Preservation of Foliage Materials for Permanent Arrangements

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The search for and the use of new and different plant materials in flower arrangements never seems to end. This includes ways in which to preserve certain foliage subjects so that they may last a long time or be used over and over again. There is such a process which preserves certain types of plant materials, and this process has been used quite successfully at Descanso Gardens in La Canada, California.

The basic chemicals for this process are glycerine and water. Experiments, using various concentrations, have proven that the best mixture is one part glycerine to two parts water. Glycerine should be added to warm water when mixing.

The weather makes a difference in the time required to treat foliage; dry, warm weather hastens the process, because plants transpire more readily during such time. The greater the transpiration rate, the more material absorbed, the quicker the treatment.

Mature branches with mature leaves should be used for preservation of foliage .

METHOD OF TREATING THE MATERIAL

Branches must be picked in the cool of the day; early morning or late afternoon, or when they contain the greatest percent of moisture. Always make sure that the plant is at its peak freshness.

It is wise to start with a branch large enough to allow for trimming or cutting later. Remove all broken, crushed or insect eaten leaves and any other parts not wanted in the finished product.

One of the best methods for accelerating absorption is to crush two or more inches of the base of the stem. This furnishes a larger surface through which the plant may absorb the solution. As soon as possible after crushing, submerge the plant stems in the glycerine-water solution.

A word about solution containers. Narrow containers keep the solution level at the proper height and have the advantage of requiring less solution. It is not necessary to use glass containers, because the material of the container appears not to affect the treatment.

Next, place the container and plant out of drafts and sun. Keep the plant in the solution until the leaves begin to change color. During this process, you can observe the solution traveling up the stems and into the veins of the leaves. The branches may be removed from the solution any time after the solution has traveled past the leaf joint of the upper most leaf. The smaller the amount of solution in the branches, the dryer the treated branches, resulting in brittleness. The more solution the branch absorbs, the more pliable the branch will be.

The method of treating with less solution will result in effective mottled patterns; in many cases giving some very interesting results. For other unusual effects, the use of food color or other vegetable oil stain mixed with the solution will impart interesting shades.

Special attention should be given to Eucalyptus, one of the most versatile plants to use for preservation. First, treat the branch in the usual manner, crushing stem, etc. Then extend the absorption time until you see the solution bubbling out of the stem. This is an indication that the branch has absorbed all it can, and is now beginning to transpire the excess solution. Now expose the branch to full, hot sun for two or three days. You will observe that the sun will bake a very beautiful reddish brown color into the leaves of the branch. The main stems of the branch will be almost ebony-black. Wiping the leaves with a soft, dry cloth will give them a very high luster.

One point should be considered in treating slow growing plant materials. Their treatment time may be quite lengthy. An example of this kind of material is *Magnolia grandiflora,* which may take as much as six weeks to obtain the desired results. In order to obtain a very dark brown, or almost black leaf it is often necessary to make a fresh cut and a fresh crush at the base of the stem after a week of treatment. Often, when using Magnolia the absorption rate will seem to slow down. This results in dry edges on the leaves. The leaves can be dabbed with the glycerine solution to prevent such drying. The solution is absorbed through the leaves.

Foliage such as peach, apricot, pear and other soft leaves will hang limp after absorbing too much glycerine solution. There is a lot of experimenting still to be done in processing these types of leaves. Most leathery type leaves absorb the solution well. Fleshy or succulent leaves do not hold up.

Some of the trees and plants that will treat well are: *Magonlia grandiflora,* most eucalyptus, oaks (evergreen and deciduous), native and European sycamores, bays, loquat, acacias (both in and out of bloom), the *Prunus* family which includes the peach and apricot; oleander, camellias, Australian tea in bloom, heather in bloom, guava and pittosporum. Some weeds are treated to advantage, such as dock.

Materials preserved by the described process will last from six months to two years depending upon the type of leaf and the glycerine saturation of the foliage.

Information Aid
Descanso Gardens

Salt Affected Soils

DONALD EBERHARD

Many soils in the Western United States contain sufficient salts to restrict or prevent plant growth. This problem is common in areas of low rainfall and, unless it is understood and prevented, extensive damage may occur.

TYPE OF SALTS

Salts most commonly found in soils consist primarily of sodium, chloride, nitrate and sulfate; secondarily of potassium, bicarbonate, carbonate, nitrate and boron, which may take the form of sodium chloride (table salt), magnesium sulfate (Epson salts), calcium sulfate (gypsum) and other combinations.

SOURCE OF SALTS

The primary source of all salts is the earth's crust. Decomposition of rocks by weathering processes releases salts in a soluable form. In high rainfall areas, the salts are normally leached through the soil into the ground water and eventually to the ocean. In arid regions, where rainfall is not sufficient to leach all of the salt out of the soil, salts collect in low areas or are washed into streams or rivers. This water, with its load of salts, may be used again and again downstream for irrigation, such as with the Colorado River. The accumulation of salts to a harmful degree may be caused by certain irrigation practices.