

Mark of the Industry Today Is Professional Tree Care

Research has helped make a scientific profession of arboriculture. Foresters, entomologists, pathologists, physiologists, arborists and others have contributed to an understanding of tree problems. Their work in the field and laboratory has saved many valuable trees and perpetuated what has now become a national beautification program.

Mechanical care when properly done can speed recovery time for the tree, as well as protect it against insects and diseases during coming months and years. Use of rubber or other soft foot-

wear and ropes are simple practices. But they are extremely important in terms of tree care. Spurs are not nearly so safe as ropes and resulting bark wounds open the tree to disease organisms.

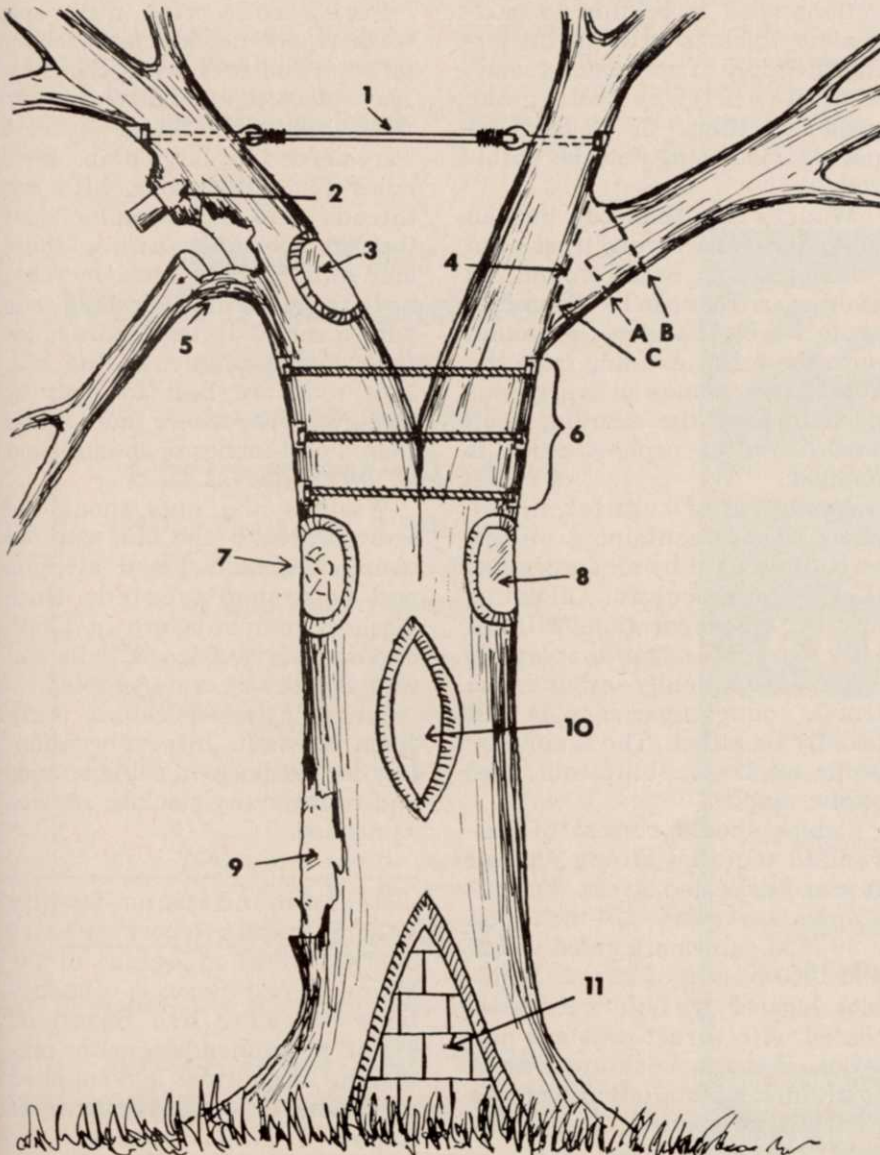
Bleeding at certain times of the year becomes a problem when sapwood is exposed during pruning and cavity work. Maple and birch, which are profuse bleeders, should not be pruned in the spring. Work on other hardwoods and evergreens may be done at any time. Small pruning wounds made between Feb-

ruary and May heal most rapidly.

Another precaution in working with trees, especially when moving from site to site, is maintaining sterile tools. Some bacterial, fungus, and virus diseases can be carried by tools. Therefore, use denatured alcohol on all tools after use, or disinfect with bichloride of mercury (very poisonous but may be prepared by mixing 1 part of mercuric chloride to 1000 parts of water), or purchase a commercial disinfectant.

Careful bark tracing promotes rapid healing. Dead or fractured, irregular areas of bark need to be cut back smoothly and cleanly with a sharp knife to live cambium or tight bark. This is true even though the wound is made larger. Cut only soft bark tissues unless wood is decayed. Make the wound lengthwise of the tree, pointed at the top and bottom.

For freshly bruised trunk



1. Prevent or mend a split crotch by a cable installed $\frac{2}{3}$ of the distance from crotch to top of branches.
2. Old stub decay needs to be cut off flush to tree, cavity filled, and treated.
3. Stub cleaned and treated as a new wound. Paint exposed bark edges with orange shellac and apply wound dressing.
4. Any branch more than 1 inch in diameter needs to be pruned in 3 cuts as lettered, making the center cut first. This prevents damage by peeling of bark.
5. Stripped bark results from one-cut pruning or from wind damage. Tree health is aided by keeping bark wounds small and using the 3-cut system in No. 4.
6. Reinforce weak or split crotches with screw rods. Counter sink nuts. Bark trace holes and treat.
7. Perfectly healing pruning wound should appear as in drawing.
8. When limb is removed and only slight decay follows, clean wound and dress, but do not fill.
9. Common bark injury or bruise is common. Treat as shown in No. 10.
10. Treat bruise or bark injury by cutting torn bark back to solid bark to form a larger wound, pointed at top and bottom. Shellac bark edge and paint wood.
11. Large cavity here is properly filled in sections. But before doing cavity work, decide if work is worthwhile. Old, slow growing trees are seldom worth effort. Good rolls of callus growth around large cavities are strong, and removal weakens tree. Best treatment may be to brace cavity area and fertilize tree.

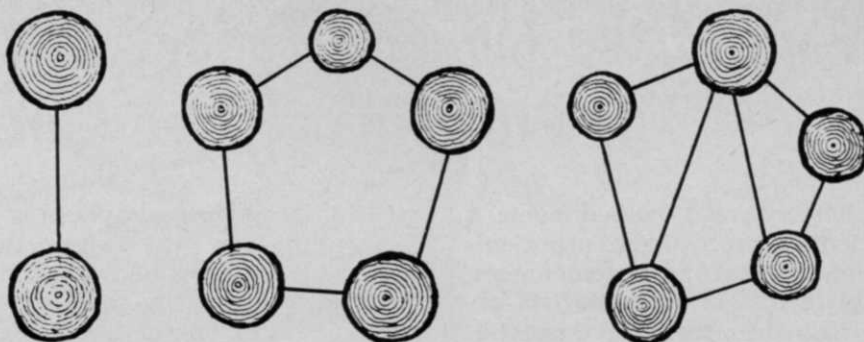
areas, an alternate method is worth trying. Tack the loose bark back onto the trunk and shade the damaged bark area with a burlap shield. Install this shield a few inches from the trunk to allow for air circulation. This sometimes keeps the cambium cells alive to produce callus growth and reduces the size of the wound. When it doesn't work, bark trace and treat.

Judicious Pruning Insures Future Shape

Pruning is done for a variety of good reasons. But it needs to be planned carefully to maintain the shape of the trees. Even when trees are interfering with overhead wires, judicious pruning and planning for future growth can usually be done to maintain the shape and prevent interference with the wires.

When pruning branches one inch or more in diameter, make three cuts (see illustration). This prevents peeling of bark as the limb falls. Final cuts need to be smooth. Avoid loose bark and be sure they are flush with remaining branches or trunk. This promotes rapid healing. Always start pruning at the top of the tree and work downward. Remove all dead, dying, diseased, and interfering branches. Treat larger wounds with a wound dressing. Renew this at least once or twice a year because of checking or weathering.

In treating solid, surface wounds, all exposed wood resulting from bark tracing, pruning, and cavity work should be treated with a wound dressing. Best procedure seems to be to paint the exposed bark edges with orange shellac followed by an application of an asphalt base paint over the entire wound once the surface is dry. Such dressings as asphalt varnish, fibrated asphalt roofing paints, and water-asphalt emulsions have merit. Water-asphalt emulsion can be applied to both wet and dry surfaces at temperatures above 32 F. Do not use asphalt preparations which contain carbolineum, creosote, gasoline, or similar materials. Mixtures such as 10-2-2 of lanolin, rosin, and crude pine gum; shellac over-



Cabling may be used to support heavy or overhanging limbs, however, only the minimum number to meet the existing problem should be used. Extra cables may create problems. Various systems are used. To repair or prevent limb breakage use the simple direct, left above, which is a single cable connecting two limbs arising from a single crotch; box or rotary, center, a series of cables connecting four or more limbs in a rotary fashion which permits maximum crown movement but no direct support; or triangular, right, which is the cabling together of limbs in combination of threes. This latter combines the best features of all systems and is preferred. Bands, cables or chains choke tree during future growth.

coated with plastic asphaltum; and Bordeaux paint are examples of other cambium and wound dressings. Asphalt applications need to be thin to moderately thick to prevent blistering. Reapply at least once yearly, after carefully removing old, peeled coatings. Cover only exposed wood, and not the callus roll.

Wounds less than one inch in diameter on hardwood trees need not be painted. Small wounds on evergreen trees can be ignored or protected by smearing the wound with the resins exuding from the cut. Large wounds on evergreens need to have the exuding resin smeared after asphalt paint is applied.

Avoid use of regular house paint. Those containing oil are sometimes used by amateurs, but their value is doubtful. Oil paints or other oil preparations will kill back bark on sugar maples. If applied completely around the trunk, young sugar maples will usually be killed. The same may occur on beech, butternut, and exotic maples.

Cables should consist of galvanized material strong enough to stand expected stress. For example, 7-strand 1/4-inch and 5/16-inch cables are rated at 500 and 1000 pounds of stress. Thimbles, lags, or eye bolts need to be coated with a rust-resistant material. If the rust coating is damaged during installation, apply a protective coating. Lag screw hooks may open under stress, so

are not reliable. Thimbles are used in each eye splice to prevent parting of the cable where it passes through the eyebolts.

Screw rods with nuts and washers are needed for bracing through and near weak crotches. These need to extend completely through involved limbs. At least 2 are needed for large limbs. Bore holes for screw rods with lag threads 1/16 inch smaller than the rod. Countersunk washers and nuts at both ends increase holding power. For bolt rods with machine threads, bore holes the same diameter as the rod. Bolt rods are best for soft or weak wood, or where there is less than 3 or 4 inches of sound wood at each end.

Washers and nuts should be countersunk, the cuts pointed above and below, and all cuts and bolts then treated. Once washers and nuts are in place, exposed parts of wood, bolts and nuts need to be waterproofed.

When installing cables, make them just taut. Inspect occasionally for breakage of cable strands and remedy any slack or replace as needed.

Recommendations for this WTT Tree Care Report are based on technical material of the Maine Forest Service. Illustrations likewise are based on Maine recommendations for preserving shade trees and supplied by Maine State Entomologist Robley W. Nash, Augusta.
