



This young sapling presents an opportunity to correct some structural concerns with much more ease than in the future when it would be larger & taller.

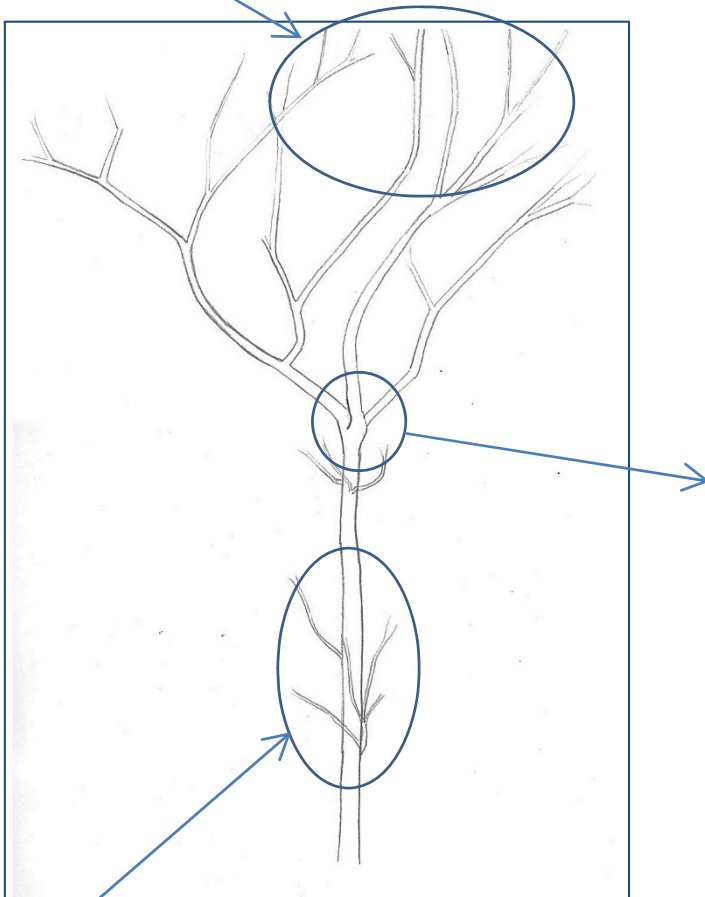
To begin, Bruce points-out that the tree has favored using its energy toward vertical growth rather than lateral growth. Lateral growth is more conducive to producing fruit when a tree has plenty of space like this one. His recommendation is to shift this balance, and also reduce the dense concentration of growth near the center of the crown.

The next step is to determine how to best accomplish these goals with as little stress on the tree as possible. After close examination Bruce found a bad union between two of the more dominant stems. One or the other needed to be removed to avoid structural failure in the future.

By removing the co-dominant stem on the right multiple things are accomplished:

- Chances of structural problems & breakage at the union are reduced
- Dense area of crown is opened to more light & air
- Lateral growth is encouraged, vertical growth reduced

Dense growth in the central part of crown. The tree has favored growth in the vertical direction. More Lateral growth is preferable for fruit production.



Epicormic sprouts on bole will be left to protect the bark from buck rubs. They'll be removed in the future.



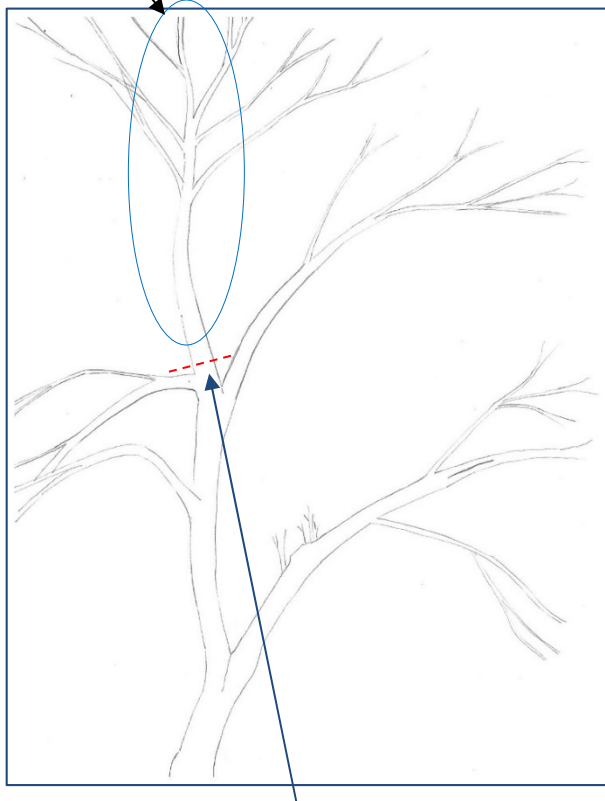
Included bark was forming at the union of two dominant stems. The larger stem left behind will now grow freely and develop a strong union. Two lesser branches are left to grow freely. They do not impose upon the remaining dominant stem.



This tree is much older and larger than the one portrayed in the first example (Fall Newsletter). Larger trees generally require more work to correct problems and redistribute the shape of the crown as desired. Multiple rejuvenation pruning treatments are needed for this tree, and it will take several years to complete. Ideally, pruning to correct problems should be started when the tree is younger and smaller.

Bruce started his instruction by pointing-out the tree had directed more growth in the vertical direction than is desirable. His recommendation was to remove the tall vertical leader. This would return emphasis to horizontal structure and open light to the central portion of crown.

Tall vertical leader. This portion of stem doubles the height of the tree.



The final removal cut was made just above the union with a lateral branch.

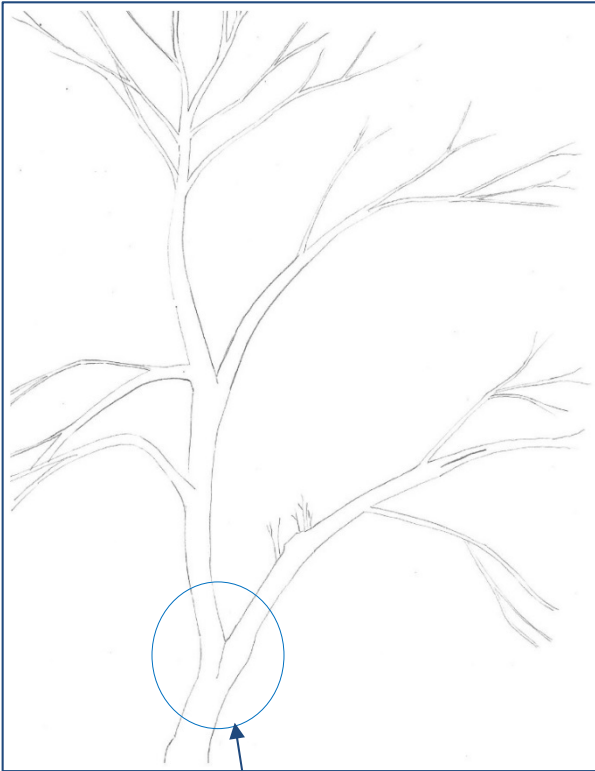
For information regarding the proper placement and process of pruning cuts see the following guide: How to Prune a Tree PDF is available on the Forest Service website <http://na.fs.fed.us/>



A single removal cut has completely changed the crown structure. It almost looks like a different tree. Sunlight will now more easily reach the central portion of the crown. A flush of new growth in this area is a likely response. The crown will fill-out and the 'flat-top' look will begin to fade next growing season.

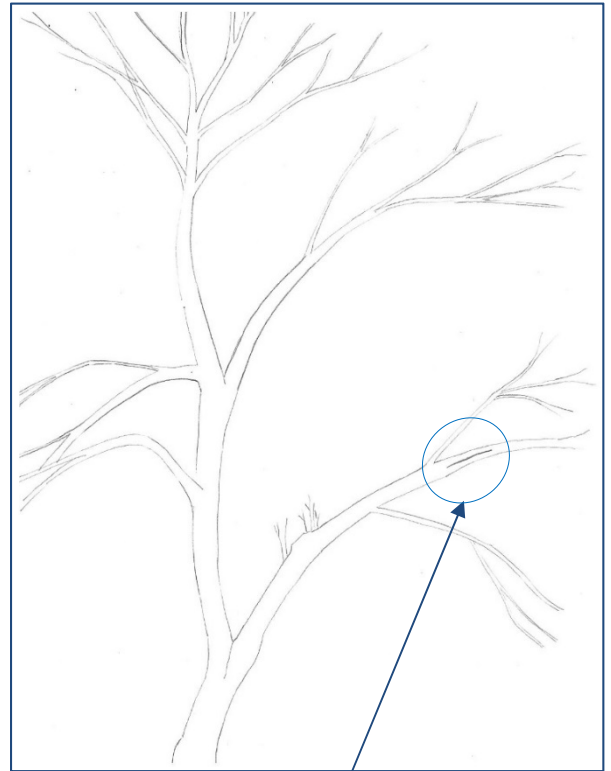
There is more work to do on this tree (See Next Page) but this initial cut removed a large portion of the crown. It is not advised to remove more than 30% of the crown during a single pruning (less is preferable).





This narrow union has a vertical seam indicating structural vulnerability.

A heavy load on either side of crown may cause the seam to split and one side or the other to tear-off



Bruce points to a stress crack that runs parallel the length of branch. This is a structural concern and potential entry point for wood decay fungi

Bruce suggests that future pruning work might focus on reducing the right side of the crown. Removing the entire right-side leader isn't necessary. Complete removal would reduce the tree's ability to produce and store energy. The loss of so much crown would likely cause a great deal of stress on the tree. However, leaving the entire right-side of the crown keeps the weak union (at the fork) vulnerable to the potential of heavy loading forces from wind, snow, and ice. Pruning to reduce weight and crown surface area will minimize potential for structural failure. Structural failure at large unions usually leads to the formation of large cavities and the eventual breakage and loss of everything above the cavity. Work on the right-side of the crown must wait for a season or two so the tree can recover and adjust to the pruning work just completed on the left-side of the crown. Bruce also points-out that the tree's response to this season's pruning will help guide subsequent treatments.



Before Treatment

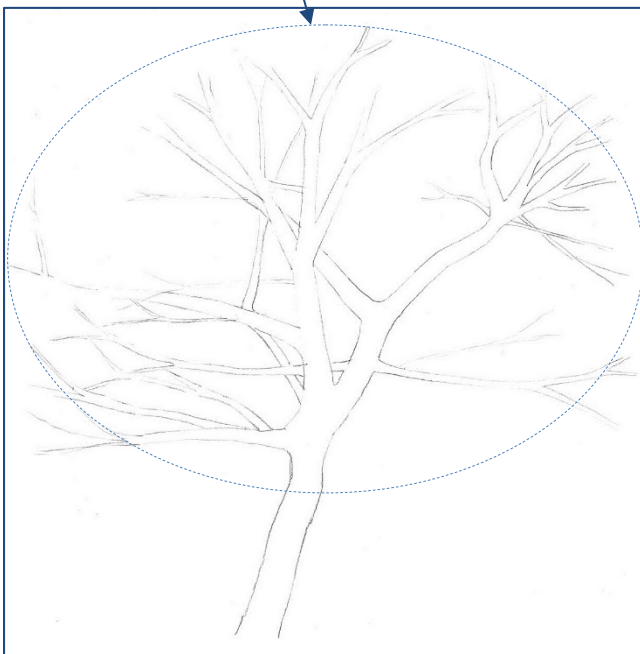
Bruce spent the first half of the workshop instructing participants how to examine wild apple trees in terms of pruning needs. After treating a handful of wild grown apple trees together he felt the group was ready to work on their own. Bruce then split the participants into teams of 2-3 and directed them to an area of the landowner's field where a large number of wild apple trees awaited maintenance.

The team working-on this tree took several minutes to look it over and decide what, if any, work was needed. They concluded that the overall form of the crown was already pretty good. However, there were some structural issues amongst the branches. Also, the crown was overly dense; less than ideal for fruit production.

The team verbally listed a number of things that could be improved with pruning and agreed on an order of priorities. They focused on the following two items:

1. Decrease the density of the crown for better light and air circulation.
2. Eliminate crossing branches and provide adequate spacing to avoid rubbing injuries and structural problems.

This tree's crown already had good general form; crown spread was a little more horizontal than vertical.



The foliage of this tree was very dense and a much closer view was required to see what work was really needed. The following page takes a closer look from within the crown. The pruning goal was to reduce crown density while eliminating structural problems at the same time. (See next page)



After Treatment

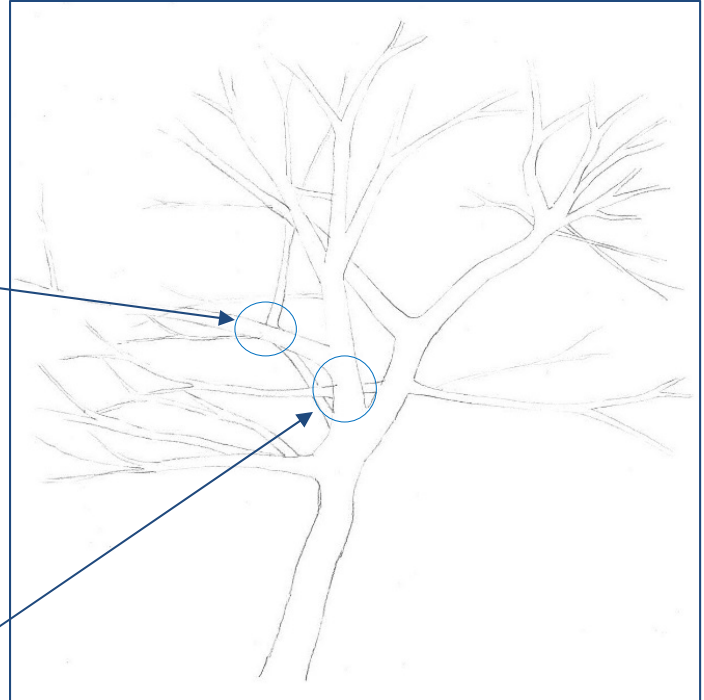
A noticeable change in crown density was accomplished without changing the crown's form.



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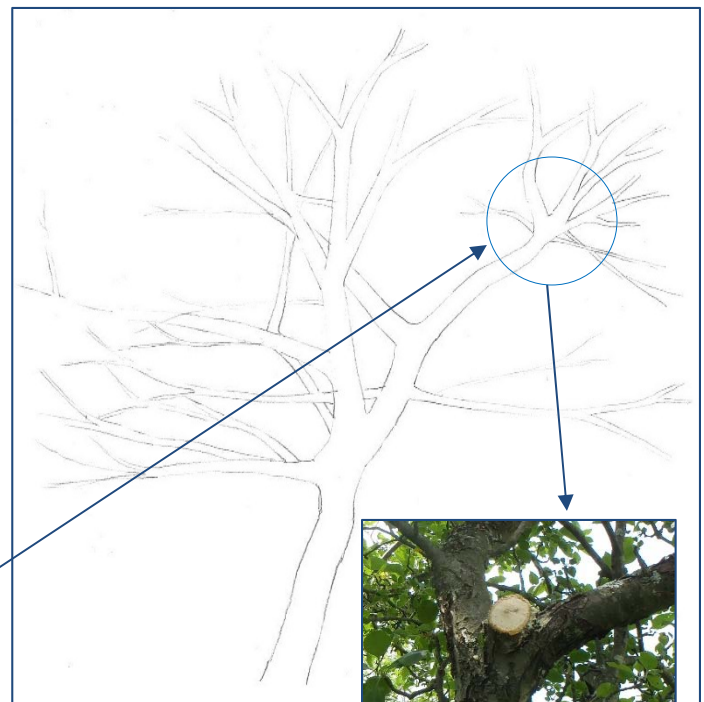


This branch was removed because it was contacting a better branch and competing for light higher in the crown. (Picture from backside of tree)



Another crossing branch. Bark injury occurred where the branches were in contact.

(Picture from backside of tree)



Before



After

Numerous lateral branches were crowding this portion of the crown. Two branches were removed in order to provide better spacing while also reducing crown density.