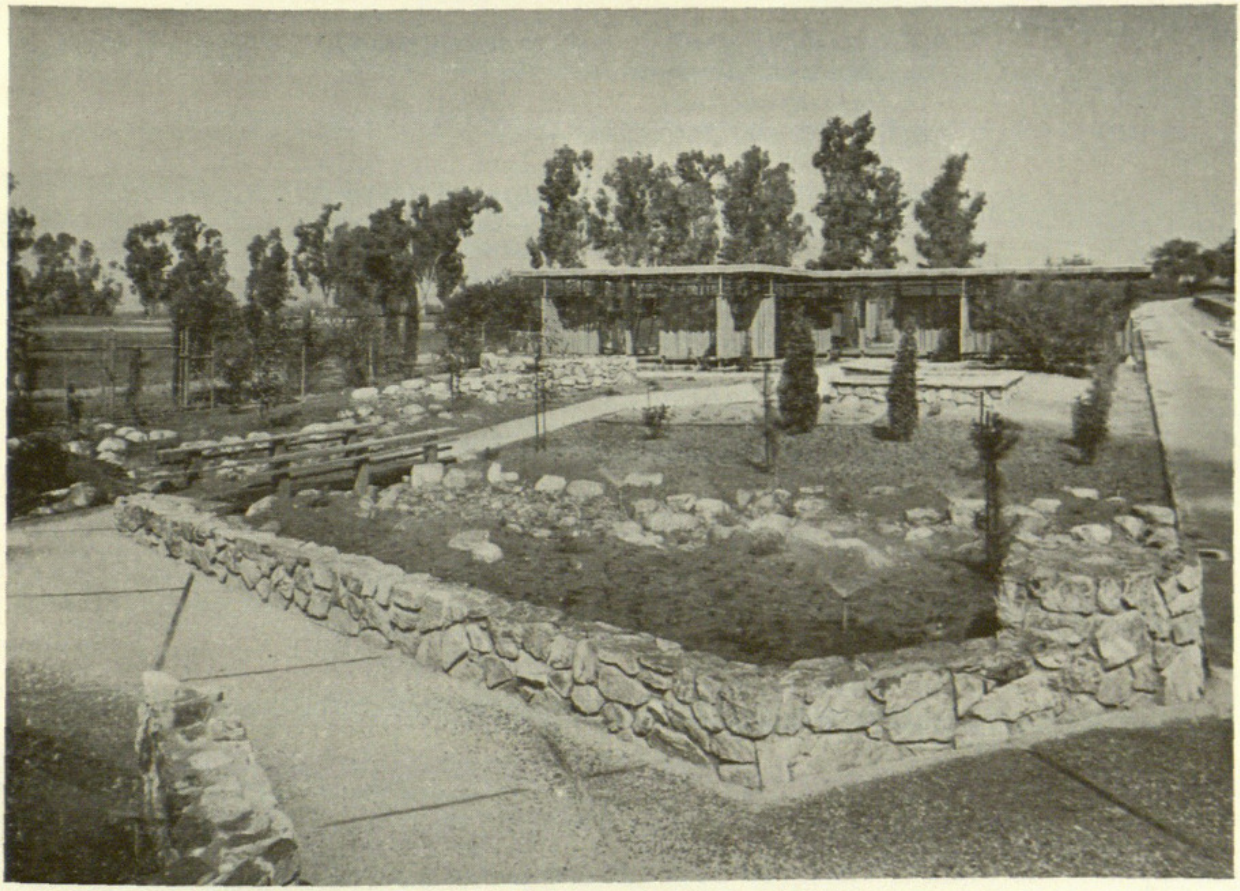
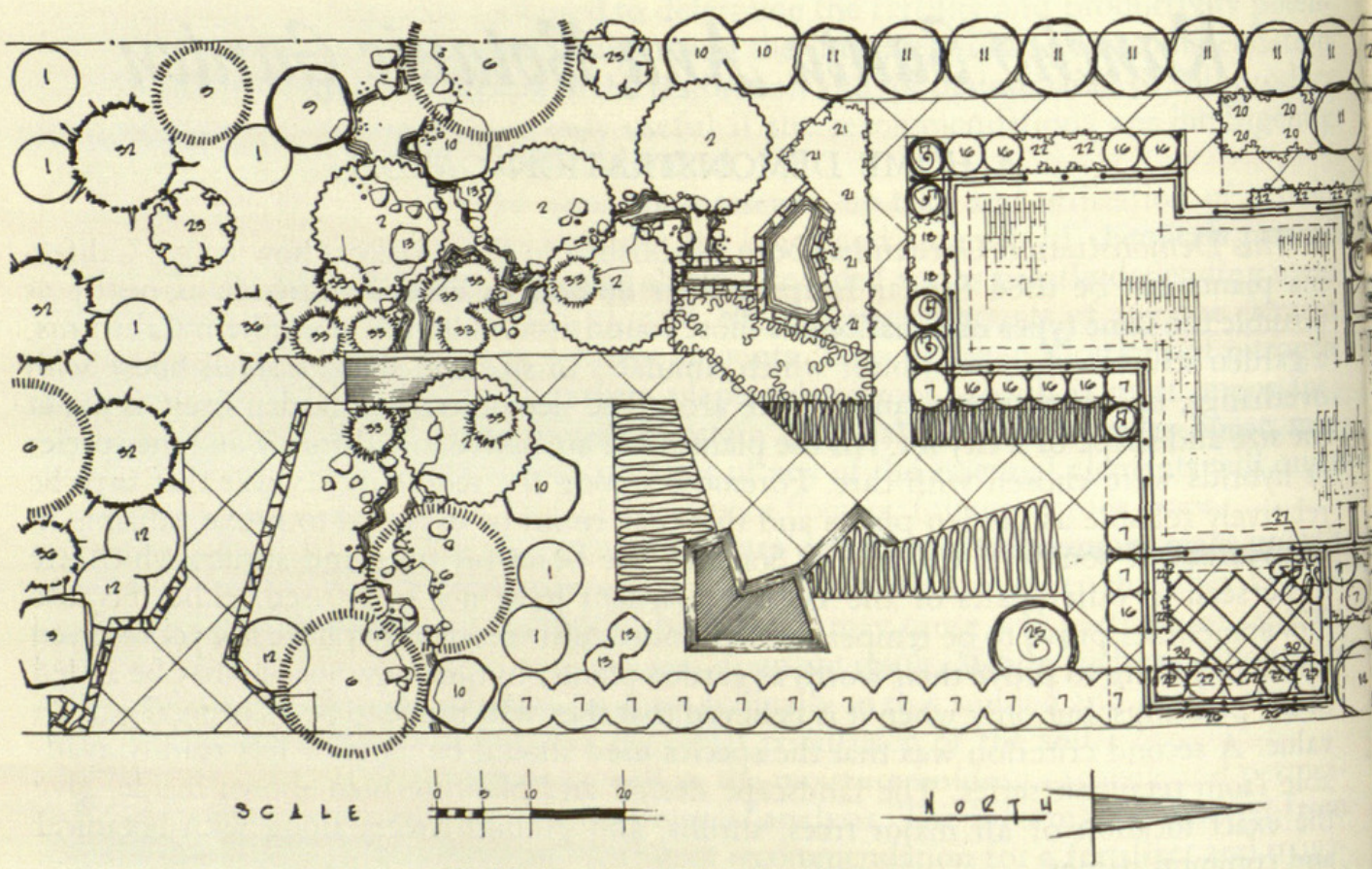
Rancho Santa Ana Botanic Garden

A HOME DEMONSTRATION GARDEN

This Demonstration Garden has been established to show visitors how native California plants can be used for landscaping their homes. In order to provide as nearly as possible the same types of situations as those found around homes in southern California, a garden structure has been built which simulates in size and shape a small house with overhangs, openings, patio, and service area. The demonstration garden itself is about the size and shape of a city lot. All the plants used are native to California and the species or hybrids were chosen with care. Foremost among the requirements was that they be relatively reliable as garden plants and that they could be expected to prove valuable in many areas of southern California. Some of the beautiful trees and shrubs which are to be seen in other parts of the Botanic Gardens have not been used, either because they sometimes prove to be temperamental under cultivation or they have not yet received sufficient testing to prove their worth as garden plants. In time new species may be added to the plantings, but only when it is believed that they will prove to be of general garden value. A second criterion was that the species used should be more or less readily available from retail nurseries. The landscape design and planting plan shown inside, give the exact location of all major trees, shrubs, and ground covers along with botanical and common names.

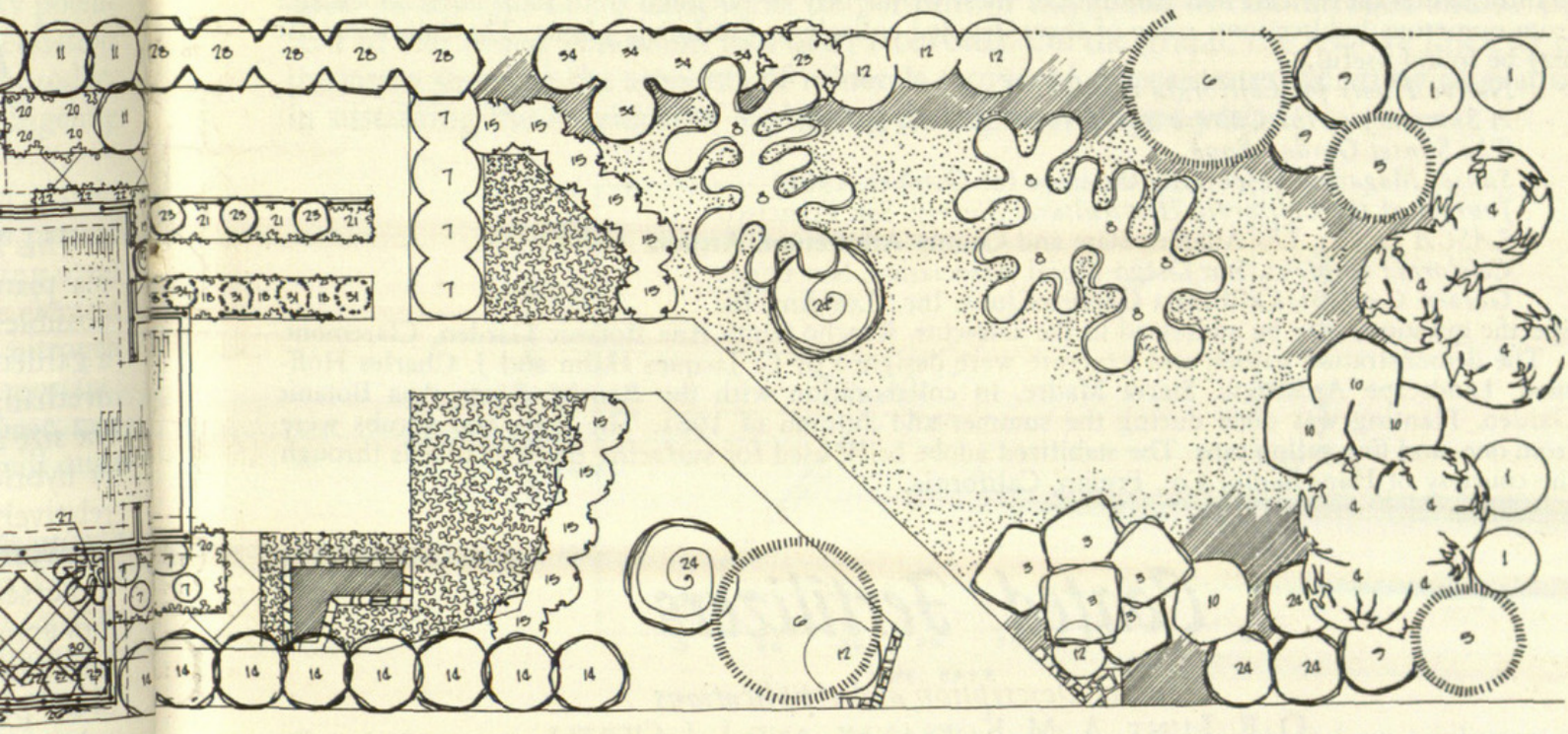


As visitors approach from the south, this is their first view of the Home Demonstration Gardens. The model "house" is located near the center of the landscape project. Photo: Douglas Ebersole.



PLANT MATERIALS LIST

NO.	BOTANICAL NAME	COMMON NAME
1.	*Libocedrus decurrens*	Incense Cedar
2.	*Alnus rhombifolia*	White Alder
3.	*Lyonothamus floribundus* var. *asplenifolius*	Island Ironwood
4.	*Lithocarpus densiflora*	Tan Oak
5.	*Pinus coulteri*	Coulter Pine
6.	*Pinus radiata*	Monterey Pine
7.	*Torreya californica*	California Nutmeg
8.	*Platanus racemosa*	California Sycamore
9.	*Fremontia* 'California Glory'	Flannel Bush
10.	*Heteromeles arbutifolia* var. *maceocarpa*	Island Toyon
11.	*Prunus lyonii*	Catalina Cherry
12.	*Arctostaphylos densiflora*	Sonoma Manzanita
13.	*Arctostaphylos pumila*	Dune Manzanita
14.	*Rhus ovata*	Sugarbush
15.	*Myrica californica*	Wax Myrtle
16.	*Ribes viburnifolium*	Catalina Evergreen Currant
17.	*Berberis dideriana*	Barberry
18.	*Berberis redens*	Barberry



C. JACQUES HAHN - J. CHARLES HOFFMAN LANDSCAPE ARCHITECTS

PLANT MATERIALS LIST

NO.	BOTANICAL NAME	COMMON NAME
19.	*Asarum caudatum*	Wild Ginger
20.	*Heuchera hybrids*	Alum Root
21.	*Iris hybrids*	Iris
22.	*Polystichum munitum*	Sword Fern
23.	*Umbellularia californica*	California Bay
24.	*Ceanothus* Species and Hybrids	
24.	*Ceanothus* Species and Hybrids	California Lilac
25.	*Ceanothus* 'Cal Poly'	California Lilac
26.	*Vitis californica*	California Grape
27.	*Woodwardia chamissoi*	Chain Fern
28.	*Comarostaphylis diversifolia* var. *planifolia*	Summer Holly
29.	*Rhododendron occidentale*	Western Azalea
30.	*Whipplea modesta*	Yerba de Selva
31.	*Berberis amplectens*	Barberry
32.	*Juniperus occidentalis*	Western Juniper
33.	*Juniperus communis* var. *saxatilis*	Dwarf Juniper
34.	*Arctostaphylos insularis*	Island Manzanita
35.	*Picea sitchensis*	Sitka Spruce
36.	*Cupressus bakeri* ssp. *matthewsii*	Siskiyou Cypress

Denotes *Ceanothus criseus* var. *horizontalis* ..... Carmel Creeper
Denotes *Arctostaphylos edmundsii* ..... Little Sur Manzanita
Denotes *Arctostaphylos viva-ursi* var. *coactilis* ..... Bear-Berry
Denotes Native Annuals and Perennials
Denotes Hybrid Ornamental Strawberry No. 25 ..... Strawberry
Denotes *Dichondra repens* ..... Dichondra

Information on the care and handling of these plants may be obtained from local nurserymen and from numerous publications, some of them devoted entirely to California plants. The following list may be found useful.

Native Plants for California Gardens, Lenz
A Summary of the Culture of California Plants, Everett
The Sunset Garden Book
Sunset Magazine (especially the issue for October, 1961)
Journal of the California Horticultural Society, San Francisco
LASCA Leaves, Los Angeles State and County Arboretum, Arcadia
California Gardens, San Diego Floral Association, San Diego
Golden Gardens, California Garden Clubs, Inc., Los Angeles

Specific questions may be addressed to the Director, Rancho Santa Ana Botanic Garden, Claremont.

The demonstration garden and structure were designed by C. Jacques Hahn and J. Charles Hoffman, Landscape Architects, Sierra Madre, in collaboration with the Rancho Santa Ana Botanic Garden. Planting was done during the summer and autumn of 1961. The trees and shrubs were from one- and five-gallon cans. The stabilized adobe brick used for surfacing the structure is through the courtesy of Hans Sumpf Co., Fresno, California.

Coated Fertilizers

General Description and Applications

O. R. LUNT, A. M. KOFRANEK, AND J. J. OERTLI
University of California, Los Angeles

Reprinted from California Agriculture, *December, 1961 and* California Turfgrass Culture, *January, 1962.*

In the coating process, individual granules of inorganic fertilizers are coated with resinous, polymeric membranes. When such granules are placed in contact with water or moist soil, water passes through the membranes and dissolves some of the fertilizer. A saturated solution with considerable osmotic pressure develops within each capsule. The coated granules swell and become spherical in shape. Apparently the dissolved fertilizer materials diffuse through the membranes into the outside solution. The rate of diffusion is regulated by the thickness of the membranes and is relatively steady until about two thirds of the fertilizer has been released. The rate of transfer through the membranes is not markedly influenced by steam sterilization of soils or by other conditions occurring in soils, except dryness. The influence of soil conditions on diffusion rates will be the subject of a subsequent article.

Nitrogen (including urea), phosphorus, potassium, and mixed fertilizers can be coated. With some coatings, the minerals have been released over a period exceeding six months. A depletion time of 4 or 5 months is adequate for many crops.

After all the minerals have passed through a membrane, the solution is withdrawn from the capsule, apparently by soil-moisture suction. The membrane shrinks, becomes brittle, and is easily crushed between the fingers. The swollen condition distinguishes coated particles which are still functional from those which are exhausted.

DURATION OF SUPPLY

To illustrate the duration of mineral supply from coated fertilizers, 500 granules of coated 20-10-5 fertilizer were examined after 112 days in soil with a growing crop. Of the lightly coated granules, 37.4 per cent were still swollen; of the medium coated, 49.6 per cent; and of the heavily coated, 58.2 per cent.

The graph shows cumulative quantities of nitrate nitrogen and of potassium released from a 60-centimeter column containing 30 grams of coated 10-10-10 fertilizer uniformly incorporated in 1 kilogram of krilium-treated soil. The column was leached every few

1962. "Rancho Santa Ana Botanic Garden: a home demonstration garden." *Lasca leaves* 12(Spring 1962), 35–38.

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