Looking Forward

In reviewing the literature it is emphatically revealed that newly developed chemicals possess a wide range of toxicity and effectiveness. This fact justifies in part the enthusiasm with which some scientific people have endorsed and recommended general usage. However, complexities resulting from general usage are beginning to appear and may in time reflect badly upon those who have been too hasty in their appraisals. Requirements for the wide-spread use of newly developed chemicals are: safety to soils; safety to public health; safety to plants; safety to farm animals; safety to beneficial insects; and safety to wildlife. Such complete information has not been obtained thus far for the newly developed insecticides.

Indications of troubles arising from ill advised use of chemicals are classically illustrated by the possible effects upon the soils. DDT may tend to retard plant development when used at certain rates. The retardation effect may depend upon the degree of acidity or alkalinity of the soil, or the amount of organic material or colloidal clay that is present.

Data is rapidly being recorded that indicates the tremendous toxic effect that newly developed chemicals have upon the parasitic and predaceous enemies of economic insect species. Thus has been demonstrated the abnormal increase of scale insects on citrus, aphids on deciduous fruits, and pests of vegetables due to the heavy destruction of beneficial species. This upsets the biotic complex to such a point as to endanger crop production. Time must be taken in the detailed investigation of all problems involved in the use of such chemicals.

It is quite evident that we are well advanced into a new insect control era. We are well equipped, for this period in human affairs, with great Industrial Agencies staffed and equipped for the synthesis and manufacture of new chemicals, and with thousands of well trained entomologists who ask mainly for the opportunity to serve. If provision is made for the proper appraisal of these new developments it will result in a worldwide advancement of civilization.

FLOWERING TROPICAL TREES—A PLANTING PROGRAM FOR FLORIDA

By Edwin A. Menninger
"The Flowering Tree Man"
Stuart

Florida needs a well-rounded program of ornamental tree-planting. There are three distinct zones in this state: north Florida with its usually acid soil and temperatures as low as 18 degrees; central Florida with its neutral, or sometimes acid soil, with temperatures as low as 25 degrees; and south Florida, with its predominantly limestone soil and a minimum temperature of 32 degrees.

For each of these areas it is necessary to work out a schedule of the trees best suited for special purpose planting, particularly highways, parkways, yards, parks, cemeteries, community forests, special locations on the waterfront which are exposed to high winds, salt spray, or occasional inundation, and lastly, trees which best resist hurricane winds.

In working out such a schedule, we should consider trees that provide a combination of shade and flowers, those that are particularly useful in providing shade, those that are distinguished mostly for their showy flowers, and those which, like mahogany, the tung oil, and many similar trees, can be planted with the thought of timber or nut crops.

Progress in working out a program of ornamentals is slow because, to begin with, there is no immediate dollar appeal. Economic factors have promoted extensive research and experimental planting in connection with fruit and timber crops in Florida, but there are no funds for trial efforts with ornamental trees. Even the University of Florida Experiment Station at Homestead gets insufficient money from the Legislature to provide one single horticulturist to study ornamental trees, and there are too few horticulturists in private life in Florida who are able to devote their efforts to the esthetic field.

Inadequately explored is the field of propagation. It is hard to get tree seeds from abroad, and many that do come in lose their viability in transit because tropical seeds are notably short-lived. Many introduced trees fail to bear seed when planted in Florida, perhaps because of the absence of the requisite pollinating agency. Moreover, methods of propagation used for other plants are often unsuccessful in growing tropical trees. Considerable research needs to be done in this field, and it is noteworthy that the University of Miami has added a research staff this year to make studies in this particular field.

Entirely unexplored is the matter of vegetative propagation, which is the only manner in which we can get the choicest and surest flowering strains in our tropical plants, and it is the only way in which we can develop root systems suitable for some parts of Florida. For example, in south Florida, where the water table is within a few feet of the surface of the ground, deep-rooted trees will not grow. And it is necessary in these areas to do considerable experimental work to ascertain which root stocks with shallow, spreading root systems are best adapted for growing the flowering trees suited to the locality.

More different kinds of trees are under cultivation today in Florida than in any other State in the union. Besides 300 native trees, there are 800 exotic shade and ornamental trees in various stages of introduction in Florida and more than 200 species of fruit trees—1300 in all, But these represent less than one-third of what can be grown here, and there is a tremendous unexplored field in new trees which Florida can use to bring to life its millions of idle acres.

In this vast forest, too large for any individual to encompass without getting lost in the woods, my special interest has been in trees that are distinguished by their showy flowers. Excursions through the floras of tropical countries reveal that there are more than 3,000 trees worthy of being classed as "flowering trees," in that their bloom is a conspicuous and interesting phase of the tree's growth and development. Of these 3,000 trees, not more than 500 have ever been introduced into the United States or any effort made to study them with reference to their usefulness as ornamentals. They are not trees which promise dollar returns, vast crops or extensive orchards, and consequently they fail to appeal to an economic-minded generation. However, these flowering trees do create a soul-stirring beauty, they do provide charm for our landscape, and they add lasting value that is measured in satisfaction rather than in money.

I call these flowering trees "the bouquets of the giants."

We, in the United States, have so much to learn about the beautiful trees which grow in other countries that it is difficult for us to take a starting place. Yet, in the limited scope of this paper, I venture to suggest at least thirty magnificent flowering tropical trees that deserve extravagant effort to introduce and establish in Florida for the beautification of our State. I shall ignore the many beautiful flowering trees we already have and attempt to stimulate your imagination and challenge your ingenuity to help bring to the Florida landscape some or all of these beautiful trees.

Let us begin with South America. On the western slopes of the Andes, in the sub-

tropical parts of northern Chile, there are two trees of exceptional merit. One is called the Evergreen Hazel (*Guevina avellana*) which is described by one authority as "one of the most beautiful of all trees," with snow-white flowers in spikes. From the same country comes report of a tree the Chileans call Firebush (*Embothrium coccineum*). One botanist has reported that it is "perhaps the showiest tree in the world."

Such expressions take in too much territory, because from time to time in other tropical countries, plant explorers have found trees which they, in turn, have described with equal enthusiasm. For example, a good many years ago, the great botanist Hooker expressed the opinion that the most beautiful flowering tree in the world was *Magnolia campbelli*, with its 12-inch pink flowers, and that the second most beautiful was the Indian tree *Talauma hodgsoni*, with its bell-shaped creamy white flowers. But even these two trees, fine though they are, must take a back seat when their beauty is compared to some of the other genera that have been observed more recently in other countries. For example, passing eastward over the Andes into the sub-tropical and tropical parts of northern South America, particularly Brazil, Colombia, and the Guianas, explorers have reported exceptionally beautiful trees of top rank. I might cite two or three examples from that area.

Adolph D. Ducke, famed Brazilian botanist, has done more to call the world's attention to what Brazil has to offer than anybody else, and his pick of the most beautiful trees to be found in that part of the world belong to two genera we in the United States have never even heard of. One of these is the genus *Elizabetha*, and the other in the genus *Eperua*. These to us are only strange names. But there are a good many kinds of *Elizabetha* and a good many kinds of *Eperua* trees, some of them outstandingly beautiful, and offering great possibilities for use as ornamentals.

However, the Brazilian authorities do not agree. The Brazilian Government, through its Department of Agriculture, has twice published a book illustrated in color portraying the beautiful flowering trees of Brazil and it is noteworthy that the trees described in those books and pictured to best portray their beauty, include not the two choice genera suggested by Ducke, but instead we find presented trees of undoubted merit and certainly of great beauty in the pictures, with such strange names as *Moldenhaurea, Vochysia, Macrolobium, Calycophyllum*, etc.

Many Floridians are familiar with the Queen's Crapemyrtle (*Lagerstroemia speciosa*), an Indian tree which is beginning to be widely planted in south Florida and, as it does well here, it has become more and more popular for its lovely flowers, even if they do come in the summer time when tourists are not here. However, in the lowlands of eastern Peru where the climate is similar to ours, there grows another tree which in its general aspect resembles the Queen's Crapemyrtle, but is possibly better suited for ornamental planting because the flowering season is much longer, often three months, and the profuse blossom with bright pink petals and dark purple calyx, offers a dazzling appearance at a flowering season which in Florida probably would be between January and March when the tourists are here to enjoy the bloom. The name of this tree in Portuguese is Pau de rosas and the botanical name is *Physocalymma scarberrimum*. Presumably, if we could get it established in the United States, we would call it by some simpler name.

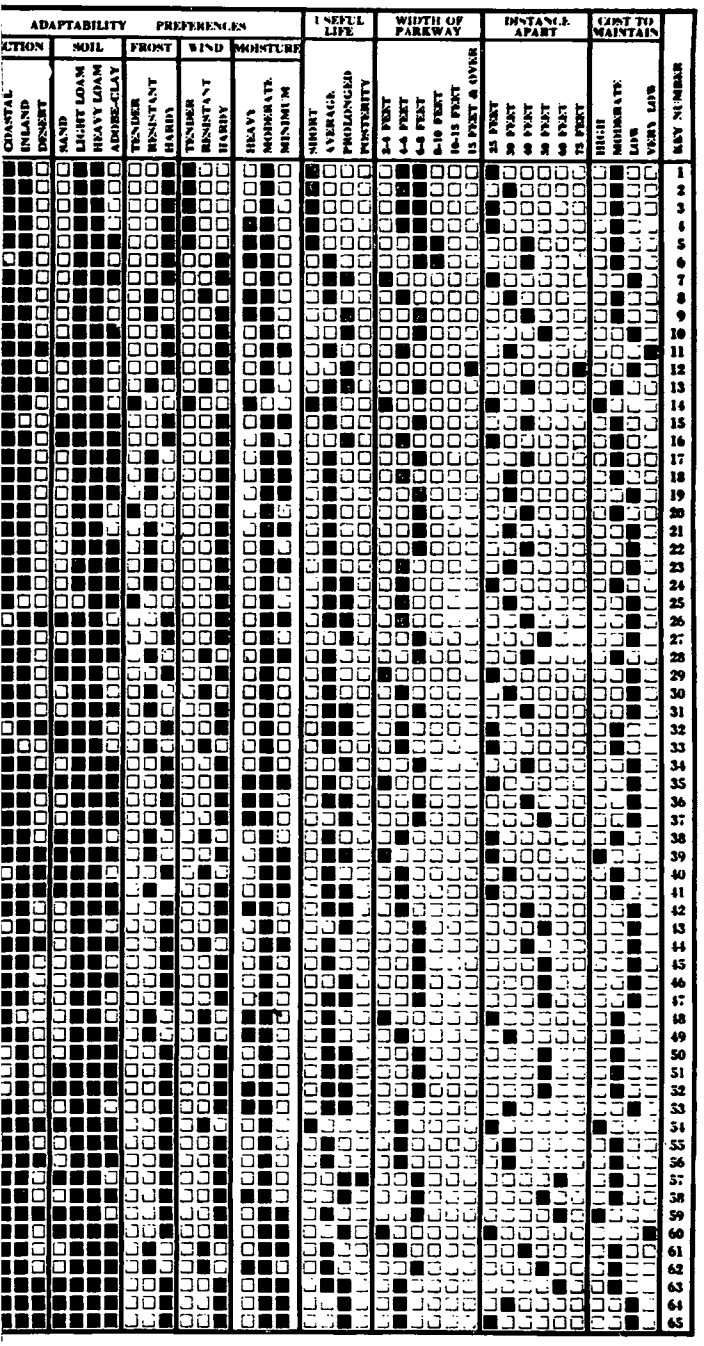
There is another Brazilian tree, *Sparattosperma vernicosum*, which Rock, the famous Hawaiian botanist, once referred to as "a magnificent spectacle when in full bloom and certainly deserving to be cultivated."

Over in Hawaii, where most of the cultivated plants are native of some other part of the world, they do have a few outstanding showy flowered trees which are indigenous in the islands and which are quite unknown elsewhere in the world. I

KEY NUMBER	BOTANICAL NAME	COMMON NAME	TYPE OF TREE					HABIT OF GROWTH					STATURE OF TREE				TYPE OF FOLIAGE						COLOR OF FLOWER						RAPIDITY OF GROWTH		
			EVERGREEN	HALF DECIDUOUS	DECIDUOUS	CONIFER	PALM	SPREADING	SPHERICAL	PYRAMIDAL	SLENDER	COMPACT	SPARSE	10 TO 30 FEET	30 TO 50 FEET	50 TO 70 FEET	70 FEET OR OVER	LARGE	MEDIUM	SMALL	ELONGATED	OVAL	NEEDLE	FERN LIKE	WHITE	CREAM	YELLOW	PINK	RED	ORANGE	BLUE	SLOW	MODERATE	FAST
1	Acacia baileyana	*Bailey's Acacia*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	□	□	□	□	□	□	■	□	□	□	□	□	□	□
2	Acacia dealbata	*Silver Wattle*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	□	□	□	□	□	□	■	□	□	□	□	□	□	□
3	Acacia floribunda	*Ever Blooming Acacia*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	□
4	Acacia latifolia	*Knife Leaf Acacia*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	□
5	Acacia melanoxylon	*Black Acacia*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	□
6	Acer dasycarpum	*Silver Maple*	□	□	■	□	□	■	□	□	□	■	□	□	■	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	□	□	■
7	Arbutus unedo	*Strawberry Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	□	□	■
8	Bligbia sapida	*Akee Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	■
9	Chlodendron capensis	*Cape Chestnut*	□	■	□	□	□	■	□	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	■	□	□	□	■
10	Camphora officianalis	*Camphor Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	■
11	Casuarina stricta	*She-Oak or Beefwood*	■	□	□	□	□	□	□	■	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
12	Cedrus deodara	*Himalayan Cedar*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
13	Ceratonia siliqua	*Carob*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
14	Cocos plumosa	*Queen Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊕	□	□	□	□	□	□	□	□	□	□	□	□	□	■
15	Cupressus macrocarpa	*Monterey Cypress*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
16	Erythea edulis	*Guadalupe Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊙	□	□	□	□	□	□	□	□	□	□	□	□	□	■
17	Eucalyptus cornuta	*Yate Tree*	■	□	□	□	□	■	□	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
18	Eucalyptus cornuta lehmani	*Lehman's Yate Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
19	Eucalyptus corynocalyx	*Sugar Gum*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
20	Eucalyptus ficifolia	*Scarlet Flowering Gum*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■	□	□	□	□	■
21	Eucalyptus leucoxylon rosea	*White Iron Bark*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
22	Eucalyptus polyanthemos	*Red Box*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
23	Eucalyptus sideroxylon rosea	*Red Iron Bark*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■	□	□	□	□	■
24	Eugenia myrtifolia	*Australian Brush Cherry*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
25	Ficus nitida	*Rubber Tree (small leaved)*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
26	Fraxinus velutina	*Arizona Ash (modesto type)*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
27	Ginkgo biloba	*Maiden Hair Tree*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
28	Grevillea robusta	*Silky Oak*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	□	■
29	Hakea laurina	*Sea Urchin Hakea*	■	□	□	□	□	□	■	□	□	■	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	■	□	□	□	□	■
30	Hymenosporum flavum	*Hymenosporum*	□	■	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	■	□	□	□	□	□	■
31	Jacaranda mimosaefolia	*Jacaranda*	□	■	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	■	□	□	□	■
32	Lagerstroemia indica	*Crape Myrtle*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■	□	□	□	■
33	Lagunaria pattersoni	*Primrose Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	■	□	□	□	□	□	■
34	Libocedrus decurrens	*Incense Cedar*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
35	Ligustrum japonicum	*Japanese Privet*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
36	Liquidambar styraciflua	*Sweet Gum*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
37	Magnolia grandiflora	*Southern Magnolia*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■
38	Melaleuca leucadendron	*Cajuput Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
39	Nerium oleander	*Oleander*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	■	□	□	□	□	□	■
40	Parkinsonia aculeata	*Jerusalem Thorn*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■	□	□	□	□	■
41	Phoenix reclinata	*Senegal Date Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊕	□	□	□	□	□	□	□	□	□	□	□	□	□	■
42	Pinus canariensis	*Canary Island Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
43	Pinus coulteri	*Coulter Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
44	Pinus halepensis	*Aleppo Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
45	Pinus muricata	*Bishop Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
46	Pinus pinea	*Italian Stone Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
47	Pinus torreyana	*Torrey Pine*	□	□	□	■	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
48	Pittosporum rhombifolium	*Queensland Pittosporum*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	■	□	□	□	□	■
49	Pittosporum undulatum	*Victorian Box*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
50	Platanus acerifolia	*London Sycamore*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
51	Platanus orientalis	*European Sycamore*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
52	Platanus racemosa	*California Sycamore*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
53	Podocarpus elongatus	*Fern Pine*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
54	Populus nigra italica	*Lombardy Poplar*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
55	Prunus caroliniana	*Carolina Cherry*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
56	Prunus pissardi	*Purple Leaf Plum*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
57	Quercus agrifolia	*California Live Oak*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
58	Quercus virginiana	*Virginia Live Oak*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
59	Schinus molle	*Pepper Tree*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
60	Trachycarpus excelsa	*Windmill Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊙	□	□	□	□	□	□	□	□	□	□	□	□	□	■
61	Tristania conferti	*Brisbane Box*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
62	Tricuspidaria dependens	*Lily of the Valley*	■	□	□	□	□	□	■	□	□	■	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	□	■
63	Ulmus pumila	*Chinese Elm*	□	□	■	□	□	□	□	■	□	■	□	□	□	■	□	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□	■
64	Washingtonia filifera	*California Fan Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊙	□	□	□	□	□	□	□	□	□	□	□	□	□	■
65	Washingtonia robusta	*Mexican Fan Palm*	□	□	□	□	■	□	□	■	□	■	□	□	□	■	□	□	⊙	□	□	□	□	□	□	□	□	□	□	□	□	□	■

■ BLACK SQUARES ARE AFFIRMATIVE

□ BLANK SQUARES ARE NEGATIVE



⊕ FROND TYPE

⊙ FAN TYPE

Trees Suitable For Parkway Planting In Southwestern United States

Approved and recommended by

CALIFORNIA ASSOCIATION OF PARK ADMINISTRATORS

Head Office, Los Angeles

All information contained upon this chart is based upon average conditions and is applicable primarily to Southwestern United States. No attempt has been made to list all the trees usable in this area, the emphasis being placed upon proven species and varieties of known worth and predominant usage in parkway planting; additions will be made to the list as their worth becomes better known.

To quickly determine the best species for any given area, the climate and soil conditions should be given first consideration by placing a rule perpendicularly down the columns covering these requirements. To determine the species most desirable place another rule or straight edge horizontally from any affirmative square to the botanical and common names of the trees which meet the specified locality and environment.

To further determine a choice it is a matter of shifting the rule to cover such necessary elements as space requirements, habit of growth, longevity, stature and the many other features contained in the chart. By careful checking upon each requirement a comprehensive knowledge of any of the given trees may be secured, quickly and authoritatively.

refer particularly to *Kokia,* with its splendid red blooms, and to a *Clermontia* tree which is exceedingly handsome with dark purple flowers. The tree which the Hawaiians call Naenae, (*Dubautia plantaginea*), is striking when in full flower, with yellow blossoms in great 10-inch clusters sticking up beyond the foliage. Occasionally, these flowers are purple rather than yellow.

Australia has several offerings. We are familiar with many beautiful Australian trees, but strangely enough two or three of which they are pacticularly proud, are entirely unknown in the United States. We do not know at all their Christmas tree, *Ceratopetalum gummiferum,* which is used out there as we use holly. I have in mind, too, the *Eucalyptus pruinosa,* a species which Charles Barrett in his book "Pacific Wonderland' refers to as "whose huge crimsom blossoms are among the world's most wonderful flowers." We are entirely unacquainted with the Australian Firetree, *Nuytsia floribunda,* which is exceedingly fine, and Queenland's pride, *Barklya syringifolia.*

India has given us a number of beautiful trees that are in common cultivation but we in the United States are quite ignorant of the beauty provided by *Mesua ferrea,* widely planted as a street tree in India and throughout the East Indies because of its exceptional beauty . We also are unfamiliar with *Tecomella undulata,* which produces enormous quantities of bright orange flowers in clusters, very similar to some of our *Tabebuia* trees, to which it is related.

In New Zealand, the most beautiful flowering tree they have, they call Hinau, (*Elaeocarpus dentata*) ; it covers itself with saucer-shaped flowers, creamy white like lilies-of-the-valley.

From west tropical Africa I would mention only three among hundreds of beautiful trees; *Baikiaea insignis,* which has enormous snow-white flowers 10 inches across, the largest blossom to be found on any plants of the legume family; *Lophira alata,* with its clouds of white blossoms; and *Newbouldia laevis,* which bears pink trumpet-shaped flowers in great clusters. It is referred to in one book about the plants of the Gold Coast colony as "flowers, purple, and bell-shaped, and very beautiful." Purple and pink are often so closely related that the discrepancy is understandable.

From Java I have selected only one of a hundred beautiful trees described by Corner in his splendid book, "Wayside Trees of Malaya." This is the yellow Pagoda flower tree, (*Deplanchea bancana*), whose clear yellow flowers appear in long dense umbrella-shaped clusters and Corner says of it: "This beautiful tree is included in this book because it offers in bloom such a wonderful sight, the light green crown being decked with pyramids and pagodas of yellow flowers."

Central America offers a profusion of beautiful trees which we know nothing about. I particularly want to call attention to *Symphonia globulifera,* which, when it is in flower, at a distance resembles a cherry tree full of red cherries, because the branches are heavily laden with bright red flowers in terminal clusters, each flower rather small but the over-all effect exceedingly showy and ormanetal.

Guatemala is distinguished for beautiful trees. I might refer here to *Robinsonella,* of which one botanist has written: "They are a beautiful sight when in full bloom in March and April, being covered with small clusters of pendent bell-shaped flowers whose ground color is white but so strongly veined with bright purple as to appear more purple than white." Also distinguished for its beauty is *Bernoullia flammea,* which is wide spread in Central America. These trees are leafless during the dry months but they blossom at the beginning of the rains, and then attract attention because of the bunches of small but brilliant, flame-colored flowers.

Wigandia is another handsome tree with large velvety leaves and great masses of bright purple flowers. *Astianthus,* native of southern Mexico, often forms dense

thickets and the trees are conspicuous because of their bright green foliage which contrasts in dry seasons with the sparse, withered vegetation on the surrounding hillsides. The trees are even more conspicuous when in blossom, producing many clusters of very large, bright yellow flowers, similar in form and size to those of *Catalpa*.

All of these—and I have overlooked some of the finest of all—*Brownea, Jackia, Erblichia, Phlebotaenia, Saraca* and so on—are only names which today are a jargon as unintelligible as a foreign tongue, but which tomorrow may be keys to a more beautiful landscape in Florida.

There is a practical application of all these facts about trees to our situation in Florida. When a newcomer arrives in this state to build and landscape a home, he is confronted with a vast body of tropical plants with which he is entirely unfamiliar and he is immediately confused by the maze he finds on every side. If he ever needs help, it is then. He can, and usually does, go to a nurseryman to advise him, and that nurseryman sells what he has on hand, without regard to landscaping as an art and without reference to the enormous body of tropical plants that are available or should be available to the householder who is interested in making the most of his new opportunity.

We very much need a campaign of public education to acquaint would-be home owners, as well as others who want to learn, with the trees and other plants which have been tried and found most satisfactory for specific purposes. If such a list were prepared by a representative committee of plantsmen from north, central and south Florida, and could be placed before the public with the sponsorship of the Florida State Horticultural Society, this would be a definite step to assist newcomers in becoming acquainted with the flora of our state.

In California, leadership in this field has been taken by the California Association of Park Administrators, who have prepared a list of 65 trees suitable for parkway planting in the southwestern United States. This published list gives the botanical and common names of the tree, the type, whether evergreen or deciduous, conifer or palm, the habit of growth, the stature of the tree, the type of foliage, the color of the flower, the rapidity of growth, the adaptability as to seashore or inland, the soil requirements, the preferences as to frost, wind, and moisture, the useful life of the tree, the width of parkway, the distance apart to be planted, and the cost to maintain.

It is my suggestion that a similar chart be prepared for Florida, setting up a group of trees recommended for highway planting in south Florida, a group recommended for this purpose in central Florida, and a group for north Florida. The same schedule would present a group of trees suitable for yard planting in south Florida, a group recommended for central Florida, and a group for north Florida. The same thought could be carried a little further to other specific purposes where trees are needed on our landscape, and only by such suggestion and constructive effort to educate the public on available trees which do best under certain conditions, can we ever bring many fine new species into general cultivation in Florida.

The public wants to know what trees to plant and there is a constant flow of inquiries to persons who are studying the possibilities in this field for lists of trees suitable for specific purposes in certain locations. Often it is difficult for a homeowner to get anybody to tell him what trees are best for salt spray areas, or extra low ground, or extra high sandy land, or what trees suffer least from hurricane winds, or what trees have edible foliage and hence are suitable for pasture planting. Inquiries of this sort would be largely answered by the right kind of a tree planting chart based on the experience of men who have spent their lives learning about the adapatibility of certain trees to Florida conditions and a great public service could be rendered by this society, by the sponsorship of such a tree planting recommendation.