parts of Southern California for local testing. During the next two years the behaviour of the plants was checked

periodically.

"Hybrid Ornamental Strawberry No. 25," the name by which this clone is known, is believed to be a ground cover which is superior to the Beach Strawberry by being more vigorous, larger in all its parts, and in addition produces dessert quality fruit for the home. The selected name at first appears to be unnecessarily long, but it was chosen only after careful deliberation. In the first place this hybrid is not to be confused in any way with the commercial type strawberry. The fruit, while perhaps more flavorful than many commercial varieties, has several characteristics which make it unsuitable for commercial use. The berries tend to be soft and rather fragile so that they could not be packed or shipped and they also tend to be pale in color. Another characteristic of the variety is that they reach their flavor peak before they attain their full color and should therefore be picked while they still appear to be somewhat green. Concerning flavor it is interesting to note that Etter many years ago said that the "most exquisite flavors the strawberry will ever know will be derived from the various forms of the chiloensis species."2

This hybrid appears to be quite adaptable to various soils in Southern California and can probably be grown in any soil

suitable for general gardening, although they are probably at their best in sandy loam. In hot inland areas this hybrid does best in semishade. The plants require watering about every week or ten days during the summer to keep them at their prime. During late fall or winter some of the leaves may become brown and discolored and this is then a good time to give them their yearly renovation. The leaves can be mowed off with a lawnmower if the blades are set high enough to avoid injuring the crown. The old leaves and excess runners are raked off and the plants fertilized and watered. Within a couple of weeks the area should be covered with a smooth even mat of fresh new leaves. In order to maintain fruit production, the plants should be thinned about every two years. So far the plants have not been troubled by diseases and the only insect pest that has been noted is an occasional attack of aphids in the early spring.

Editor's Note: Of prior interest to readers of Lasca Leaves, on the subject, Fragaria chiloensis, is the leading article appearing in Vol. III, No. 4, Autumn 1953, pp. 59-61, "White Flowering Native California Plants for Garden Use," by Katherine K. Muller, Director, Santa Barbara Botanic Garden, Santa Barbara, Calif. The cover picture of the same issue, described briefly on page 79, is a close-up of this useful ground cover.

²Quoted by Wilson Popenoe in "The Chilean Strawberry," Jour. Hered. 12: 457-466.

PLANT INTRODUCTIONS FOR 1954

PHILIP EDWARD CHANDLER

REVIVAL of some things old, several items new, one good low shrub borrowed... thus might one paraphrase the "introductions" in this year's nursery trade. All are new as far as the nursery-going public is concerned. As to their best use in the landscape-scheme, only time will tell. The fact that they are now available is news, and we have ventured to suggest in the notes below some of the better known ornamentals with which these newcomers may be planted harmoniously.

Hibiscus tiliaceous, in one form or another, has been a collector's item, doubt-

less, for a generation or more in relatively frostless areas, but its appearance in numerous gardens dates from 1954. Common near the sea in tropical countries, it is not always regarded as an ornamental in such environment, because of its great size and aggressive qualities. In Hawaii, it is the "hau" where it is pictured as "an erect, gnarled, crooked tree of low or medium height [but] in other places, spreading horizontally over the ground in thickets, forming an apparently impenetrable network of trunks and branches."*

*Marie Neal: "Gardens of Hawaii."

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to be excluded for a private residence or even a public building. Protection can be afforded to plants grown in the field by the application of dithiocarbamates to the leaf surface. This class of material offers specific protection from damage by the oxidized hydrocarbons. Some dithiocarbamates are currently available on the market at moderate price. One that is commonly sold as a fungicide for the control of leaf blights is zinc ethylene bisdithiocarbamate. This same material is often referred to as zineb. Zineb is sold under a variety of trade names but can always be recognized by reading the list of active ingredients on the package. Research has not progressed sufficiently to indicate at this time just how often the dithiocarbamate should be applied to plant material sensitive to oxidized hydrocarbons, or in what quantity.

The abatement of hydrocarbon losses from the air mass is difficult to accomplish and time consuming because of the multitude of contributors. The effects of air pollution damage are real to the agriculturist and cause great economic loss. Damage to 11 agricultural crops in 1949 in the Los Angeles area alone was estimated at slightly less than 1/2 million dollars. Estimates based on surveys in 1953 indicate that losses will exceed three million dollars. This increase in loss is due not only to recognizing damage on a greater variety of plants but also due to increased community activity and industrial development. It is hoped that the results of the air pollution research activity at the University of California at Riverside will permit some identification of oxidized hydrocarbon injury to plants in other parts of the world, and some immediate relief to the producer of food, forage, and flower crops, grown in the Los Angeles and San Francisco areas.

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In California, it is neither aggressive nor of great size, but is an unusually arresting shrub of 6'-10' across with rounded heartshaped leaves which vary greatly in size from 2"-12" in diameter, leathery, and with edges entire or scalloped, the upper sides rather smooth, varying in color from green through bronze to red, sometimes with conspicuous ribbing. In seasons of very cool nights, the foliage is even more brightly hued, though the plant is virtually evergreen unless damaged by frost of which it is definitely tolerant. This foliage color is the outstanding feature of Hibiscus tiliaceous in the Los Angeles area, one not observed on it in tropical climates. Flowers, 2"-3" long, open as yellow cups, some with dark eyes; later in the day, they deepen to apricot or dull orange; by night, to dull red. The inflorescence is not profuse, nor is it conspicuous. Of rather easy culture, in fairly rich soil, it prefers a warm location, free of strong winds. The authority of the plum color of Hibiscus tiliaceous may be emphasized to advantage by a companion planting of Echeveria metalica, (perhaps as a ground cover), or Phormium tenax, variety Silver Bronze.

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