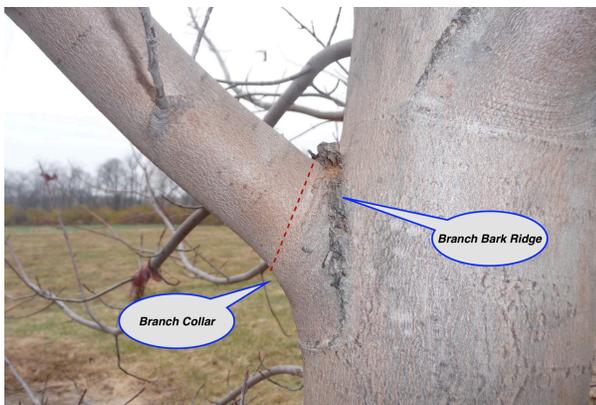


THE PURDUE LANDSCAPE REPORT

Branch component identification for better pruning cuts

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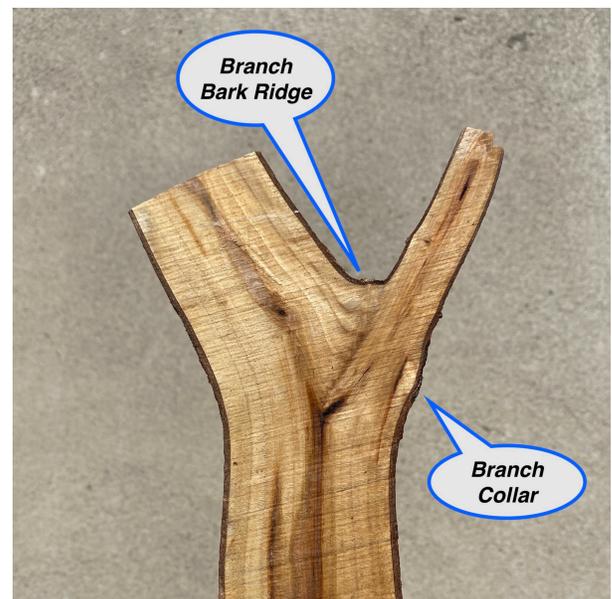
Identify the branch collar and branch bark ridge to perform a good cut, which is just outside the line.

Pruning is an important maintenance practice on trees that is discussed a great deal. An essential part of making the pruning cut properly is the ability to identify the parts of a branch. Identification of the branch bark ridge and branch collar are vital to severing the branch in a place that facilitates fast and effective wound closure, reducing decay in the location of the cut.

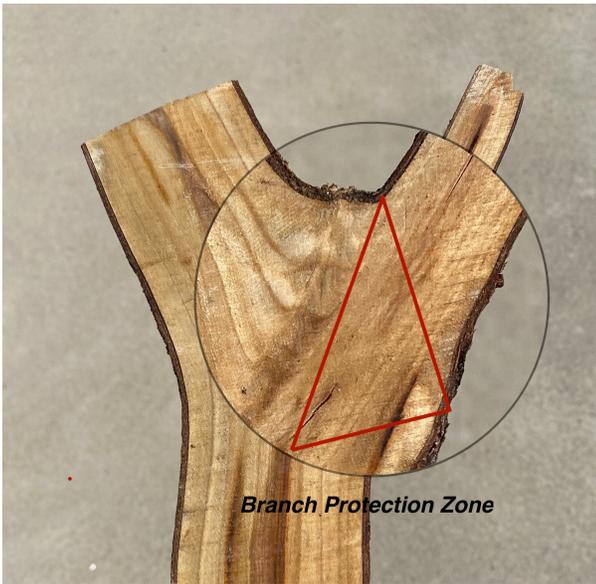
Branches on trees arise from lateral buds present in leaf axils. Initially, lateral shoots (branches) grow in length and diameter at approximately the same rate as the parent stem. As branches become shaded naturally by crown expansion, photosynthesis is reduced in that location and growth slows to a lesser rate than the parent or main stem. A swollen area or collar develops at the junction of branch and stem because of their differential growth rates and by the intermingling of vascular tissues from both the branch and the stem or trunk. This swollen area is commonly referred to as a branch collar and often present in many branches on the underside of the branch. This specialized location on the branch is composed of trunk (parent stem) wood. The branch collar contains a protective chemical zone that inhibits the movement of decay organisms from dead or dying branches into healthy tissues of the parent stem. As branches begin to die from shading, pests or storm damage, for examples, they usually are walled off (compartmentalized) by tissues in the branch collar

which prevents movement of decay organisms into the parent stem.

Another important branch component to identify in tree branches is the branch bark ridge. This part of the attachment is composed of rough, usually darkened, raised bark formed at the union where the branch meets the parent stem. The ridge extends from the top of the branch down both sides of the branch union. Together with the branch collar, the portion of the ridge pushed up in the union provides our target for the pruning cut. The BBR is present on every branch union and is an important identifying feature for determining tool placement.



An internal view of the branch collar and branch bark ridge revealing the intermingled stem and branch wood fiber.



The Branch Protection Zone is an area that contains specialized chemicals to assist with the healing process after pruning.

The combination of the branch collar, branch bark ridge, and the overlap between the branch and stem are the branch components that form what is called the branch protection zone. This zone contains specialized chemical compounds that help resist the spread of disease in the tree and facilitate wound-sealing. Always avoid damaging the area within the branch collar and branch bark ridge to help the tree recover from the pruning cut as quickly as possible.

For the best advice on tree maintenance and care, seek out a tree care professional with the experience and expertise to care for your trees. [Search for a tree care provider in your area.](#) Also, consider hiring an [ISA Certified Arborist which can be found here.](#)

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