

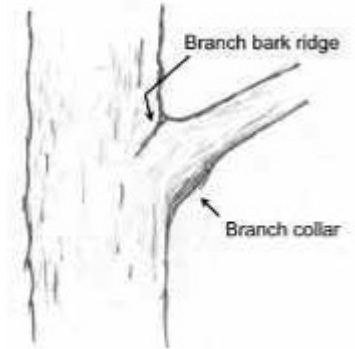
# Sunshine Nursery & Arboretum

## *Tree Pruning Guide*

Proper pruning is important in maintaining the health of your tree. Trees have amazing natural defenses that enable them to heal---if they are pruned correctly. Cutting the tree improperly creates large wounds that leave the tree open to disease and decay. This is a quick introduction to proper pruning. It will show you how to make the right cut and gives some basic guidelines for making the decision to prune.

### Branch Anatomy

Tree branches grow outward from the main trunk of the tree (as opposed to a fork in the stem). When a tree branches, it forms a **branch collar** and a **branch bark ridge**. These two features are very important when it comes time to prune.



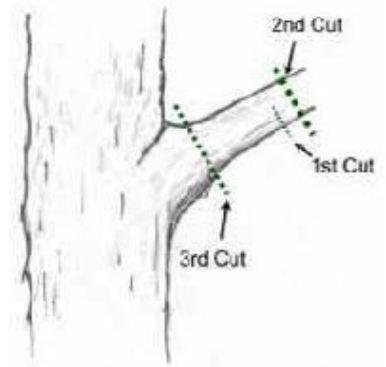
The **branch collar** is a distinctive bulge at the base of the branch, where it connects to the trunk. It is actually interlocking layers of cells of the branch and the trunk, and is the part that will heal the wound left by pruning. The branch collar seals off the wound, minimizing disease and decay. Proper pruning leaves the branch collar intact. Branch collars vary widely from tree to tree, and from species to species. Some are large and very noticeable, while some are much harder to distinguish.

The **branch bark ridge** is slightly raised bark between the branch and the trunk that extends in a line to each side of the trunk. When the branch collar is difficult to identify, the branch bark ridge can help us decide where to make our pruning cut. When you are pruning, never cut behind the branch bark ridge.

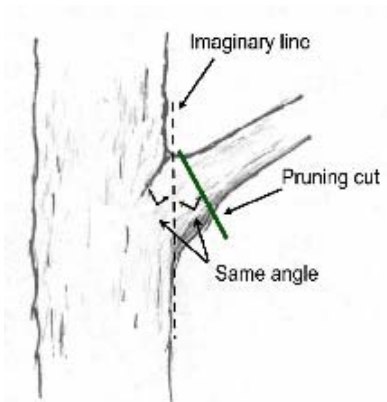
Before you begin pruning, look around at several trees to learn to identify these two important parts of the branch.

### How to Make the Proper Cut

The branch collar should always be left intact. Your pruning cut should begin at the top of the branch collar and end at the bottom. If the branch is large enough to require a pruning saw, it is important to first shorten the branch to about a 6-8" stub, before making the pruning cut to prevent the weight of the branch from tearing through the branch collar.



Make your first cut about 6 inches out from the trunk on the underside of the branch, about a third of the way through. Next, cut through the branch just outside your first cut, leaving about a six inch stub on the tree. Now, you can safely make your pruning cut, leaving the branch collar on the trunk.



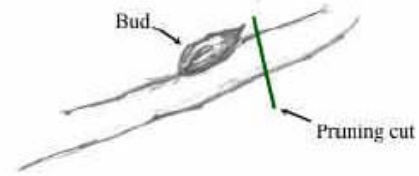
If the branch collar on your tree is flat and close to the trunk, so that it is hard to distinguish, use this method for determining where to make your pruning cut.

Draw an imaginary line from the top of the branch collar to the place where the branch attaches to the trunk. Then, observe the angle that the branch bark ridge makes with the imaginary line. Mirror the angle across the imaginary line, and make your pruning cut at this angle. This will keep the branch collar intact.

## Pruning: When and Where and Why

The best time to prune your tree is in late winter before the buds begin to swell. Pruning can also be done in the summer well after the tree has leafed out. Avoid pruning just after the tree has leafed out because it has just used up a lot of energy and won't be able to tackle the job of healing as well. Dying or dead branches in the tree can and should be removed at any time.

Pruning is best done while the tree is still young. Proper pruning will help the tree to develop a good structure and eliminate potential problems later on. When you first plant your tree, remove any broken branches, pruning back to a bud on the branch or to the branch collar.



Within the first couple of years after planting, if your tree appears to have two competing central branches, it is best to remove one, letting the other become the main central leader. Two main tops will prevent the tree from developing a good structure. This is actually a fork and not a branch, so there will be no branch collar. There will, however, be a branch bark ridge, so use the bark ridge as your guide for making your cut. The cut should start beside the top of the bark ridge and end directly across from the bottom of the ridge. It is best to make this type of cut as early as possible in the tree's life, so that the wound is small and healing is easier.

After three or four years, the lower branches can be removed to raise the canopy of the tree. Also, look at the overall structure of the tree and remove any potential problems such as branches growing in undesirable directions, or branches that are rubbing against one another. Branches that are growing with a narrow angle to the trunk should also be considered. Too narrow of an angle can make the attachment weak. As the branch gets heavier, its weight can cause it to pull away from the trunk.

### Use the 1/3 Rules:

- Never remove more than 1/3 of a tree's crown.
- Encourage side branches that form angles that are 1/3 off the vertical, the 10:00 and 2:00 positions
- For most deciduous trees, don't prune up from the bottom any more than 1/3 of the tree's total height.

### Pitfalls to Avoid

Do not prune your tree by cutting off a branch flush with the trunk. Although once commonly advised, this type of cut removes the branch collar leaving a larger, oval wound. Remember, the branch collar is the tree's number one defense and so should always be left intact.

After pruning, it is not necessary to use a wound dressing. Wound dressings have not been shown to improve the recovery of the tree, and in some cases do actual damage to the tree.

Never try to control the size of a tree by "topping"---cutting large branches out of the top of the tree. This practice destroys the health and beauty of the tree. Pruning a tree in the first few years after planting is easier, safer, and better for the tree. Also, plant trees responsibly, choose the right size tree and type of tree for the location.

If you choose to hire someone to prune your trees, choose carefully. Make sure they are reputable and that they know the proper way to prune your tree. Check references and make sure to clearly specify your wishes.

### References:

*Tree Pruning: A Worldwide Photo Guide*. Shigo, Alex L. c. 1989. Shigo and Trees Assoc. Durham.