THE exhibit of pruning at the 1953 Boston Spring Flower Show was assembled by the Arnold Arboretum for the purpose of clearly showing right and wrong methods of pruning. A little knowledge of what to prune and how to do it, goes a very long way in assisting plants to grow into well balanced specimens which prove an asset in any garden. Conversely, the indiscriminate hacking of shrubs and trees at definite heights is the quickest means by which otherwise beautiful plantings are made unsightly. A glance through this exhibit showed some of the following things:

WHEN TO PRUNE

As far as the growth of the plant is concerned, pruning can be done almost any time except in the early summer, but if done then, the new growth may not have sufficient time to mature before winter and killing may result. However, as far as our interest in the ornamental qualities of plants is concerned, shrubs are divided into two groups, those that bloom in the early spring like Daphne, Forsythia and Lilac, which might be pruned after they flower in order to obtain the full benefit of their flower the current year; and secondly, plants which bloom on the current year’s wood like Hydrangea and Rose of Sharon which can be pruned in the late winter or early spring and still be expected to bloom the same year. Trees are usually pruned in the late winter and early spring (with the exception of those that “bleed” profusely like the Birch, Maple, Yellow-wood) for at this time, before the leaves appear, it is much easier to see which branches should be removed, and also it gives the tree the entire spring and summer to form new growth. However, they can be pruned any time except the “bleeders” as noted above.

WHAT TO PRUNE

1. Dead, broken or diseased branches.
2. Broken roots and one-third of the branches at transplanting time. Some roots are always cut when a plant is dug. A good general rule is to remove about
one third of the total linear branch length when the plant is moved by thinning out weak or damaged branches and correcting structural defects. This compensates for the loss of roots which have been cut in the transplanting operation, and always results in more vigorous plants at the end of the first year. This is hard for the home owner to do, since the new plant looks smaller than the original specimen purchased from the nursery, but it is always better for the plant in the end. When plants are to be moved from their native place in the woods, it is advisable to root prune (merely forcing a spade in the ground in a wide circle about the plant) one year in advance, to force the production of many roots close to the base so the transplanting operation will be easier. Nursery grown plants are usually root pruned periodically.

3. **Young trees should be pruned early.** Timely corrective pruning saves trouble later. If the tree is one that normally has a single trunk, see that only one straight trunk develops and cut out any others that try to grow. Occasionally several branches grow out from the trunk at the same place and these will always make weak crotches. All but one should be removed. In the Flower Show exhibit was a Dogwood plant with many leaders from the base. Unless most of these are removed at once, the plant will be a bush (and a poor one at that) and never a fine tree. Sometimes young shrubs should be "headed back" a bit to force them to grow more branches from the base. A Forsythia, for instance, with just one leader would never become an interesting shrub. In other words, know how the tree or shrub will develop at maturity, and help it early in life by selecting the proper leaders, removing the others if necessary.

4. **Correct structural defects.** Never allow two equally vigorous leaders to develop on exactly opposite sides of the same trunk. This will always be a "weak" crotch, susceptible to splitting as the tree grows older. It may spoil the symmetry of the entire tree when this happens. Examples of several weak crotches were shown in the exhibit.

5. **Cut suckers from the bases of grafted or budded plants.** Many plants used in gardens such as roses, crab apples, lilacs and fruit trees, are either grafted or budded on another kind of understock. Usually, this is never more than a foot or so from the ground. Hence, all suckers developing below this point should be removed as soon as they are observed for if allowed to develop they will not only spoil the symmetry of the plant and sap the strength of the variety wanted, but will develop into an entirely different and usually undesirable plant. An excellent example was shown of a rose, grafted on *Rosa multiflora* in which the understock had completely smothered the original variety. Frequently, when two kinds of blossoms or leaves are seen on one plant, this is the reason. Cut out understock suckers as soon as they develop.

6. **Rejuvenate old shrubs.** A Mock-orange, Privet, Lilac, Spirea or many another shrub may grow too tall and become open and ungainly at the base. Most shrubs can be rejuvenated in one of two ways: either by cutting the entire shrub to 6" above the ground in the early spring and allowing it to develop as a
new plant; or by thinning out the old wood, cutting some of the older branches off near the ground and allowing new ones to form, then repeating the process with a few more of the older branches the second and third years. Lilacs are often treated thus, for in this way they produce a few blooms each year of the change, while when they are cut to the ground they do not bloom for two or three years. However, one Forsythia shown in the exhibit was cut to the ground in the spring of '32 and produced a few flower buds for bloom in the spring of '33.

7. **Hedges, screens and windbreaks.** These should be pruned with the objective of increasing their density, for if a twig is cut back a few inches, it frequently sends out more than one new shoot to take the place of the one removed. This growth habit of plants can be utilized to force them to grow more dense.

8. **Certain limbs for utility purposes.** The lower limbs of street trees, or limbs that interfere with a certain view, walk, window or wire, must sometimes be removed.

9. **Girdling root.** Close observation of the base of poor growing trees often discloses a girdling root, that is a root partly on the surface of the soil or just beneath, that is growing in such a way as to choke or constrict the trunk of the tree or a larger root. Such girdling roots can do real harm and usually should be cut as near as possible to the trunk of the tree or at least at the point where they are doing the damage.

These then, are the reasons for pruning. Be certain the reason for pruning is understood before it is done, for it is always a dwarfing process, and there are some plants that never need any. Study the situation and have a good reason for all pruning.

**HOW TO PRUNE**

1. Make all cuts clean with sharp tools.

2. **Never leave any stubs.** A short stub may never heal over and is always a source for infection. Make all cuts back to a bud, branch or main trunk. The removal of a large limb should be done in 3 cuts. First, an undercut is made by sawing up one fourth or one third through the limb about a foot from the trunk of the tree. Then the uppercut is started one to two inches beyond the first cut away from the trunk on the top of the branch and sawed down until the limb falls. As the two cuts near each other and the limb begins to sag, its weight will break the wood at the center and the limb will jump clear without stripping and tearing the bark down the tree trunk. Finally the stump is removed by a cut flush with the trunk of the tree.

3. **Paint all cuts over 1" to 2" in diameter with a protective paint.**

4. **Disinfect tools after each cut on diseased plant.** A satisfactory disinfectant to have in a suitable can for this purpose is alcohol.

5. **Shrub rejuvenation.** Thin out the older branches over a period of a few years or cut the shrub to within a few inches of the ground in late winter or early spring. The obvious exception to this would be weak growing shrubs or those which have been budded or grafted. Never cut any shrub off at a horizontal line.
several feet above the ground. This is an artificial practice, outmoded for many years, and always results in unsightly specimens. Thin out here and there, cut one branch back hard and another not nearly as much and thin out from the base, simultaneously. In this way, an old plant can be reduced in size, still look natural and will produce new growth at different places from the ground on up to the top.

6. Shear hedges wider at the base than the top. Both evergreen and deciduous hedges should be sheared in such a way that they are wider at the base than the top, thus allowing the important lower branches plenty of room, light and air. If the hedge is pruned narrower at the base than the top, the lower branches will often die from lack of light. Once these lower branches die on an evergreen hedge, it is practically impossible to force any new ones to grow in the same place. Deciduous hedges, on the other hand, are mostly vigorous growing plants, and when they become open at the base, the entire hedge can be cut to within a few inches of the ground in the early spring and will quickly start a new vigorous growth from the ground, thus forming a new hedge in a few year's time.

Pruning need not be difficult. It is important, however, that one understand exactly why the contemplated pruning is necessary and can visualize the probable results. Even yews and rhododendrons can be heavily pruned and old plants rejuvenated by the expert gardener who has previously studied what to do, and when to do it. The exhibit at the Boston Spring Flower Show clearly demonstrated many good and bad methods of pruning and the growth made by the plants as a result of certain practices.

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