TECHNICAL BULLETIN DAVEY

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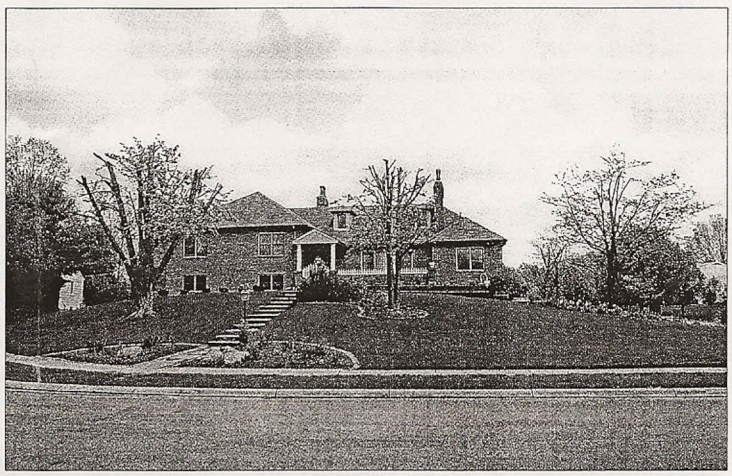
# TOPPING vs. PROPER PRUNING

Many people have no idea that cutting large diameter main branches of a tree back to stubs in an effort to reduce the height is an unacceptable, and unskilled way to prune trees. This approach guarantees quick, visible results, but leaving stubs (also referred to as "hat-racking") permanently disfigures and essentially initiates the decline of that tree (see Figure 1 and 2).



*The trees on this beautiful lot have been topped. The beauty and the value of this property have been greatly decreased.*

Topping invites internal decay. When a branch is correctly pruned at its point of attachment (Figure 2) to the trunk just outside of the branch collar and the branch bark ridge, internal decay is usually stopped from progressing into the trunk by a barrier inside the collar. Also, a correct cut results in more rapid wound closure so that the bark quickly grows over the injury.

Branch stubs produced by topping harbor decay fungi which have an avenue to break through the protective barrier in the collar and then proceed into the main trunk. Whenever a cut is made in the main leader by topping, there is nothing to prevent decay from developing in the trunk. The tree may be structurally weakened and its useful life-span reduced. Other adverse effects of topping are:

1. Topping removes a major portion of a tree's leaves which are necessary for the production of carbohydrates.

2. Once-shaded bark in the canopy may be scalded by exposure to direct sunlight. This weakens the integrity of the protective bark and it is more prone to borers, diseases and decay fungi.

3. Stubbing stimulates the development of watersprouts just below the cut. These shoots grow rapidly, causing a topped tree to grow back to its original height faster and denser than a properly pruned tree. These watersprouts are weakly attached and are in danger of splitting out in a storm.

If the height of a tree has to be reduced because of storm damage or interference with electrical wires, it can be correctly done by a method called ***crown reduction or drop crotch pruning***. This procedure involves the removal of a main leader or main branch at the point of attachment of a lateral branch (see Figure 2). The final cut should be parallel to the lateral branch and the branch bark ridge without cutting into the bark ridge. The lateral branch should be at least one-third the diameter of the branch or leader that is being removed.