Basic Pruning

Dr. Pat Williams
Essential Question

Can you assess the importance of proper pruning techniques?
Good Design Can Reduce Maintenance

Pruning Consideration Questions
• Why are you pruning?
• How does your plant grow? (shape, form or habit, leaf arrangement)
• When does it bloom/fruit?
• Training new plants versus pruning existing plants?
Reasons for General Pruning

• Shape
• Invigorate new growth
  – Short/stocky vs. tall/leggy
  – Encourage lateral bud growth
• Increase light (fruit trees and planting beds)
• Correct storm damage
• Remove dead, dying or diseased tissue
Good Design Can Reduce Maintenance

- Right time of year for the degree of pruning?
- Proper tools for the job?
- Is the job something you are physically able to perform?
- Does it require work above your shoulder height?
Types of Pruning

• Pinching: soft-tip vs. hard (up to 3”)
• Heading back cuts
• Thinning back cuts (don’t injure collar)
• How close to cut: no flush cuts or stubs
• Triple cut for heavy branches
• Hand pruning versus shearing
• Dormant vs. growing season
Age of Specimen
Pruning Process: Shrubs

- Hair Cut Rule
- Pruning done well should not look like pruning
- Walk around specimen and watch what is under your feet
- 5 Initial sizing cuts
- 3 Ds: dead, dying and diseased
- Crossing or rubbing branches
- Watersprouts and suckers
Pruning Process: Shrubs

- Reassess shape
- Know point of origin before branch removal
- Branch collars: no stubs
- Cut on angles above nodes
- 2 cuts to make removal easier and be care of limb drop damage
Pruning Process: Shrubs

- Pruning cuts: thinning out: **removal** of entire shoot to trunk; heading back: removal of partial shoots to point of origin on branch
- Deciduous shrubs: multiple stems or canes. Rejuvenation: too harsh in most cases, 6" in late winter. Renewal: 1/3 to 1/4 of canes each year to the ground (early spring)
Pruning Process: Shrubs

- Remove clustered stem cuts (hedges)
- Evergreen Plants: Dead zone - 6-12" past new growth
Pruning Shrubs
Many shrubs can be low maintenance if placed in the correct location.

*Dwarf Burford holly*
You often inherit issues that take expertise and time to correct.

Removing the shrub is always an option.
Reducing Size?

- Cut the longest stems back deep into the shrub. Try to cut above some foliage which will form the new canopy.

- If there will be no foliage after pruning, cut the shoots at different lengths so new foliage develops in layers.
Maintaining Size

Cane producing shrubs: Remove 1/3 of the tallest canes to the ground each year.

Without pruning, the aggressive upright branches only have leaves at the top of the plant.
To reduce the size of a formal shrubs, cut below original heading cut.

Perform in late winter or early spring for fastest recovery.
Thinning

- To reinvigorate old shrubs or to reduce plant density.
- Thinning is best done is late winter or early spring.
- May be done each year as needed.
Renewal Pruning

1. Remove dead or severely diseased/damaged wood.

2. Choose the oldest stems and cut back to about 4 to 6 inches.

3. Some of the oldest stems may be cut back to their point of origin.

4. Cut back stems that extend far beyond the edge of the canopy.
Maintaining Size

- Rounded shrubs: Cut the longest branches 6 to 24 inches back inside the outer edge of the plant.
- Make no cuts on the edge of the new, smaller canopy.
- Make reduction cuts to lateral branches with plenty of foliage.
- If there is a hole in the plant, make a heading cut at the point where you want foliage to fill in.
Hedges - Informal

- Informal hedges are lower maintenance and recover quicker from damage.

- Reduction or heading cuts are made on longest shoots into the canopy about 6-18 inches.

- Make sure lower branches are receiving sunlight to maintain full appearance.
Hedges - Formal

- Formal hedges are maintained with regular heading cuts.
- Make cuts within an inch of last cuts to create a dense growth. The plant will be slightly larger after each hedging.
- Normally prune during active growth or after flowering.
Proper vs. Improper Bush Trim
Rejuvenation Pruning

• Use this severe type of pruning sparingly in winter/spring for rejuvenation.
• After some recovery, practice thinning and reduction to keep plant manageable and healthy.
Which one is stronger?
Pruning Process: Trees

- Training purpose: excurrent or decurrent tree?
- Tree proportions 2/3 canopy, 1/3 bare trunk, avoid overlifting
- Multiple point of origin branches (dueling leaders)
- Tree branch height
- Trashy trunk growth (good or bad)
Pruning Process: Trees

- Aspect ratio
- Avoid lion-tailing
- Crotch angles: U is stronger, V is weaker
- 3 cut method for large branches
- Branch collars
Pruning Shade Trees

- Pruning techniques designed to develop and maintain strong structure.
- Trees that are well structured are aesthetically pleasing, long-lived, and have crowns that are preserved as they mature.
- Structural pruning is important for young and mature shade trees.
Other Inappropriate Pruning Practices

Overlifting removes too many branches along the trunk, resulting in many wounds. Crown structure is not addressed.

Liontailing is when trees are over thinned leaving growth at the tips. Trees then form heavy numbers of sprouts as they try to recover.
Improper Pruning Practices or Tree Neglect

- Harms plant health
- Poor tree stability
- Poor appearance
- Early tree removal
Proper Pruning Cuts

Diagram showing the correct way to prune branches, including the branch bark ridge and branch collar.
Collar vs. Stub
1. Use the branch bark ridge as your guide (green line).

2. Then draw an imaginary line from the top of the ridge parallel to the trunk (red line).

3. Measure the distance between the two lines (a).

4. Apply the same distance from the center line outward on the branch (b).

5. Draw your imaginary line which will leave the collar intact (blue line).
Pruning Large Branches

Step 1
Make an undercut about 12 inches from the trunk.

Step 2
Make a top cut between the tree and the undercut.

Step 3
Remove the stub with final cut, being careful not to cut flush against the trunk. Leave the collar.
Collar is left intact.

One year later, wound wood grows evenly around the pruning cut.

Good cuts on young branches will be round.
Collar vs. Stub
Pruning Paints and Wound Dressings

Do not prevent wood rot, cracks, or mushrooms.

Some dressings may actually promote decay by trapping moisture.
Characteristics of strong shade tree structure:

- One dominant trunk
- Strong branch unions
- Balanced canopy
Types of Pruning Cuts

**Thinning or Removal Cut**
Prunes a branch back to the trunk or parent branch.
Non-Heading Back Cuts

- Cuts through woody tissue at random points on the trunk or branches.
- Not often appropriate for landscape trees.
- Results in decay and weak structure.
Topping typically delays flowering compared to unpruned crape myrtles. Some cultivars may have a shorter bloom season. Number of flowers decreases as pruning severity increases. Basal sprouting increases, which can result in higher maintenance.
Structural Pruning Strategies

1) Develop or retain a dominant leader
2) Space main branches along the dominant trunk
Structural Pruning Strategies

3) Prevent or suppress formation of included bark
Pruning Cuts for Included Bark
Structural Pruning Strategies

- Reduce growth rate of low aggressive branches when trees are younger.

- On mature trees, removal of these branches result in wounds that are not able to compartmentalize, leading to decayed areas.
Pruning Ornamental Grasses

- Prune in early spring, after last frost.
- Cut grasses about 12 inches above the ground.
Pruning Palms

- Remove completely dead fronds, fruit and flower stalks.
- Can remove living flower or fruit stalks if desired.
- Hurricane cuts are not appropriate pruning techniques
Pruning Palms

- If nutrient deficiencies exist, never remove any leaves that are not completely dead.
- If no deficiencies exist and palm has a full canopy (360 degree green fronds), remove no more healthy leaves than will be produced during the interval between prunings—and preferably less!
- Never remove any living leaves originating above the horizontal plane (9:00 to 3:00 positions).
Pruning Palms

• If leaves are partially damaged from the cold, they should stay on the palm until new leaves form.
International Society of Arboriculture (ISA)

- Certified arborists are trained and knowledgeable in all aspects of arboriculture.
- Practical experience or appropriate degree
- Must pass exam and abide by a code of ethics.
- ISA maintains a list of certified arborists. 
  http://www.isa-arbor.com/
Pruning Tools

• Pruners: bypass vs. anvil (½ inch)
• Loppers: handle length (½ to 1 ½ inch)
• Shears
• Saws (landscaping versus carpentry)
• Pole saws
• Chain saws (only use on stable branches)
Free Pair of Pruners
Loppers

- Handle length will dictate leverage and diameter to be cut.
- Be careful of telescopic handles.
Pruning Shears

• Used for small leafed plants only.
• Hedges
• Telescopic handles are useful
Pruning Saws

• Curved fixed blades
• Folding
• Larger teeth
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<th>Hand Sharpeners</th>
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<td><strong>Swiss Sharpener by AM Leonard</strong></td>
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<td>For shears, knives, scissors and more! This ultimate sharpener has a concave composite steel blade. Two precision sharpening ... Manual</td>
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<td>The SWISS Istor All-Purpose Sharpener features a concave composite steel blade with two precision sharpening edges bonded to ...</td>
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Hand Sharpeners

**Corona Sharpening Tool, Garden Tool Blade Sharpener, AC 8300**

$8.38 from 25+ stores

★★★★★ 52 product reviews

A 5 inch super-carbide file. Ideal for sharpening all blades. Easy to fit in pocket.

Other size options: 1.6 oz ($6)

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**Biteharder Standard Series Carbide Runner Sharpening Tool - CRST150-60**

$58.46 from 10+ stores

★★★★★ 1 product review

Easily re-sharpen carbide runners providing the perfect edge every time you ride. Use with a portable drill so you can re ...
Pruning Tools

- Bypass Hand Pruners
- Folding Pruning Saw
- Pole Saw
- Hedge Trimmers
- Loppers
- Chainsaw
Finding a Certified Arborist

• Large trees: consult with a *Certified Arborist*: [www.isa-arbor.com](http://www.isa-arbor.com) and select **Find an Arborist** (International Society of Arboriculture)

• Arborist vs. tree cutting service
Finding a Certified Arborist

ISA promotes the hiring of companies who have ISA certified professionals on staff. ISA Certified Arborists are held to a Code of Ethics and are encouraged to follow industry standards. Certification demonstrates the individual has the knowledge to perform tree work correctly, but does not guarantee the quality of the work performed by that individual. If you feel someone has not provided proper tree care, you may report a code of ethics violation.
Hurricane Pruning

• Assess if plant can be saved and be patient
• Leaning trees: how far?
• What does the canopy look like? healthy/green or wilted/browning/dying
• Exposed root ball or soil heave?
• Chainsaw blight was rampant after Irma
• Three cut limb removal
• NO ladders or pole pruners
Which will recover?