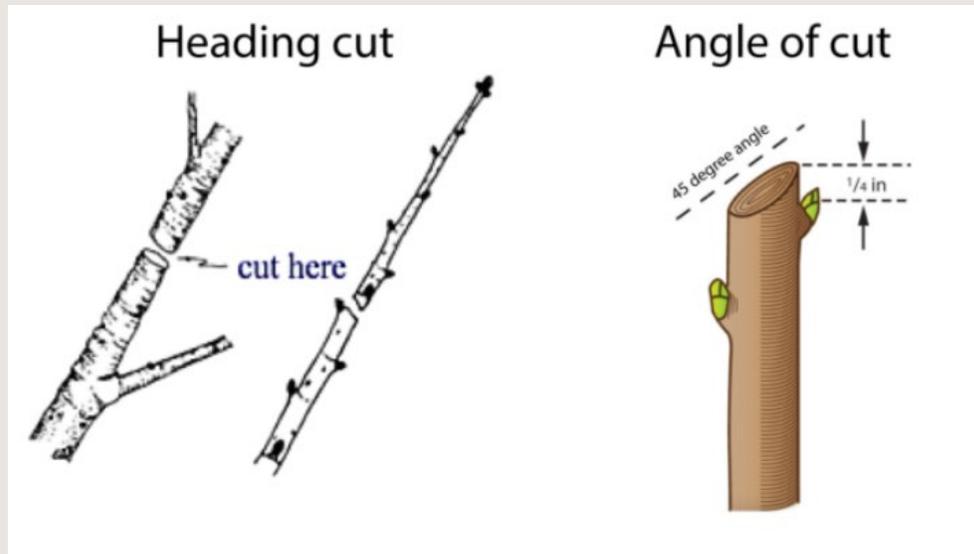
White arrows show the branch collar.



Red lines indicate where to make removal cuts.

Heading cut

This type of pruning cut is similar to a reduction cut but the cut is made anywhere on the branch or stem, regardless of the position of nearby lateral branches. This usually results in an unsightly, dead stump beyond the first lateral branch.



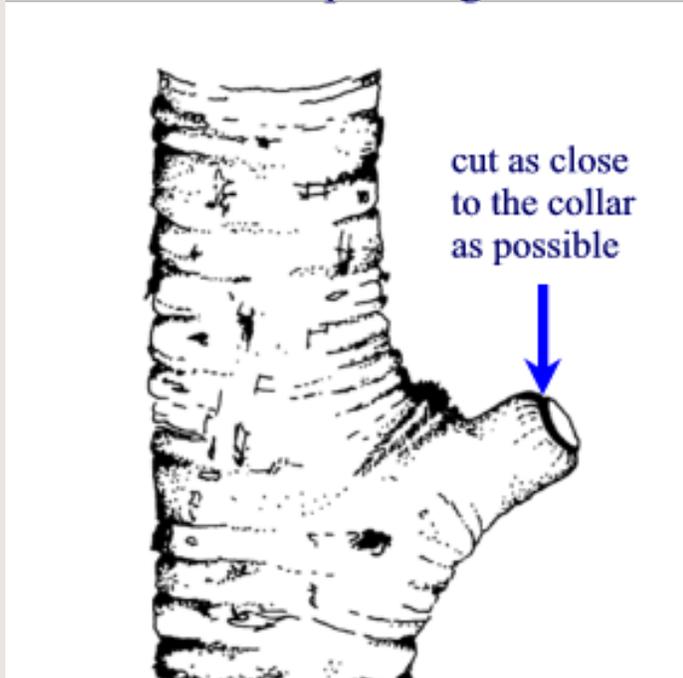
Cut about a quarter inch above a bud or branch.



A heading cut can be used to restructure a plant (a multi-year process).

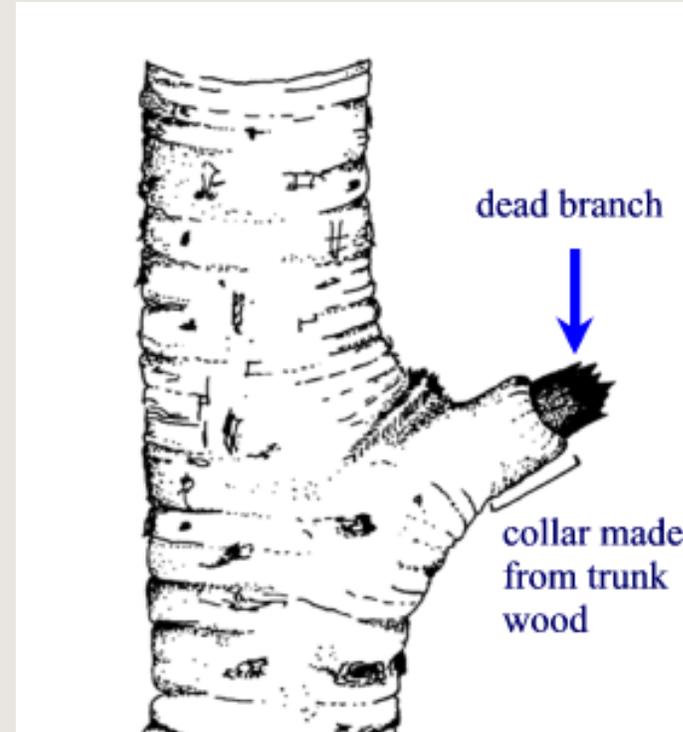
Removing dead branches

after pruning



A collar of trunk wood begins to grow out onto a dead branch that remains on the tree.

- Be sure not to cut into this collar.
- Cutting into the collar amounts to cutting into the trunk.
- Removing dead branches is good for the health of trees



Cut all dead branch tissue from the tree, but do not injure the collar.

- If the branch is small or severely decayed, you might be able to simply break the dead branch from the tree.
- This often allows you to remove more of the dead tissue inside the edge of the collar.
- Do not break the dead branch if this could injure the collar.

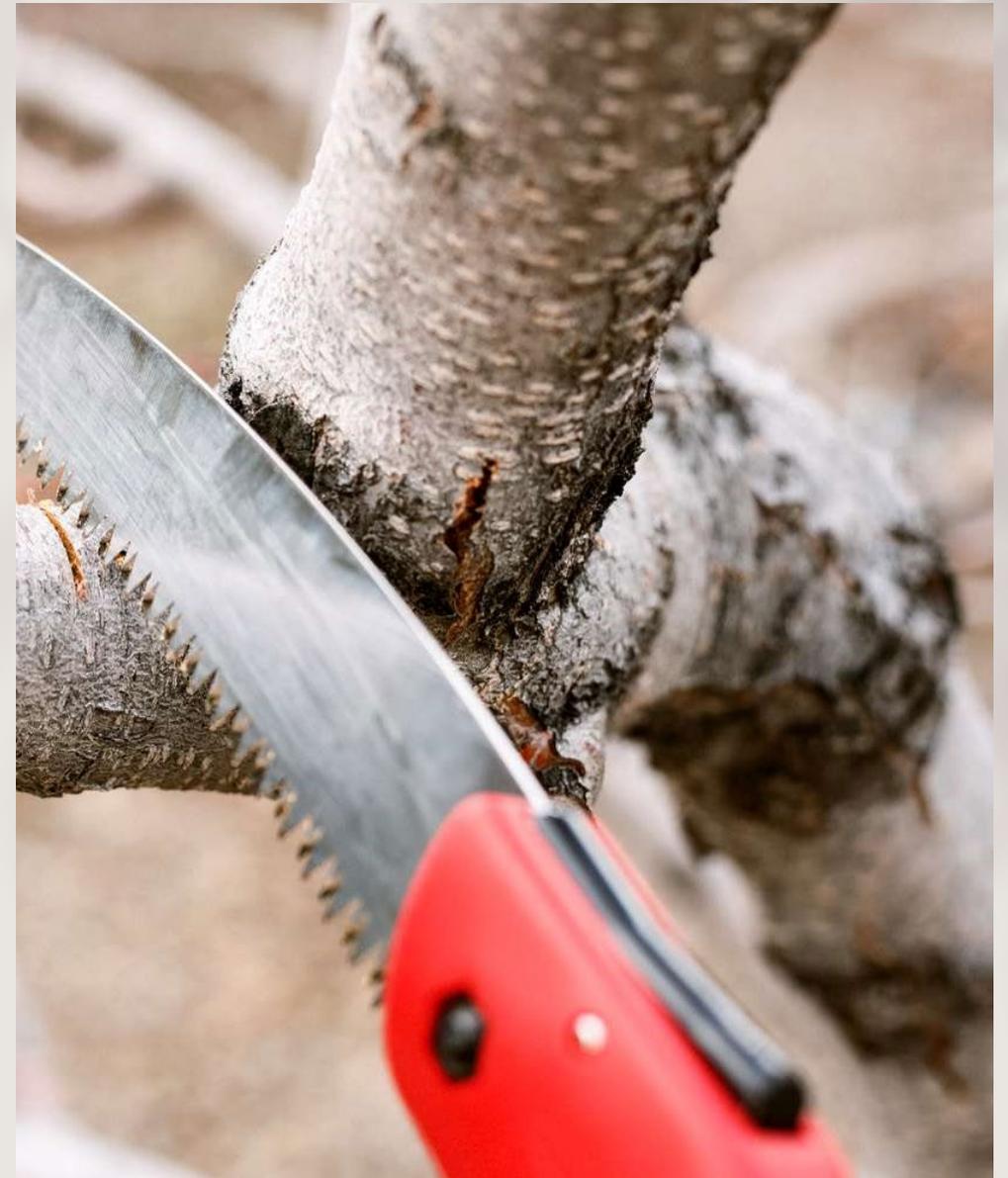
Using a saw on a branch



Work problem

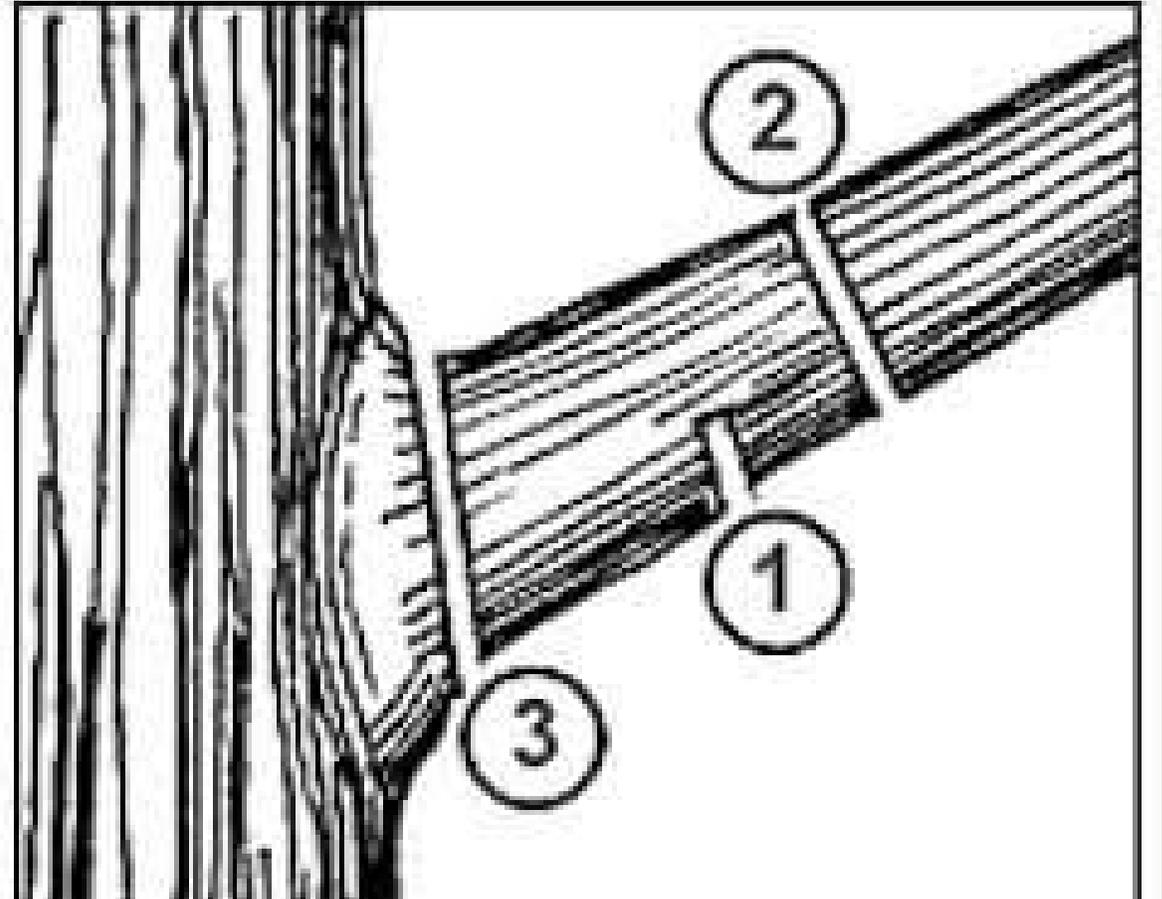


Using a pruning saw on a larger branch



Branch collar and cut line

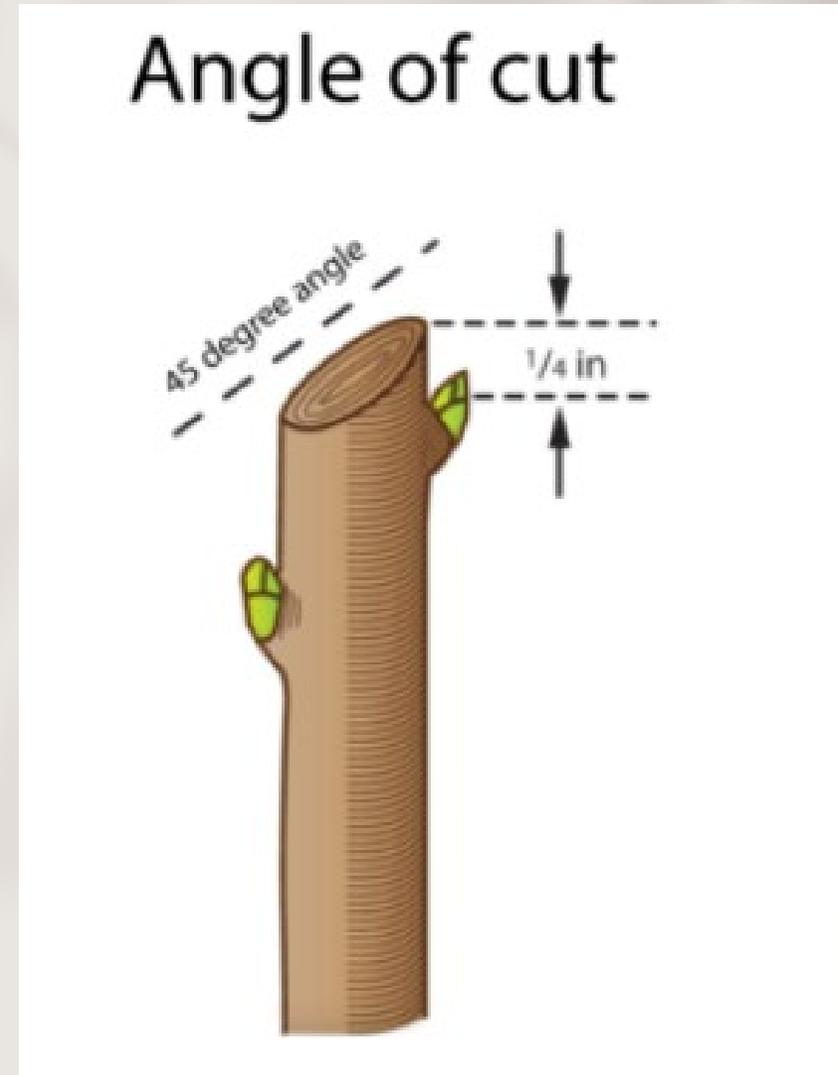
- Make a precise cut to remove the stub. Now you can make another cut almost right against the stem collar. This gives the tree the best chance of healing in a quick, healthy way.
- Be sure you don't cut off the branch collar. This must remain intact.



Pruner cuts

Cutting to an alternate bud

- Make a slanting cut at a point about $\frac{1}{4}$ inch above the bud.
- The gentle slope will allow moisture to roll off the cut surface, discouraging the development of disease.



Pruner cuts

Cutting to opposite buds

- Cut squarely across the shoot above a healthy pair of buds, as close as you can without grazing and damaging the buds.
- A pair of healthy shoots should develop.



Other routine tasks

- **Deadheading** - Not essential for shrubs, but for some shrubs it can improve their appearance, stop them from self-seeding, and by preventing them from expending energy on setting seed, stimulate further growth and flowering.
- **Reversion** - Variegated cultivars occasionally produce shoots bearing plain green foliage. Cut them out immediately or they will revert the plant.
- **Suckers** - New growth form ground level increases the plants size and spread..
- **Water sprouts or shoots**
- **Crowded and crossing branches**



Other techniques

Topiary

- The art or practice of clipping shrubs or trees into ornamental shapes.



Topiary at Longwood Gardens

Other techniques

Coppicing

- A traditional method of woodland management which exploits the capacity of many species of trees to put out new shoots from their stump or roots if cut down.



Other techniques

Pollarding

- A pruning system involving the removal of the upper branches of a tree, which promotes the growth of a dense head of foliage and branches.



Other techniques

Pleaching

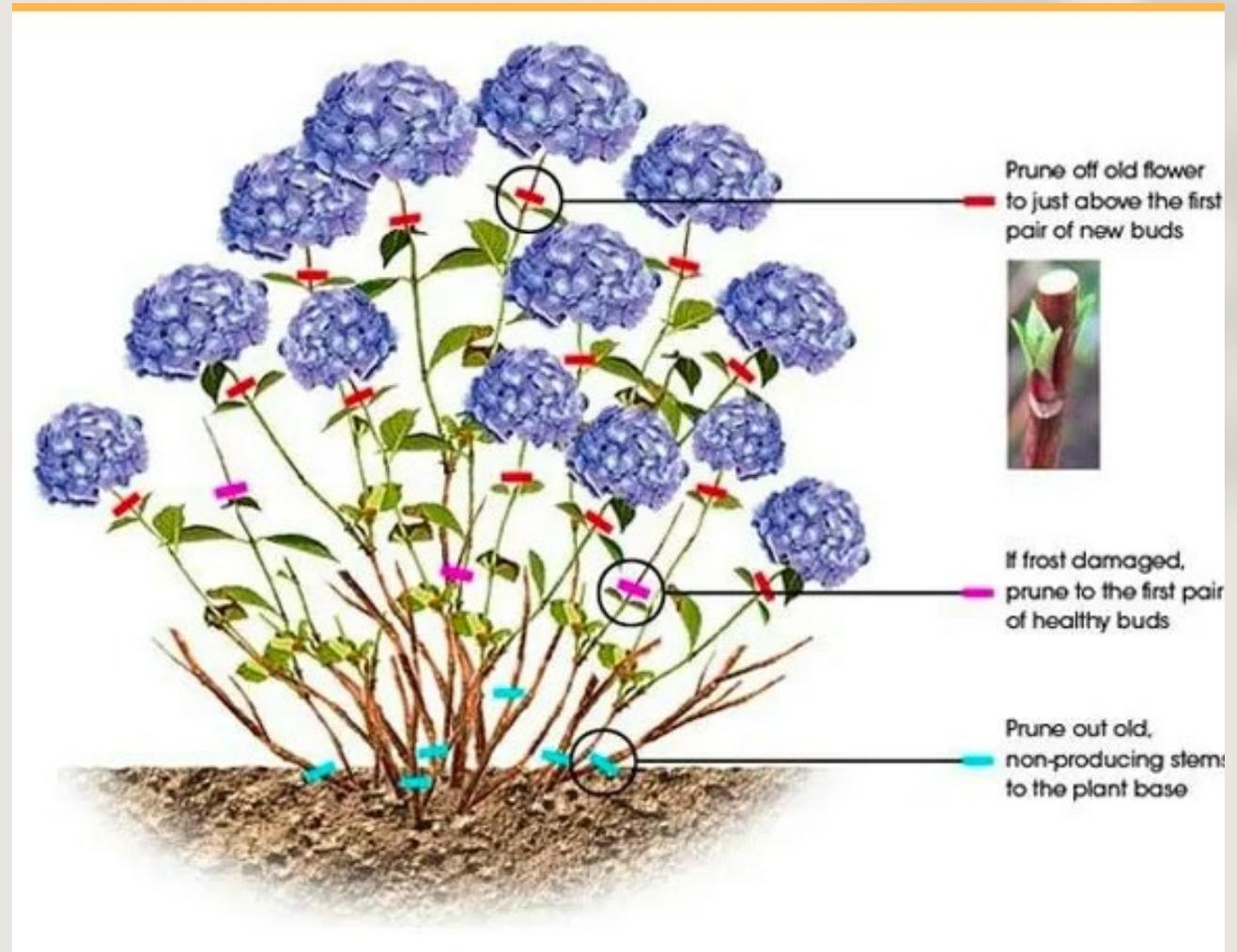
- The weaving together of the branches of a row of trees.
- Combined with formal trimming, this creates a hedge with an intricate branch structure on a freestanding row of clear trunks of foliage and branches.



Hydrangea pruning

Hydrangea macrophylla

- Flowers are usually born on the previous season's wood, often satisfactorily with little attention, but regular pruning nearly always enhances flowering.
- When to prune:
 - In warm climates prune after flowering.
 - In colder climates leave the old flower heads on over winter and prune in mid-spring.



Hydrangea pruning

Hydrangea paniculata

- Upright shrub with large panicles of flowers in late summer on the current season's growth
- When to prune:
 - Early spring, before plants start into active growth
 - Cut *Hydrangea arborescens* in the same way



Summary & key points

- Have a plan
- Know the form
- Cut as little as possible
- Leave branch collar
- Thin for air circulation & light

No:

- Flush cuts with stem tissue
- Crossing branches
- Crowding branches
- Inward growing branches

Cut:

- Scaffold branches at 90 degrees to 45-degree angle, 60-degree is optimal. Branches should be 50% less than stem.
- Bad branch angles (U-shape acceptable, V-shape not ideal)
- No more than 25% of tree at a time

Watch for:

- Co-dominate leaders/stems, in most cases have only one

Summary & key points (con't)

- A sharp tool is a safe tool
- Felcos will last a lifetime if cared for properly
- Use a sheath/holster for carrying your pruners
- Sterilize your tools with alcohol
- Be safe and know when to call a professional

Additional topics of interest

- Conifers
- Ornamental trees
- Fruit trees
- Topiary
- Standards
- Wall training
- Perennials
- Grasses
- Special stem and foliage effects
- Ornamental vines
- Fruiting vines
- Propagation



Thank you

References

- Virginia Cooperative Extension Pruning Handbook and Calendar:
<https://www.pubs.ext.vt.edu/430/430-462/430-462.html>
- Video: "Pruning Essentials: Choosing Your Tools"
<https://www.youtube.com/watch?v=-WDWxMu-Odg>
- Penn State Extension pruning articles:
<https://extension.psu.edu/pruning-landscape-trees>
- The University of Tennessee Extension:
<https://utextension.tennessee.edu/>