

Bruce Robinson instructing group, summer 2016

In this example we have a multi-leader wild apple tree growing in close competition with other apples, hawthorn, and the occasional ash and black cherry tree.

Due to heavy competition from both other trees and its own leaders, this apple tree's foliage was sparse and its crown had concentrated growth more vertically than desired. Some of the leaders had already died and there was branch dieback throughout the crown.

To return vigor to this tree (and hopefully more fruit production) some of the leaders and dead wood needed to be removed. This rehabilitation work was needed to create more space for the residual leaders to expand their crowns and potentially development of new branches lower on the boles.

Choosing what leaders to cut and what to leave is similar to the way a forester chooses trees for a timber stand improvement thinning (TSI). The objective is to leave the best leaders, remove the worst, and provide adequate spacing amongst the residuals.

Because each leader of this tree acts relatively independent of one another, limiting crown removal to 25% for the whole tree is not crucial. However, crown removal of each leader should be limited to about 25% or less.

Contact Points between Leaders

Dead Leaders

Spindly Leader w/ small crown

This is the same multi-stem apple tree the following winter.

Bruce did not prune the tree during instruction but did flag (w/ blue tape) which branches & leaders the group decided were best to prune/remove. How decisions were made:

- Leaders & branches in obvious decline or showing disease were flagged first. This helped the group visualize those tree parts as gone and focus on what would remain.
- Amongst the remaining leaders we looked for any problem areas: poor branch unions, cracks, leaders with inadequate crown, branch contact or crossing.
- Attention was also given to spacing.
 What's left behind should have free space to expand and fill-out.

Returning to the tree in winter 2016-2017





This leader forked at a wide angle. Its branches grew into contact with two other leaders and crossed closely by a third. Points of contact on crossing branches cause injuries on windy days or when snows accumulate. Removing this leader not only freed the remaining leaders of potential injury, it also created good openings for the other leaders to expand their crowns.

Mike had to remove one side of the fork first so the leader could be felled w/o getting hung-up amongst the other leaders. Finding the right approach to get the saw into cutting position was also challenging.

Every cut was carefully planned-out for safety, and to avoid hang-ups & incidental contact between the saw and the remaining leaders.

This cut was made on one side of a split leader. It was made as close to the branch bark ridge as could be done. Notice that two cuts were made to free the remaining leader. The first cut removed much of the other leader and its weight. This allowed Mike to make the second cut moving the saw toward the remaining leader without pinching the chainsaw bar. He also angled the final cut to allow rain water to run-off the stump more easily.



At completion of work, 4 of the original 7 leaders were left as residuals. The crown of each leader now has space to grow and fill-out. There are no longer any points of contact between leaders. All narrow-angled forks were removed, and all deadwood was pruned-off. Mike may choose to remove another leader in the future for further improvement of spacing. However, he will watch how the tree responds over the next several years before making any larger cuts.

It should also be noted that a couple nearby hawthorn trees were felled and others pruned to free growing space and increase sunlight around the outside of this tree.