

S.C. Gardener
BY S. CORY TANNER
Pruning for structure

Trees, much like people, must be developed while they are young. To borrow from Proverbs: Train up a tree in the way it should grow, and when it is old, it will not depart from it. In other words, a little pruning early in a tree's life will lead to a strong, stable tree in maturity. Correcting a structural defect in a mature tree, however, is akin to a 50-year-old quitting a smoking habit picked up at age 18. It's going to be difficult and expensive.

February is an excellent month for pruning trees, and by making smart pruning choices now, you will prevent future headaches and help your trees grow strong and tall.

The most common structural defect in trees is the presence of co-dominant leaders, otherwise known as forks in the main stem or trunk. This problem generally arises early in a tree's life, before one stem takes on the role of the dominant central leader. When two or more co-dominant stems arise, a weak attachment is formed in the branch fork. As the stems continue to grow larger and taller, the attachment becomes proportionally weaker, until one of the stems breaks out of the tree, usually during a storm. You might notice this defect before the branches actually break, as the fork begins to separate. Some trees are more prone to developing forks than others. Maples in particular are troublesome, but oaks, elms, ash and some conifers may also have this problem.

A proactive gardener can prevent such defects by correcting them early. When looking at a young tree, evaluate the main stem that will form the trunk. We call this the central leader. It should be obviously dominant, with no other branches "racing" it to be the tallest. If there are other branches growing at a strongly vertical angle—anything less than 45 degrees to the central leader—they should be removed. Similarly, stems that are equal to or greater in length than the central leader should be shortened. Ideally you want to do this when the competing leaders are still very small – about the size of a pencil. At that size, removal is easy with a pair of hand pruners and the pruning wound will be minimal. As the leaders grow larger, correcting the problem becomes more difficult. Stems larger than three-quarters of an inch in diameter will require a saw and special care to avoid creating a large wound.

Whether removing a co-dominant leader or pruning away low-hanging branches, there are a few simple principles to follow.

- **Don't leave stubs.** It is easy to cut a limb indiscriminately, but it should always be removed back to a bud, another branch or the main trunk. Stubbed branches will tend to decay or produce undesirable regrowth.
- **Preserve the branch collar.** Most branches have a swelling at their base called the collar. It is the transition area where two stems meet and contains tissues that grow new wood and bark over the wound, effectively sealing the cut. Remove the limb just outside of the branch collar so that the wound heals properly.

- **Use the right technique.** On larger branches, use the 3-cut pruning method (see sidebar) to avoid splitting of the branch and bark ripping as the weighted branch falls.

In addition to the strategies above, take time this month to remove any dead or damaged limbs. Also, remove low branches that interfere with ground activities, like walking or lawn mowing, but don't remove more than is necessary. Branches help feed and build a strong trunk, and by properly training your adolescent trees, you'll help them grow strong and tall.

(sidebar)

(tag) Step-by-step

(headline) Perfect three-cut pruning

Step 1: Make the first cut 8 to 12 inches out from the trunk, sawing up from the underside of the branch about halfway through the stem.

Step 2: Move out 1 to 2 inches from the first cut and make a second cut down from the top. When you saw about three-quarters of the way through, the weighted branch will break out, back to the first cut.

Step 3: Make the third cut at the branch collar. This will leave a nice, circular wound that should heal cleanly without the need for commercial wound-healing products.

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