

New Techniques in Creating Plant Labels for the Public at UCSC

Ray Collett

The Slosson Gardens at the University of California Santa Cruz Arboretum was dedicated by the Regents in 1978, and has come to contain a large collection of plants of Australian origin. Of special interest in recent years are approximately 2,000 drought-tolerant ornamentals, all of which were originally found, imported or developed by the Arboretum. Many of those have been made available to the nursery trade and have become popular landscaping products. Home gardeners, cut-flower growers, landscape managers and designers, and members of the nursery industry have visited in great numbers to view, examine and compare the plants in this collection, as well as in other Arboretum areas.

Identification of specimens in any botanic garden or arboretum is an essential service that such facilities provide to the visiting public, but our original system was not entirely satisfactory. From the outset, the Arboretum labeled its plants with handwritten anodized aluminum tags, which were durable and inexpensive. The information was minimal, however, and not legible from distances of several feet. With a Slosson Fund grant the Arboretum undertook a project to design and install new labels and signs throughout the gardens. New methods of design and production have allowed us to create a system which combines attractiveness, durability, economy and greater educational value.

Computer Solutions

The advent of desktop computer graphics, in combination with the slightly older technology of aluminum sign making, now allows public gardens an important possibility for producing the numbers and kinds of labels and signs that they need. Desktop computers make it possible to produce labels that follow the typographic conventions of botany and horticulture. Moreover maps and other graphical materials can be included in the text of labels. Errors can be minimized, since material in data banks can be copied by computer directly onto labels. Type can be easily sized and resized to economize on the space available, which is an important consideration since plant names vary greatly in length.



Visitors appreciate maps showing distribution of species in the wild.

For our project, we employed conventional page layout software, which readily gave us the ability to type and to print labels in columns, with pre-set tabs and margins. Bit-mapped graphics were designed so that they could be reproduced in a smaller size (designed at 72 dots per inch for printing on a laser printer at 300 dots per inch). The cost in terms of computer memory was thus generally in the range of 8K to 12K bytes per map (rather than 30K to 60K bytes for object-oriented maps of equivalent attractiveness), and large sheets of labels could be economically composited and printed from documents of small size. An object-oriented drawing program was used to produce fine-lined grids, which were imported and placed in the layouts. Grids were necessary to enable accurate cutting of individual labels from completed anodized sheets. Object-oriented male and female symbols were also created to match the typefaces used, for such symbols were not otherwise available.

Macros were designed to help with repetitive operations, but final decisions regarding the appearance of labels were made by individuals who controlled balance, hyphenation, optimum type size and similar matters.



Anodized aluminum on bent vinyl-coated steel rods make durable and unobtrusive labels.

Documents were printed by laser printer on paper, and from the paper masters, photographic negatives were created. (Laser printers can print on acetate sheets, but, so far, the blacks produced have not been of high quality.) A commercial shop then transferred the negative images to anodized aluminum sheets from which the individual labels were cut.

Design and Production of Holders

Durability and appearance of label holders was also a critical consideration, and we chose several types of mountings which would be attractive to visitors but not enticing to vandals. Using pressure-treated and chemically-treated lumber, we attached the labels for trees and large shrubs to two-by-fours and fixed larger signs to four-inch-by-four-inch posts. Buried portions of those posts were dipped in tar emulsion to eliminate leaching of preservatives. For labels for small plants, we used vinyl-coated steel rod. Fortunately rod-bending equipment and services were available from a local manufacturer of merchandise display racks. Simple design and brown color

make the holders as unobtrusive as possible, and longevity of both treated wood and vinyl-clad holders should exceed 30 years.

Signs in Place

Much of what the visiting public wants to learn about individual plants are names, and the new labels present genus, species, cultivar and other names which are visible from a distance. We supply additional text economically, in some cases using large signs to convey information regarding groups of specimens rather than reproducing the same information on many labels.

The public also appreciates maps showing distribution of plant species in the wild, and when possible we have provided maps on labels and signs. Distribution maps have been difficult to obtain, but since botanical publications increasingly are creating such materials, more of our labels will eventually contain them.

Ray Collett is Director, Arboretum, University of California, Santa Cruz.