

# HOW TO SERVICE A TREE

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## **HOW TO SERVICE A TREE**

by

**Donald P. Watson**

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### **NEED FOR SERVICE**

You wouldn't think of driving a car without providing it with service. Similarly, the health, vigor and success of any tree depends upon a program of service throughout its entire life. A tree, like an auto, is a sizable investment. Its value to you may be even higher than the dollar value assessed by a tree expert. The tree, unlike the auto, cannot be delivered to the service station. Instead it must be supplied with proper maintenance as it develops in its permanent location. Often trees will survive without adequate care, but their rapidly increasing value to society makes it important to provide the best possible environment for their growth.

The success of the growth of a mature tree depends to some extent upon the knowledge of the requirements of each species. This publication, however, gives simple directions for minimum maintenance.

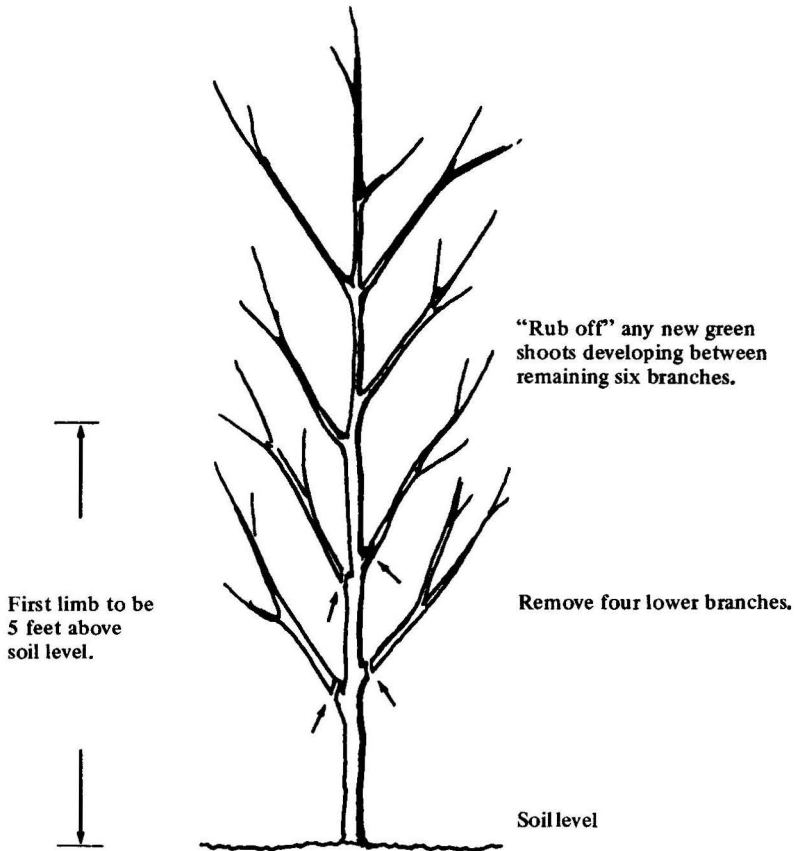
### **TRAINING THE BRANCHES**

Inspect your newly planted trees as soon as growth begins, to make sure that branches are started in positions that are well spaced and will develop into a good framework. All potential branches that will compete with each other, or those that originate in an undesirable location should be "rubbed off" while they are soft; otherwise they become wasted growth that must be removed at a later date.

The height above the ground desired for the lowest branch should be decided immediately. This height will not change as the tree matures. Usually a street tree requires more clearance than one used as a landscape specimen.

Cutting the terminal of any branch stimulates the growth of adjacent lateral branches. With this in mind the shape of the growing tree can be established by corrective trimming. In general, wide-angle branches are stronger than those that form a narrow angle with the trunk. A young branch may be tied back for a year to increase the angle as it develops.

Some trees with crooked trunks can be straightened by staking, but generally a crooked main leader will not develop a good framework for the future.



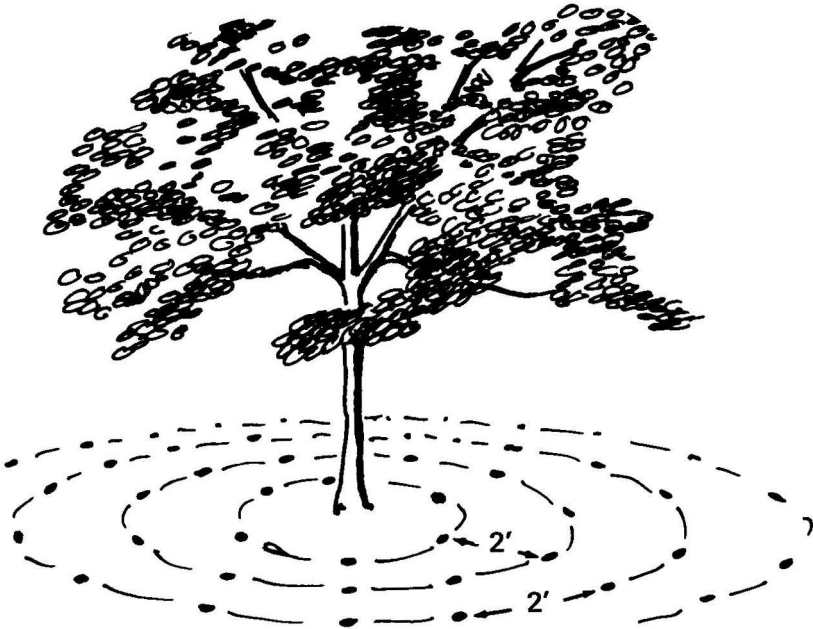
## FERTILIZING

Growth will be stimulated by the application of fertilizer. This is usually necessary to provide nutrients that are lacking or in insufficient quantity in the soil. Additional fertilizer is especially important on private property, along city streets, on lawns or in parks where trees are not supplied with an accumulation of decaying leaves as in the forest.

The best way to reach the root systems of trees is to make holes with a hand auger, a pneumatic drill or root tree feeder, at 2-foot intervals and 18 inches deep under the whole spread of the branches of the tree. If the pavement covers part of the root system, add holes accordingly.

A soil test is helpful for accurate feeding, but the following suggestions will give a general idea of amounts of fertilizer needed.

In the spring and again in the fall, supply 2 pounds of 10-10-10 (1 pound of 20-20-20) for every inch of trunk diameter. Divide the fertilizer evenly among the holes. To evenly distribute small amounts of fertilizer, dilute the fertilizer with sand. Pelleted or tablet forms of fertilizer may be dropped in the hole. Allow the sprinkler to run for at least 2 hours to insure that the fertilizer is completely dissolved and distributed to the roots.



Pattern of holes for fertilizing a mature tree.

A simpler method is to use a root tree feeder with cartridges of fertilizer that are dissolved with water from a hose. Use these cartridges according to the manufacturer's directions.

Mature flowering trees, such as poinciana or showers that have not been fertilized for years, will tend to produce more leaves than flowers if they are overfertilized. For trees of this type, use half the recommended amount only once a year, a month before flowering.

## WATERING

Normal rainfall often supplies trees with an adequate amount of water. Different trees have different requirements. When a tree, such as a kukui, that requires a high moisture supply is planted in a dry area, additional water is needed. Soil water may be conserved by the use of an organic mulch.

The most satisfactory method of supplying irrigation and distributing it evenly to an established tree is with an oscillating sprinkler or underground sprinkling system with an overlapping sprinkler pattern.

During extremely dry periods, trees may suffer from lack of water without displaying visible symptoms of damage. During these periods the soil should be thoroughly soaked with the equivalent of 2 inches of rainfall every 2 weeks. Straight-sided plastic glasses, placed within the spread of the sprinkler, can be used to measure the amount of water applied. The frequency of watering depends to a large extent upon the type of soil and the drainage.

Tiles may be sunk into the ground to conduct water to the root zone, especially where paving covers part of the root system. If water tends to run off instead of soaking into the soil before the intended amount is supplied, stop watering and apply the remaining amount the following day.

## PRUNING

When very large trees require severe pruning, or trees need to be removed, it is usually advisable to ask the assistance of professional tree experts. A well-pruned mature tree should look as if there were no branches missing or injured.

Prune to remove broken, dead, diseased and insect injured branches, to remove branches that interfere with each other, to produce a more sturdy and dense growth, to control growth and produce the desired size and shape, and to improve flowering and fruiting.

To many people, pruning is more frightening than is necessary. Unless you make large drastic cuts, pruning can be done on a trial and error basis. Plan your cuts before you begin. The need for pruning can be reduced by selecting a tree of the desired size and keeping it in a good healthy growing condition.

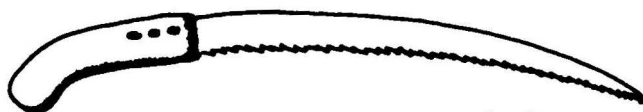


Parallel cut starting to heal.

Well-healed cut.

Although you can prune at any time, even on broadleaved evergreens, regrowth will be more rapid if pruning is done in the winter before spring growth and flowering.

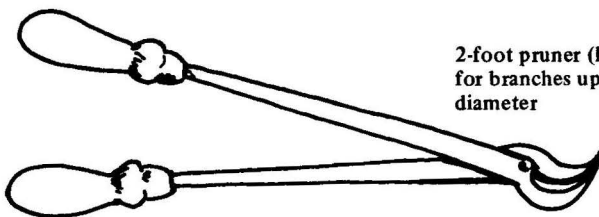
The standard tools are a pruning saw, short- and long-handled (lopping shears), hand clippers, and wound dressing. Pruning saws have coarser teeth than carpenter saws and cut on the pull stroke without binding on green wood. Clippers are used for twigs and small branches. All tools must be kept clean and sharp. After use, they should be washed, dried, and oiled.



Pruning saw.

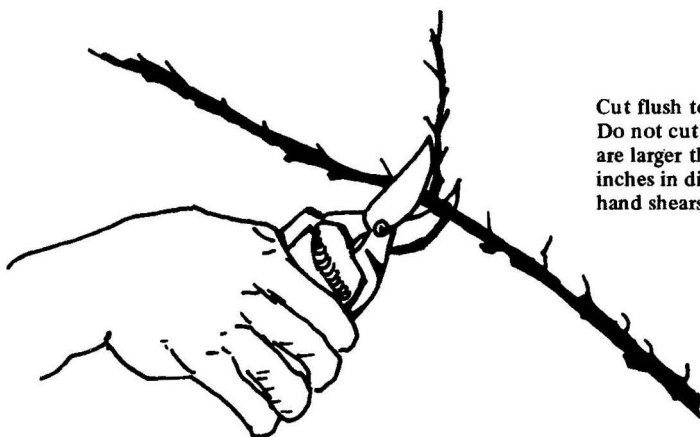


Hand shears  
for small twigs.



2-foot pruner (lopping shears)  
for branches up to 1 inch in  
diameter

Trees that are properly trained in the beginning rarely need to have large branches removed. Pruning of established mature trees usually consists of thinning. Large branches are removed only if they are dead, injured, or pose a threat to property. Removal of the terminal ends of large branches seriously destroys the appearance of the tree. Such branches should be removed at the main trunk. When removing large branches, cut close and parallel to the main branch. Cuts larger than 1 inch in diameter should be painted or sprayed with wound dressing.

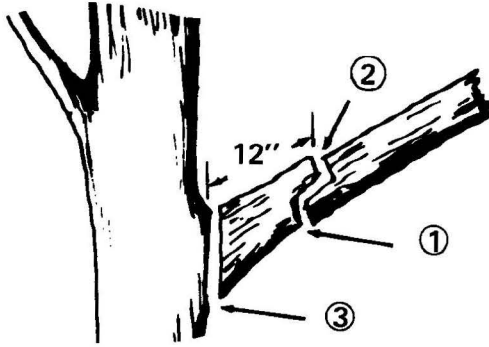


Cut flush to side branch.  
Do not cut branches that  
are larger than  $\frac{1}{2}$  to  $\frac{3}{4}$   
inches in diameter with  
hand shears.



“Stub” cutting is used to remove large branches without splitting the wood and stripping the bark. This method is recommended for limbs that are too heavy to be supported by hand.

Make first cut from below; (1) cut off the limb from above (2); remove the stub with a clean cut parallel to the main branch so water will drain from the cut surface (3); paint wound.



There are times when some other corrective pruning may be necessary. You may wish to remove unsightly parts of the tree: sprouts growing at or near the trunk, branches that grow toward the center of the tree, crossed branches, sharp “V” crotches of branches that break easily in a storm, or multiple leaders that spoil the shape of a tree. Nuisance branches that interfere with wires, street lights, and block views become a traffic hazard. Use your judgment. Some city ordinances require the use of licensed tree trimmers to prune trees on public property.

***Palms Need Special Treatment.*** The terminal bud on a palm tree must never be removed or the tree will die. Multiple stemmed palms can be improved by removing old stems at the ground level from time to time. Climbing irons make holes that causes serious injury to the trunk.

Dead and diseased leaves, especially those that form a skirt around the trunk, must be removed to prevent fires and the harboring of insects and diseases.

Large leaves and fruits must be removed regularly to prevent injury to passersby. To prevent the formation of fruit, the whole flower stalk may be cut off after it has blossomed.

Cut palm leaves from the bottom of the stem upward to avoid tearing the main stem of the tree. Some palms die naturally after flowering and fruiting. Remove the main trunks of such trees and let the strong basal sprout develop.

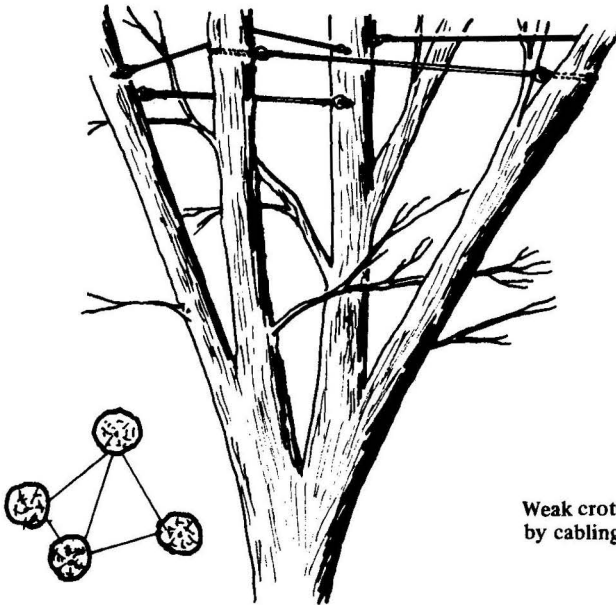
## REPAIRS

Although major tree repair and preventive spraying of large trees usually should be done by professionals, some of the smaller operations may be done personally.

**Mechanical injury** causing wounds on the trunk or large branches: Trim back to live cambium with a sharp knife, tapering the cut area at both ends. Remove all dead bark and discolored wood. Cover with wound dressing to hasten the healing of the injury.

**Weak crotches** between limbs: Support by screwing long threaded eyebolts into each limb. Connect bolts with brace rods or strong wire that can be tightened by binding both strands together.

**Grade changes** by excavation or addition of more than 6 inches of soil over the existing soil level around a mature tree limits water and air availability to roots and can retard growth and cause death of branches.



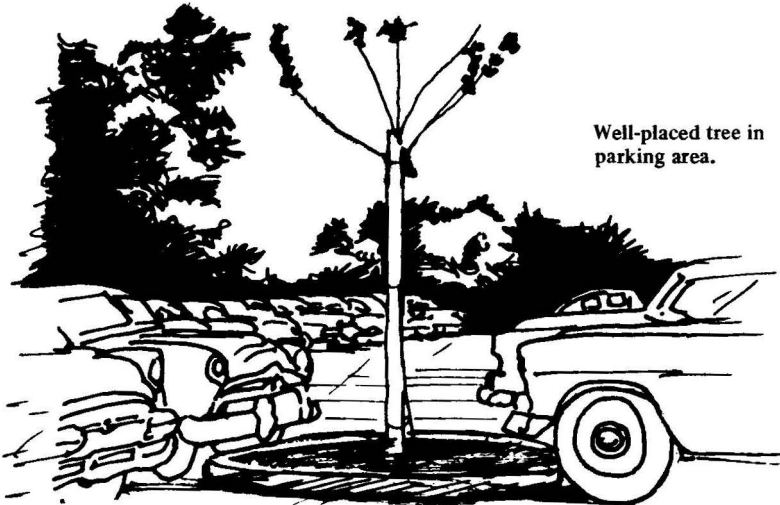
Weak crotches protected by cabling.

It may be helpful to remove some top growth and use additional fertilizer and water; but for a severe change in level, a stone or brick dry well or retaining wall is needed to maintain the existing soil level.



*During construction*, build a wooden frame around the trunk to prevent construction machinery or materials from damaging the bark. Changes in planning often can prevent utility wires from going over or through trees. After a storm, be sure power lines are not resting against the limbs of a tree.

*Sidewalks and driveways* may be planned to go around trees. In parking lots, trees should be located to help give direction to the parking lanes, provide shade and relieve the glare. Trees should be pruned so they do not block vision of motorists. Tree trunks should be 4 feet from car bumpers, arranged with curbing to stop car tires and not waste parking space.



*Spraying* shade trees to control insects and diseases is usually necessary only when serious outbreaks occur. Spraying to prevent fruit set or correct sudden nutrient deficiency symptoms is also practical.

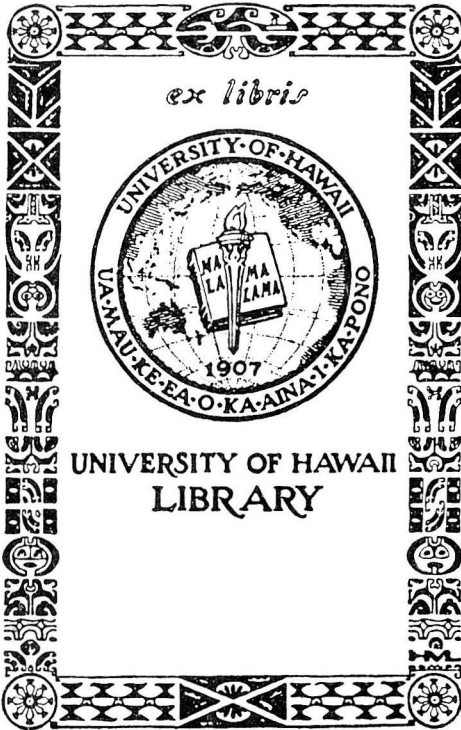
To thoroughly cover large established trees with sprays and prevent injury to the surroundings, special power equipment is needed and should be handled by professionals.

If you suspect tree injury is caused by insects, diseases or nutrient deficiency, have your county agent send samples to the University of Hawaii Plant Disease Clinic for identification and recommendations for control.

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