

ARNOLDIA



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LABELS IN THE ARNOLD ARBORETUM

R EQUESTS are constantly being received at the Arnold Arboretum for information regarding the labels used on the thousands of trees and shrubs growing here. Many types are available and those found satisfactory in one place may not prove to be the same elsewhere.

Labels in the Arnold Arboretum must be :

1. Low in cost
2. Easily made
3. Sturdy

Since thousand of labels must be made every year by our own crew during the winter months and unfortunately become exposed to occasional vandalism, it is easily seen that they should meet those three prime requisites.

Other kinds have been tried over the years, but the types described here have proved satisfactory after many years under our conditions.

Embossed or Record Label

Every plant of sufficient size to be placed in the collections has a label showing its record number, scientific name, the type of material which was originally received (whether plant, cutting, graft or seed), place of origin and sometimes the date, although this is also indicated by the record number. These are made on $\frac{7}{8}$ -inch zinc tape (no. 018 gauge) purchased from Alles Corporation, 225 Msgr. O'Brien Highway, Cambridge, Massachusetts. Each carton contains six 100-foot rolls and currently a carton costs \$17.50.

These labels are made on a Graphotype embossing press (Addressograph Model 6340, priced in 1962 at \$1900). This press is electrically operated, having a keyboard similar to a standard typewriter. Another embossing press used by the Arnold Arboretum is the hand operated Model T-40 "Tapewriter" (Roovers, Inc., Duryea, Pennsylvania, priced in 1962 at \$735). This machine can emboss from one to five lines.

Labels are made on either of these machines by our own men during the winter months. This label is attached to a branch by means of no. 18 gauge copper wire and will last as long as the wire. Recently some labels were removed which must have been on the plants for twenty years and were still in perfect condition. Thousands of these are made each year since some are inadvertently removed in pruning, others are "lost" in the center of shrubs and still others occasionally break off and fall after slapping against the tree trunks.

Plastic Labels

In a few of the protected areas about the greenhouse and in the plant beds at the Case Estates in Weston we are starting to use the laminated plastic labels. These certainly look well for the first few years, but their long-term durability under New England weather conditions is not yet known. These are made of layers of white and black plastic. The router bit of the engraving machine used for cutting out the letters merely cuts through the layer of black plastic on top, thus exposing the white underneath (Plate I). The engraving machine is made by the Green Instrument Company, 295 Vassar Street, Cambridge, Massachusetts (Model 106, with accessories, costing about \$425 in 1962). The plastic material varies in size and thickness to meet specific requirements. The labels are placed in aluminum holders stuck in the ground.

Wooden Display Label

These are made of white pine strips $8\frac{3}{4}$ inches long, $1\frac{1}{2}$ inches wide and $\frac{3}{8}$ inch thick, planed on all four sides. Pressure paint sprayers are used to apply the paint. DuPont "Dulux Outside White" is used, the first coat thinned somewhat, the second with as little thinning as possible. Special racks have been made to accommodate as many as 2000 labels at one time while being sprayed.

The printing of the labels is done from carefully prepared lists which include the scientific and common names of the plant and its habitat, set up as they are to appear on the label. The rubber type used (from R. A. Stewart Company, 80 Duane Street, New York, New York) is set up in special holders made to conform to the size of the label. Three sizes of type are used: nos. 105, 851 and 998. A special long-lasting ink (Special Black no. 54c 5479) is obtained from the Interchemical Company, 175 Albany Street, Cambridge, Massachusetts, and the fluid for cleaning the ink from the rubber type is "Fedroid" made by the James H. Matthews Company, 375 Broadway, Boston. The ink is applied to the type by a rubber roller and the type holder and label are pressed tightly together with a small binding press borrowed from the library. We have found it expedient to make twice the number of labels currently needed. The extras go into a file for future use.

When the ink is thoroughly dry a coat of DuPont "Clear Varnish" RAK-190 is sprayed on the printed side of the label. This improves the appearance of the label and extends its usefulness several years. Finally, two small holes are drilled

ACER GRISEUM
PAPERBARK MAPLE
WESTERN CHINA

JUNIPERUS PROCUMBENS
PROCUMBENT JUNIPER
JAPAN

ENKIANTHUS PERULATUS
WHITE ENKIANTHUS
JAPAN

COTONEASTER
HORIZONTALIS
ROCK COTONEASTER

BRACIATOR
1938

PLATE I

Labels at present in use at the Arnold Arboretum. Upper left: Trunk label. Upper right: Stand label. Center: Wooden display label. Lower left: Laminated plastic label. Lower right: Embossed record label.

in one end of the label and it is strung with no. 16 gauge copper wire for hanging on the plant. We find that with this treatment these wooden labels will remain on the plants in good condition for approximately ten years.

Metal Display Labels

These are of two types (Plate I), one with two holes is put on a metal stand placed before a low shrub and the other, with four horizontal slits, is nailed to a tree trunk with galvanized nails. The nails are placed as close together as the slits allow and, when driven into the tree trunk, at least one inch of the nail should protrude so that there is room for growth as the tree increases in girth. Both metal display labels are made of cold rolled steel; in the case of the trunk label, 20 gauge metal cut $4\frac{1}{2}$ inches by $6\frac{3}{4}$ inches; in the case of the stand label, we use 18 gauge metal cut 4 inches by $6\frac{1}{4}$ inches. Both types of unpainted plates are made for us by W. T. von Schoppe, 35 Otis St., Watertown, Mass. They are first washed with DuPont "Prep-Sol" no. 3919 to remove the oily film from the metal, then wiped thoroughly dry and sprayed with one priming coat of DuPont "Preparakote Gray" followed by two coats of DuPont "Dulux Yellow" no. 93-24441, the paint being thinned only enough to allow smooth spray applications. In most cases "Vari-Temp Reducer" no. T3864 is satisfactory, but if spraying is done in a cold room, then Reducer no. T8508 is used. The labels are then printed in the same manner as the wooden labels and finally sprayed with a coat of DuPont "Clear Varnish" RAK 190.

Carved Wooden Directional Signs

Signs are placed about the Arboretum to show visitors the paths leading to the main collections and to the exit gates. These are made of first quality cypress planks, 30 inches long, 12 inches wide and 2 inches thick, but of course other woods might also be used. They are carved on a regular drill press, using a 5/16-inch router bit ground to make a V cut. At first these signs were coated with linseed oil, but it was found that after several years the wood darkened materially, making the letters difficult to read from a distance. To avoid this, a dark shingle stain is now used and the letters are painted with a bright yellow weather proof paint which lasts for several years.

It is necessary, of course, to keep a complete set of maps showing the location of the plants growing in the various areas and to check them from time to time for missing labels. Some collections, such as the lilacs, are reviewed every year, while otheas are done every three years. These, then, are the labels and methods of making them at present in use in the Arnold Arboretum.

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