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THE RIGHT WAY AND THE WRONG WAY

Pruning Shade Trees

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There is a right and a wrong way of pruning shade trees. Topping should preferably be done after the leaves drop in the fall and before the buds swell in the spring but it is safe to do the work at other seasons.

WHY WE PRUNE TREES

To remove dead wood.—The reason for removing dead wood is obvious. It is in the way. It breeds disease: it is unsightly and dangerous. The way to do it is to cut it out, removing all dead or decayed portion. Smooth off the surface so that water will not gather. If a cavity remains, paint it with a lead paint to keep out fungous and insect pests, then fill the hole with a material that will keep out the moisture and squirrels and upon which a new bark may find support to grow.

To remove crowding branches.—Branches that rub against and bruise one another when the wind blows should be taken out as soon as possible. The branch should be cut off clean, close to the main stem with a slanting cut so that water will drain off. Then coat with a tar or lead paint to keep off water and insects which bore into and lay eggs in green wood.

To increase flowers and fruit.—In order to understand this we must be able to distinguish between leaf and flower buds. The flower buds are usually larger and of different shape from leaf buds. By removing limbs or twigs which contain only leaf buds we will accomplish our purpose. The cut must be made clean and smooth and if a large surface of heart wood is left exposed it should be painted. In removing such limbs care must be taken not to destroy the natural symmetry and shape of the specimen. This naturally symmetrical shape is precise and fairly regular in its occurrence due to a type structure explained later.

To remove unbalanced parts.—It is a common practice to prune in order to thicken the head, strengthen the specimen, and create a more dense shade. This is the question that most interests us in the general shaping and care of ornamental shade trees. We want to know how to "top" our soft maples, and whether or not we should top the elm at the same time.

TREE STRUCTURE

To understand topping we must study tree structure. Trees are either opposite or alternate leaved.

In the opposite-leaved trees the terminal bud develops a new stem. The side buds develop also and each in turn develops a terminal bud and side buds. This kind of a tree forms naturally a "leader" or stem that grows straight from the ground to the top of the tree and the limbs, unless accidentally injured tend to develop symmetrically about it—e. g., the maple.

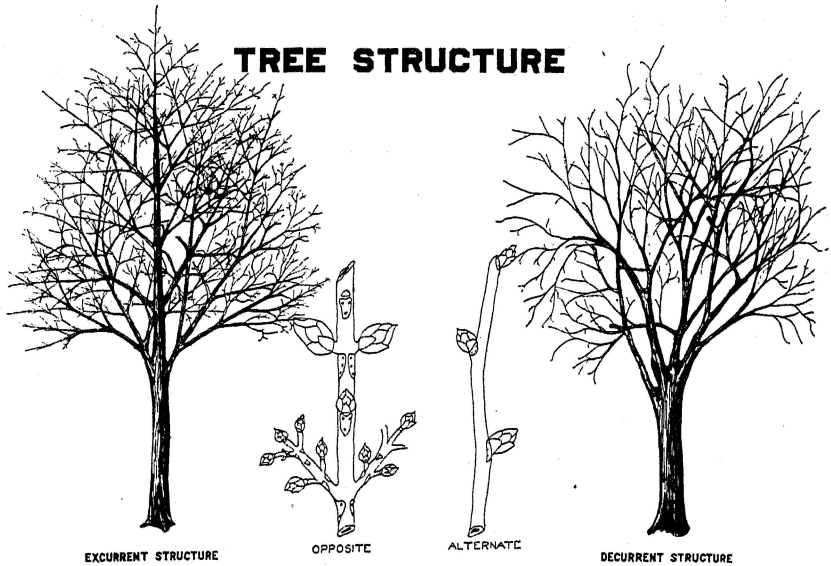


FIG. 1.—TREE STRUCTURE

Study the structure of the tree before undertaking to prune it

When you top such a tree or in other words remove the terminal bud, you give more strength to the side buds. They develop more abundantly, thickening the tree and reducing its spindly length, until it becomes a stronger and a denser shade tree. Such a tree should be topped before it gets so old that the cut will not heal over, and the cut place must be made smooth and water proof. On the other hand the alternate-leaved trees tend to send a branch first to one side and then to the other side—e. g., the elm.

Until the tree grows out of reach of our hand and strength we can keep it bent straight or the one-side bud removed so that it will tend to send up a straight stem. But as soon as it gets beyond our reach the identity of the trunk is lost in the branches and one may not as a rule trace the main trunk clear to the top of the tree. If such a tree is topped from time to time we may easily leave the last bud always on the same side of the stem and a tree will grow all to one side.

Beyond this we must consider the natural strength of a tree. There is no object in trimming or topping a strong hardwood tree such as an oak or a sugar maple that ordinarily would not be broken in the wind. Such a tree is naturally adapted to self-formation and unless injured by some external cause will take care of itself.

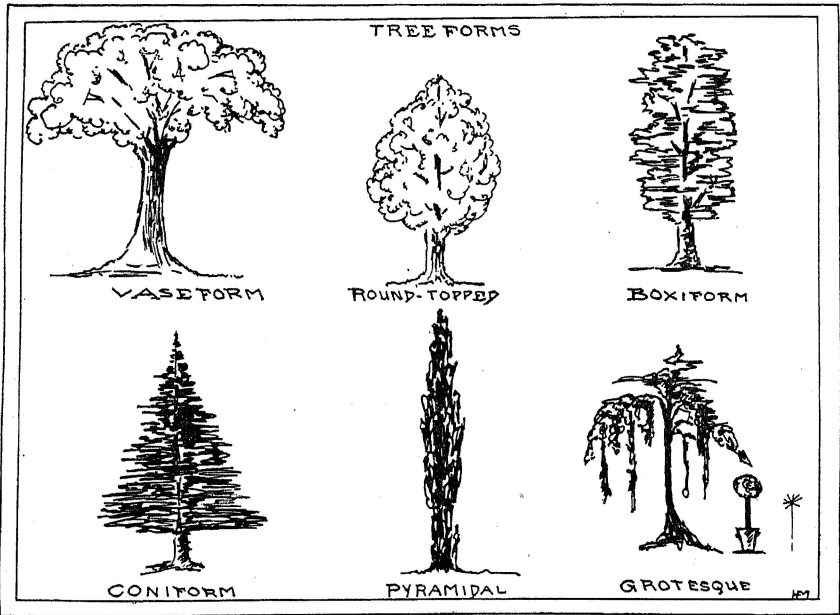


FIG 2.—TREE FORMS

Although variations may occur in different trees of the same species, yet each species may be classified more or less accurately under one or another of these type forms

There are two other things we must know about trees. First, certain varieties or species will never make good ornamental shade trees and should not be used. Many are poor because they are too open; buds too far apart on the stem and branches come out at long intervals. Other trees are objectionable because of the bad odor of their flowers, brittle twigs, dropping leaves, shedding of bark, or short life. Secondly; the method of branching or the angle of branching with the trunk affects its form.

THE SIX FORMS

There are six forms into which trees may be grouped.

- a. Vase form—elm
- b. Round-topped—maple
- c. Boxiform—hickory
- d. Coniform—spruce or pine
- e. Pyramidal—Lombardy poplar
- f. Grotesque—artificially propagated trees like the umbrella catalpa or Tea's weeping mulberry.

(a). **Vase form.**—In a vase form tree the branches bend up, then out and down,—the trunk forming the stem. Topping this tree will make it dished on top and weaken its structure. It cannot grow together again and a “fatal crotch” is formed in the branches.

(b). **Round-topped.**—The branches of round-topped trees grow out and then bend up and inward forming a globular top. Cutting off the tips of such branches thickens the top and strengthens the growth. Such a tree is the soft maple and by careful handling proper results will be gained. The difficulty is that such a tree is usually of a softwood and short lived variety that is past its prime of life at a time when it needs such topping.

(c). **Boxiform.**—Trees that are included in the boxiform group also branch squarely or at right angles to the trunk and the top branches extend to approximately the same length as the lower ones. Such a tree may be topped, if it is desirable to have it lower or the lower branches may be removed. Doing this will make the foliage mass more cubical rather than rectangular and has a tendency to create a specimen that is out of proportion.

(d). **Coniform.**—Branches of trees in the coniform group form a right angle with the trunk. The lower limbs are wide and the others shorter as they approach the top of the tree until the tree tapers down to a point. Topping destroys its chance to develop a cone shape and removing lower limbs destroys its beauty. Such trees are beautiful as lawn specimens, but are too low branched to be of value for street shade.

(e). **Pyramidal.**—The Lombardy poplar and others of the pyramidal type have limbs that tend to grow straight upwards, parallel to the trunk. The beauty of this specimen is in its unique spirelike shape which adapts it to a specimen used to attract attention, for example, to mark entrances or to cause variety of skyline in group massing. Such a tree does not as a rule spread wide enough to give shade and no pruning will change its angle of branching.

(f). **Grotesque trees.**—Trees of the grotesque class are of odd and unusual character. They are either too irregular or too formal to be adapted to naturalistic planting and usually branch too low to allow traffic underneath.

It would be safe then to say that soft wood trees like cottonwood, box elder, soft maple, and catalpa need topping. Locusts, sycamores, and hickories need to have dead wood removed before it falls. Other trees need to be shaped or headed up and given a fair start in life when they are 12 to 20 feet high. If this is done they will thereafter take care of themselves unless artificially or accidentally injured.

WHAT TREES SHALL I PLANT?

Trees adapted to shade on lawn and street must have the following characteristics:

1. Tall and wide spreading
2. Straight trunk and well balanced top
3. Long life and durability of wood
4. Strength of limb and freedom from insect and fungous pests.
5. Deep root system
6. No litter of leaf, flower, fruit, or bark
7. Branching high enough from ground to permit traffic underneath
8. Easy to transplant and affording dense shade

Try the following here stated in the order of their preference:

- | | |
|-----------------|-----------------------------------|
| 1. American elm | 5. American and European lindens. |
| 2. Sugar maple | 6. Pin and Laurel oaks |
| 3. Hackberry | 7. Norway maple |
| 4. Sweet gum | 8. Non-odorous sex of Ailanthus |