

Pruning 101

Angela Belden
Missouri Department of
Conservation



General Tree Biology

- Trees grow from branch tips, not base.



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- Branch unions can form callus tissue.

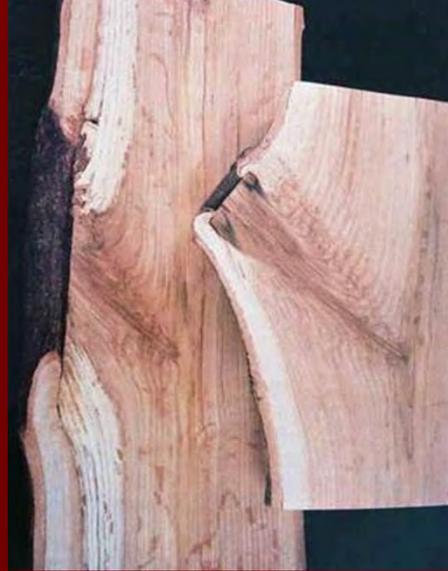


General Tree Biology

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- Branch unions can form callus tissue.
- Wounds cover, they don't heal.

General Tree Biology

A tree can only "seal" a wound through a process called compartmentalization.



General Tree Biology

- Trees grow from branch tips, not base.
- Branch unions can form callus tissue.
- Wounds cover, not heal.
- **Right tree in the right place may need little to no pruning once established.**



Pruning New Trees

- Do not remove more than 20% of branches at this time.
- Remove broken, crossing or rubbing branches.

Pruning Young Trees

One or two years after planting, start selecting scaffold branches that have good vertical and horizontal spacing.



Pruning Young Trees

- Wide angles
- vertical spacing
- Radial branch distribution

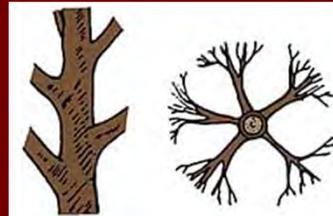


Figure 7. Scaffold branches of trees should have proper vertical and radial spacing on the trunk

Pruning Young Trees

Remove branches when young so wounds are small and growth goes into future limbs.

Remove:

- Dead, dying limbs
- Sprouts near base
- Crossed branches, branches going through center
- Low branches
- Multiple leaders
- Narrow unions with included bark

Inside View of Included Bark

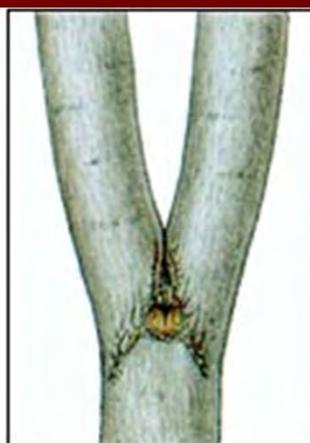
- ✗ Included bark is shown by the pencil.
- ✗ Branches with included bark should be removed while the tree is young.



Narrow unions



A. U-shaped strong union



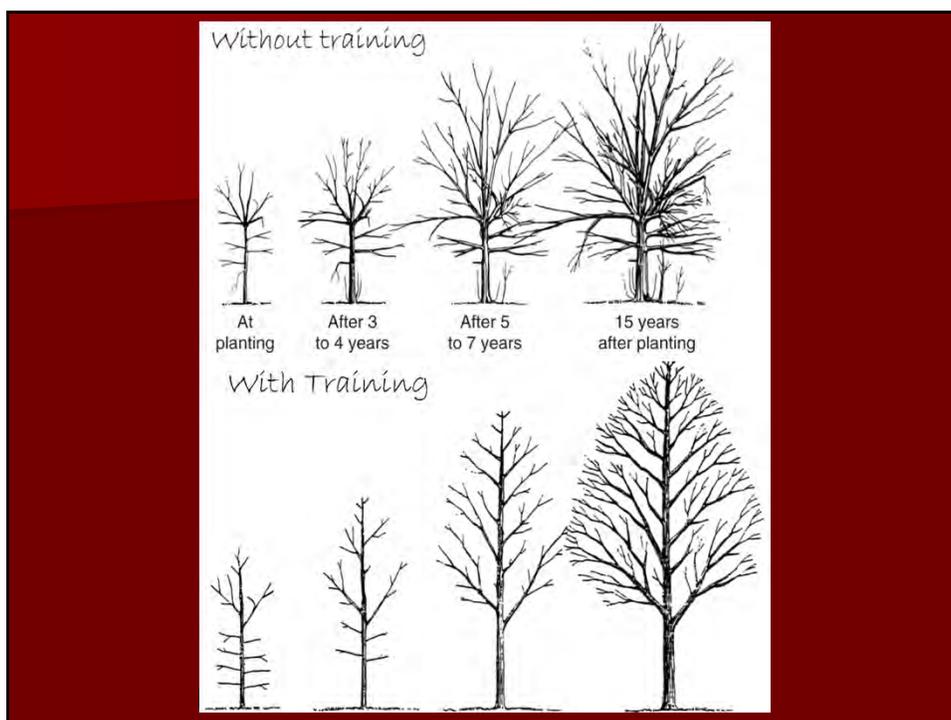
B. V-shaped weak union

Included bark between the branch/trunk union. Note the seam or "crack" between the two.



Cut open view showing lack of connective tissue at the top of the branch union.





Pruning Tools

Pruning tools are either pruner or saw based



Pruners



Bypass pruners



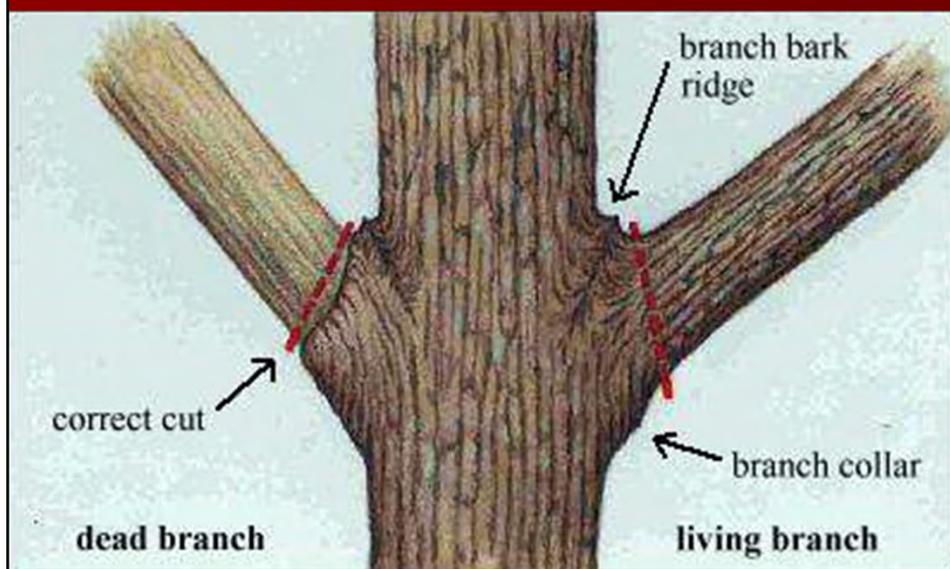
Anvil pruners

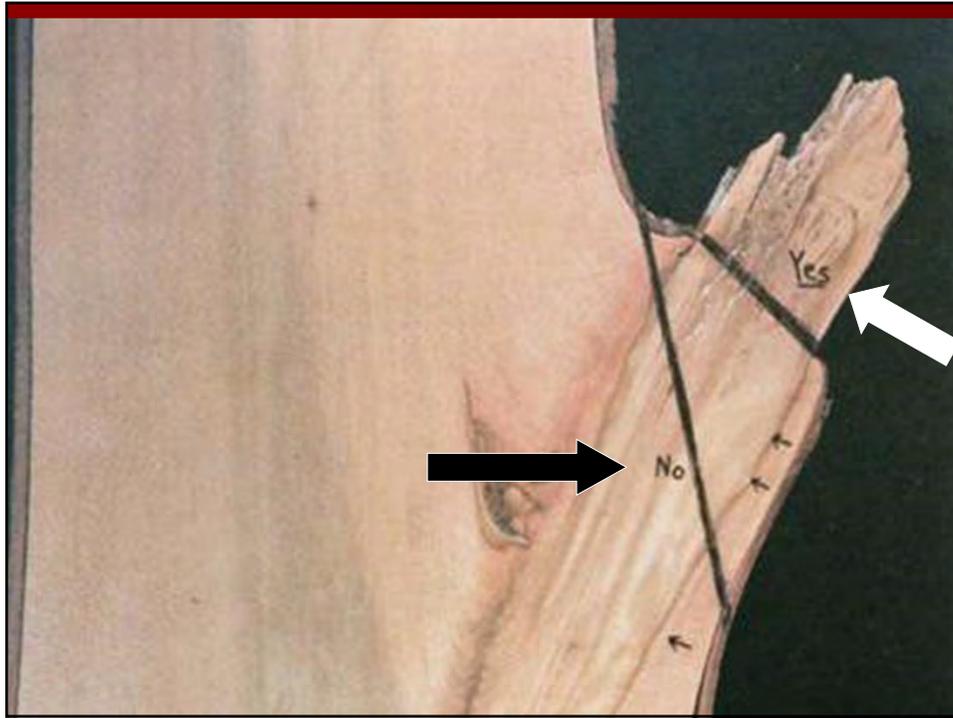
When to Prune

- Generally in dormant season
- Birch and Maple may “bleed” but not harmful. Avoid by pruning in early winter or late spring.
- Spring flowering trees, prune right after flower.



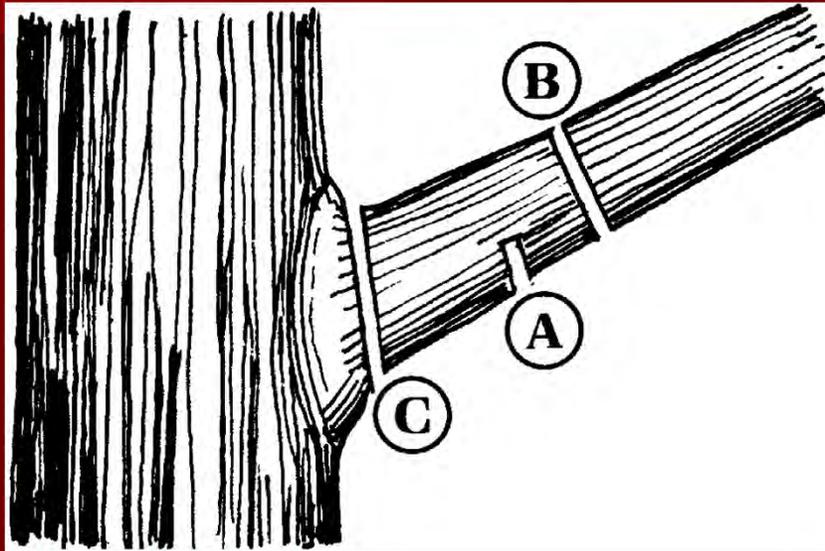
Where to make the cut



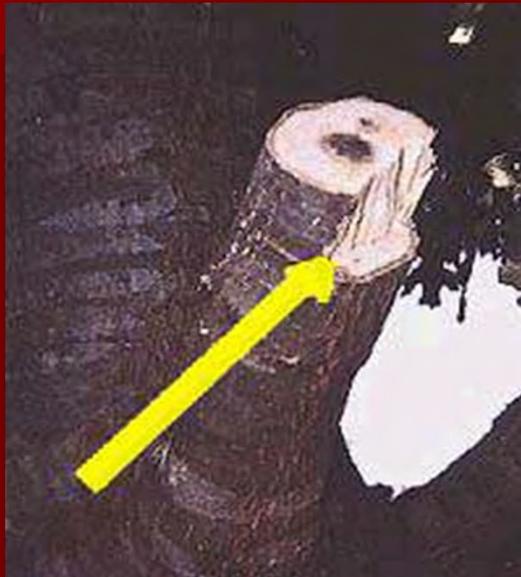


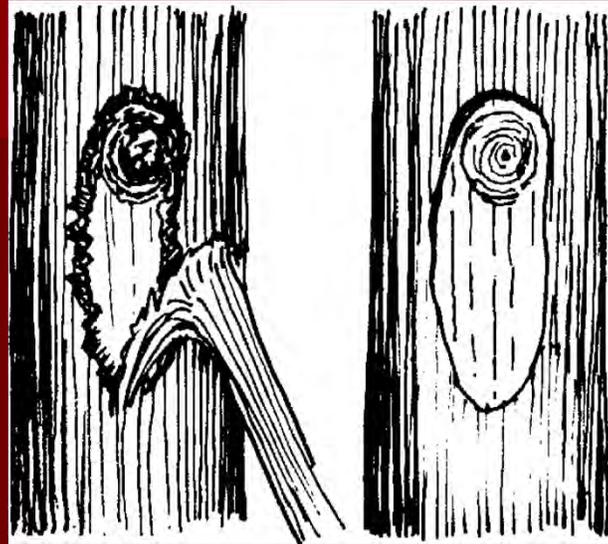
Large limb removal

The 3 cut method



The undercut did its job!





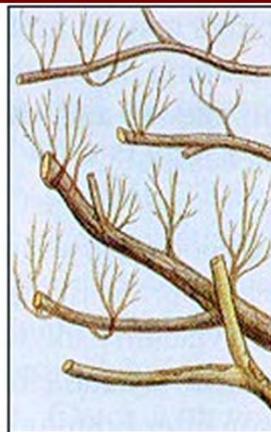
Not under cut used. Leaves large pruning wound.

Rule of Thirds

- When pruning a branch, try to bring it back to a limb at least $\frac{1}{3}$ the diameter of the limb being removed.

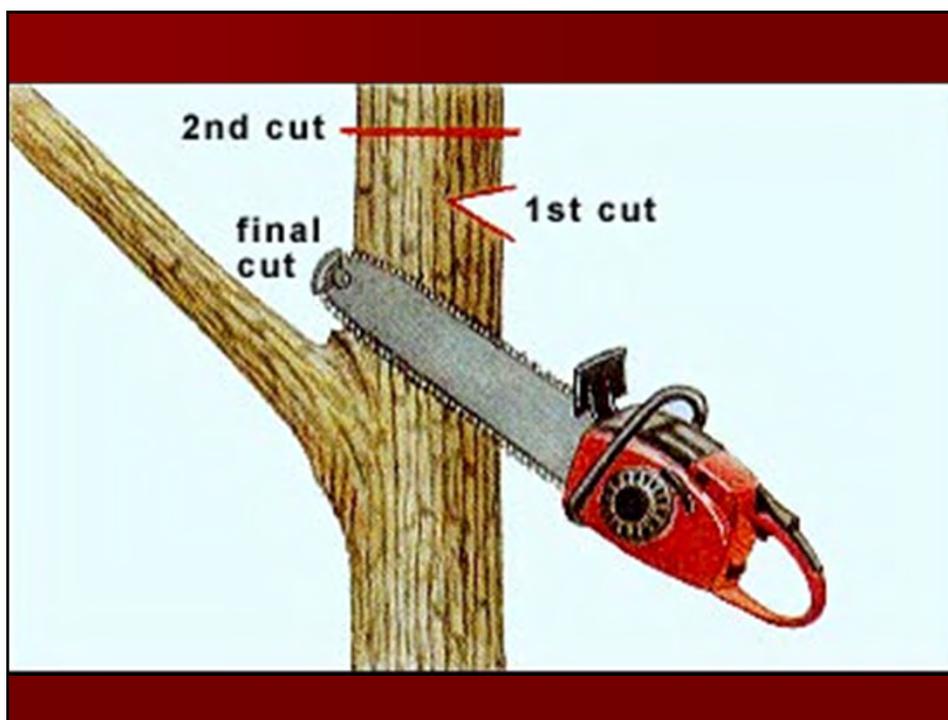
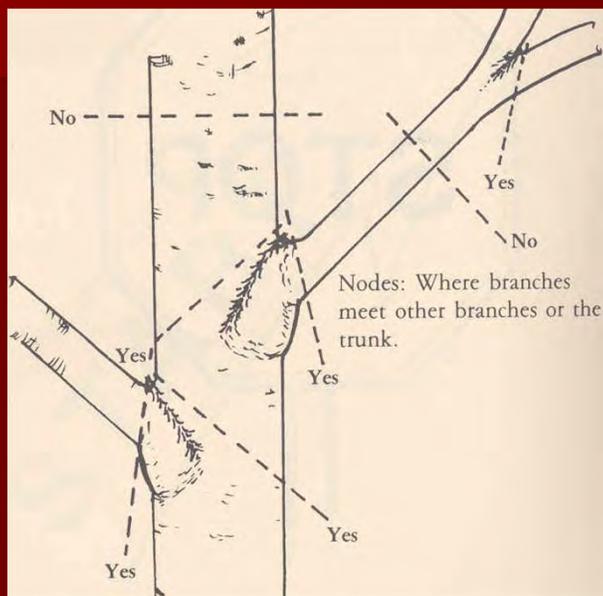


A. Topping



B. Tipping

Cut at Nodes



Top 10 Worst Pruning Practices

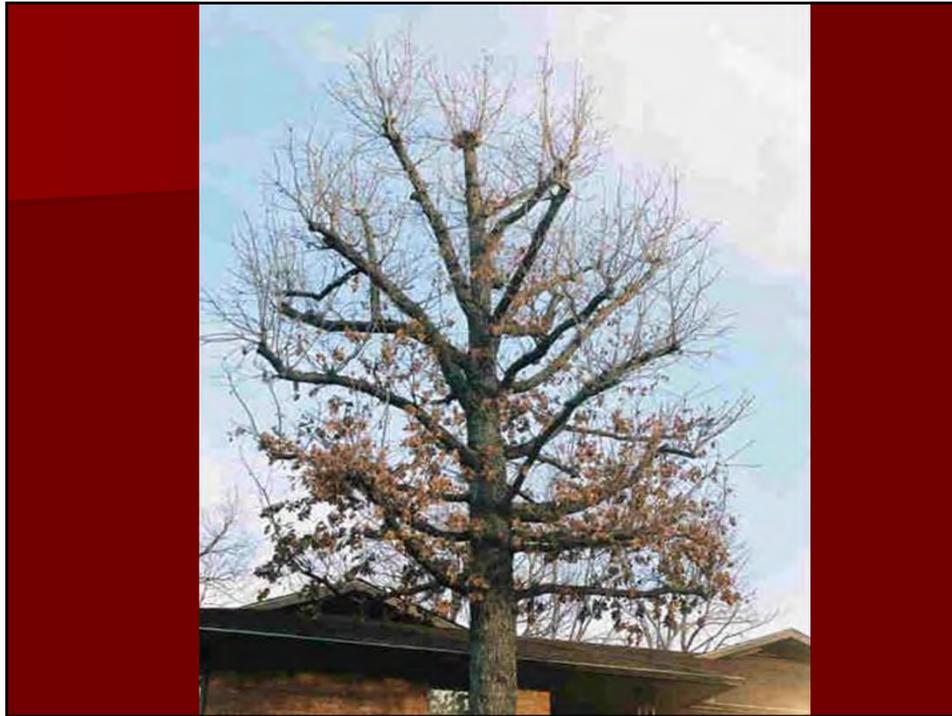
10. Neglecting a young tree
9. Dressing wounds
8. Filling cavities
7. Flush cutting
6. Leaving stubs
5. Ignoring included bark
4. Using the wrong tools for the job
3. Over pruning
2. Not being safe



#1 Worst Pruning Practice



Topping!!!

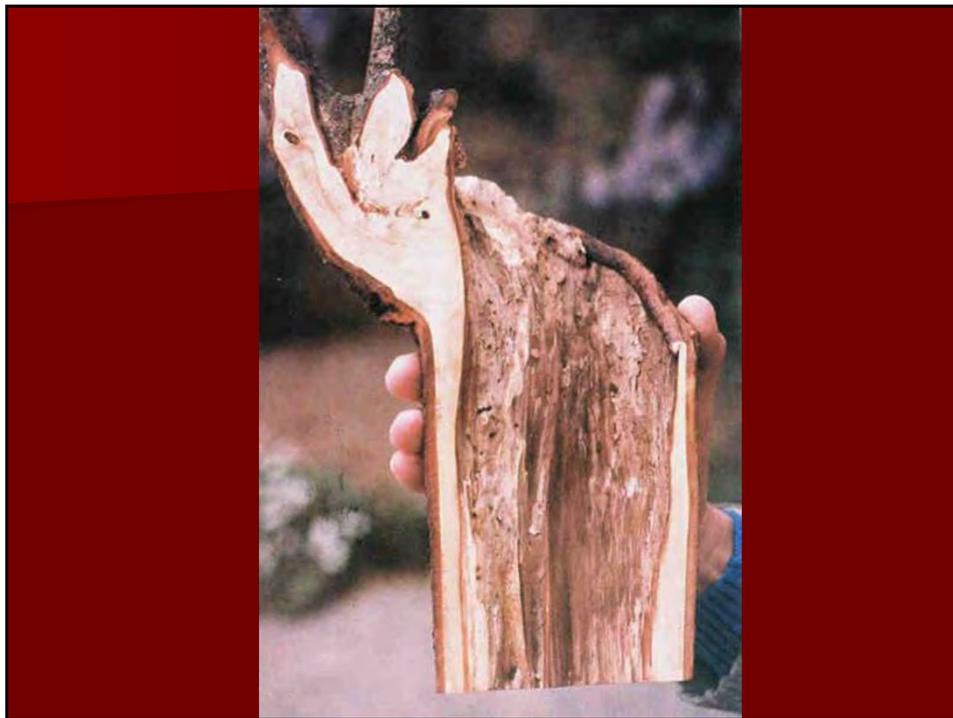
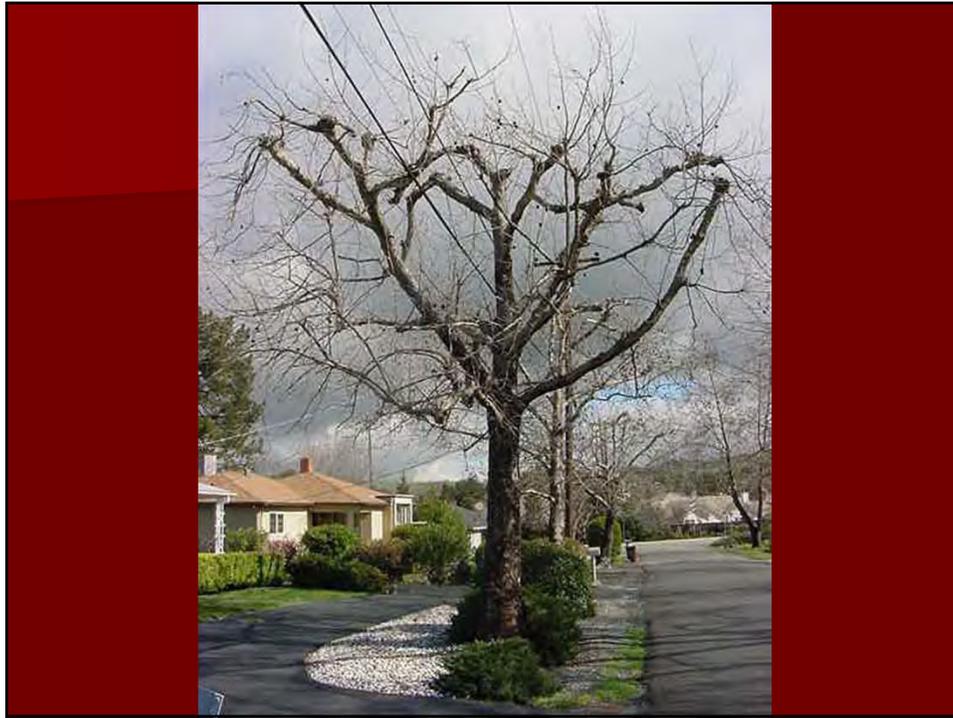


Why not top trees?

- Injures tree leading to decay
- Resulting shoots are weakly attached and easily break
- Wastes money
- Creates hazard

EXPERTS AGREE
DON'T
TOP YOUR
TREE





Test Time

