But the glory of trees is more than their gifts:
'Tis a beautiful wonder of life that lifts,
From a wrinkled seed in an earth-bound clod,
A column, an arch in the temple of God,
A pillar of power, a dome of delight,
A shrine of song, and joy of sight!
Their roots are the nurses of rivers in birth;
Their leaves are alive with the breath of the earth;
They shelter the dwellings of man; and they bend
O'er his grave with a look of a loving friend.

I have camped in the whispering forest of pines
I have slept in the shadow of olives and vines;
In the knees of an oak, at the foot of a palm
I have found good rest and slumber's balm.
And now, when the morning gilds the boughs
Of the vaulted elm at the door of my house,
I open the window and make salute;
"God bless thy branches and feed thy root!
Thou hast lived before, live after me,
Thou ancient, friendly, faithful tree."

ROSE CULTURE IN FLORIDA

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An important consideration in successful rose culture is that of the location of the garden. Adequate sunlight is necessary and avoid places where roots from large trees and shrubs will invade the area and rob the soil of moisture and plant food. The soil should be prepared several weeks prior to planting if possible. It has been found to be a good practice to apply liberal amounts of superphosphate and potash prior to working up the soil. This eliminates the necessity of supplying these materials during the growing season. A good supply of organic materials such as decomposing oak leaves or other vegetative materials, or animal fertilizers should be spread out over the garden. An application of 0-14-10 will be adequate for the season, when applied broadcast at the rate of about 20 pounds to each 100 square feet of garden. The garden should then be spaded to a depth of six to eight inches so as to thoroughly incorporate the organic material and fertilizer with the soil.

Soil fumigants have proven beneficial when used judiciously in growing roses. Dowfume—W40 and DD are both satisfactory chemicals to use but they should be applied at least two weeks prior to setting the bushes. Generally, about three cc per square foot is recommended, but this may be increased slightly if necessary. Fumigation of the soil will reduce the nematode population in the soil and will also be beneficial in some other way. They have been used successfully in a private garden at Gainesville for several years with improvement in plant growth. However, the chemicals have not been applied to rose soils very extensively in Florida, and it is suggested that growers proceed with caution in the use of fumigants at the present time.

While sunlight is an important factor in rose culture, some partial shading of the plants during the summer months will prove beneficial. This can be provided with slats or with cloth, such as cheesecloth and burlap stretched over wires above the garden. By handling in this manner the covering can be removed when necessary.

It is not absolutely necessary to remove the soil to a depth of 18 inches or more and replace with clay to insure satisfactory growth of roses. The only exception to this general statement would be in the case of a garden on extremely light sand, then one could replace the top eight or ten inches with a mixture of loamy soil and organic materials; clay is not necessary, but can be added if desired. Soils that give best results are those that contain adequate amounts of organic materials that have decomposed to a point where it can be mixed satisfactorily with the soil in making up the bed. Animal fertilizers are always good to use in the rose garden and will be greatly beneficial in maintaining a nutritional condition that will produce satisfactory growth and bloom production. On a good loamy soil it will not be necessary to do more than spade in the fertilizer and thoroughly mix it with the surface six or eight inches of soil.

The plants can be set any time during the dormant season, but generally best results will be obtained by planting during November and December, using a handful of bone meal mixed with the soil in each hole. The soil is then made firm and watered. After the planting has been completed, it is advisable to flood the entire garden with water so as to settle the soil thoroughly about the roots. In setting, the roots of the plants should be at about the same depth as when the plants were growing in the nursery. The entire garden should be covered to a depth of six or eight inches with an organic mulch such as oak leaves or some
other good material which may be available. This mulch is left in place to conserve moisture and should not be disturbed until fall or winter when it can be spaded into the soil.

Only strong, two-year, number one plants should be set for best results with newly planted roses. The plants can be set either 18 or 24 inches apart each way in the bed, and they should be unpacked and transplanted immediately upon arrival from the nursery. If there is a delay, they should be placed in a trench and the roots covered with soil and watered.

Prune the plants to about 12- to 16-inch stems and cut away damaged roots at the time they are transplanted. Subsequently, they are given very little pruning during the first year except that provided in cutting the flowers. If multiple or lateral buds are developed on the stem, these can be reduced to one by disbudding when the buds first appear.

Fertilization during the growing season should consist of an ounce or two per plant of some good nitrogenous materials at each of several times during the growing season. The dates will vary somewhat, depending on the stage of growth, as an effort should be made to make the applications when the plants are in heavy flower production, which will be every 30 to 40 days. These materials will give satisfactory results if they are applied on the mulch and dissolved and washed into the soil by rains and irrigation.

The garden should be watered frequently during the growing season when there is not sufficient rainfall to meet the requirements of the plants. Flooding the soil is generally best but, where this is impossible, an ordinary whirling type of lawn sprinkler can be used for irrigation, turning on the water each morning as required after the blooms are cut.

Many rose growers in Florida have adopted the plan of transplanting new stock each year with good results in many locations. With this method the plants must be kept in a vigorous, thrifty condition at all times so as to maintain maximum flower production throughout the growing season. Where roses are grown as annuals, blooms can be left on the plants, or they may be cut regularly for decorating the home, which ever is desired. At the end of the blooming season the plants are then removed and the soil made ready for setting the new stock during November and December. When roses are grown in this manner it is possible to increase the variety list greatly, as many can be grown for one blooming season that would not be satisfactory over a period of several years.

In renewing the plants it has been found advisable to take up all bushes if the flowers have been cut regularly and growth has not been allowed to proceed normally. The old plants can be examined and if satisfactory may be pruned and replanted and otherwise handled as new stock.

There are certain insects and diseases that will require control measures to insure best results with roses. These will not be discussed here, but it is suggested that for full information on these pests you write to the Florida Agricultural Experiment Station at Gainesville.

Most roses that are planted are Hybrid Teas, Polyanthus and Hybrid Polyanthus which are the Floribundas. Of these groups there are thousands of varieties from which to select to provide a wide range in color and type of flower. However, all of these varieties are not the best to be grown under most conditions existing in Florida. Many years ago the Tea roses were the principal ones to be found in gardens throughout the South. But now other types have replaced the Teas in home plantings, except in some of the old established places, although they are now enjoying some popularity.

Many varieties of Tea roses manifest a high resistance to black spot and certain other diseases which cause losses with the Hybrid Teas in general. It is thought, therefore, that the Teas should be given more consideration than they have received for many years, especially as bedding roses. Some of the Tea varieties which can be obtained at the present time are: Marie van Houtte, Baronesse Henrietta Snoy, Maman Cochet, Wm. R. Smith, Freiherr von Marschall, Lady Hillingdon and others including Louis Philippe that is generally cataloged as a Tea rose.

The main value of the Louis Philippe is as a bedding rose to be worked into the general landscape arrangement. It produces deep red flowers in great abundance and grows quite satisfactorily under several varied conditions. The leaves are dark green in color and the whole plant is resistant to diseases which eliminates the necessity for a spraying pro-
gram. It is certainly worthy of a place in all plantings where color is desired.

There are many varieties of Hybrid Teas which can be had that will give a range of colors and succession of blooms to please most amateur growers. Such a list would certainly include the Radiance types, Editor McFarland, Etolée de Hollandie, Talisman, Betty Upham, Dainty Bess, President Herbert Hoover, K. A. Viktoria, and many would add Chas. K. Douglas, Edith Nellie Perkins, Poinsettia, Golden Ophelia, Soeur Therese, Columbia and Frau Karl Druseckhi, a Hybrid Perpetual, and others not mentioned here.

In many locations it is desirable to have climbing roses for trellises, fence row plantings, and other uses. The old Cherokee is among the hardiest and most thrifty, will make a vigorous growth, develop a cover for unsightly places, and will grow very successfully along a fence. It produces an abundance of white flowers in the spring which are quite showy. There is a pink form of Cherokee but the plants are not quite as vigorous growers as those of the white Cherokee. One objection to the Cherokee is the ability of the canes to strike root if they come in contact with the soil for a long period. This allows the plants to eventually cover a larger area than was originally intended for them to occupy. However, with proper pruning of the canes that strike the ground, it is possible to eliminate this habit of spreading.

A group of climbers which has been used quite successfully over a long period of time would include Belle of Portugal, Reine Marie Henriette, and the Banksians. These are mainly annual flowering varieties but the yellow Banksian especially produces a great mass of small, yellow flowers that present a very pleasing appearance. The Belle of Portugal produces pink flowers of large size that are prized by those who enjoy climbers that produce blossoms of this type.

There are other climbers that produce good flowers which may be planted, and many of the bush varieties have climbing forms. Examples of this would be Climbing Radiance, Climbing Herbert Hoover, Climbing Talisman, as well as many others, including Climbing Louis Philippe.

Among the patented roses are some very fine types but all bushes of patented roses are higher in prices than those which are generally considered standard varieties. The Peace is one of the patented roses which is prized quite highly by many growers. It and Charlotte Armstrong, Forty-niner, Sutters Gold, Capistrano, New Yorker, Nocturne, Crimson Glory, Serenade, Diamond Jubilee, and many others are now in quantity production by nurseries.

There is a class of roses which has become quite popular during recent years. These are Hybrid Polyanthas and are called Floribundas. They produce the flowers in clusters of great numbers and are of a size between that of Polyanthus and the Hybrid Teas. Some of the varieties are outstanding in their colors of various hues. Varieties are available in all types from whites through to reds and multicolored. Probably one of the most interesting is Masquerade which produces pink and yellow flowers in the same cluster on the plant. The flowers start opening as a deep pink—almost red—and by the time they are fully opened they take on a deep cream to a yellow color. This gives a contrast of bloom that is showy and attractive. Other varieties would include Chatter, Summer Snow, Floradora, Red Ripple, Fashion, and many others.

Polyanthas produce a great abundance of small flowers in clusters, somewhat smaller than those of the Floribundas. The plants of the bush type grow to smaller sizes and under suitable conditions will have a great display of blooms that cover almost the entire plant. The Sweetheart rose, Cecile Brunner, is an old Polyantha variety that lives for a great many years in Florida. It can be grown successfully under suitable conditions of soil and is not very susceptible to rose diseases. Probably one of the best forms of Cecile Brunner is the climbing type which can be grown without a trellis if so desired. It is very hardy and will produce flowers in great abundance that are very good for making arrangements. Other varieties would include Ideal, Else Poulsen, Golden Salmon, Pinkie, and others.

One of the main problems in connection with rose culture is the short life of practically all varieties of the better flower types. Yet some gardeners have been successful in growing the same plants of certain varieties for several years in the same location. This has generally been accomplished by following an adequate spraying program for the control of diseases. Judicious cutting of the flowers under these
conditions has permitted the plants to develop maximum growth when other factors are favorable. Most growers are not so successful and find it necessary to replace the bushes often.

In view of the widespread interest in roses and the desire to have a variety that will be better adapted, a research project on rose improvement has been initiated at the Florida Agricultural Experiment Station. Species and varieties available that may have possibilities as breeding materials are being assembled for these investigations. It requires many years to get very far with research of this kind, and there will be many disappointments. But we hope for success in this project with the junior author (S. E. McFadden) as the leader. Reports on any outstanding rose material will be appreciated. Your cooperation in these investigations is solicited.

HIBISCUS—THE BEST 25 VARIETIES TO GROW
IN YOUR YARD

Jack O. Holmes
American Hibiscus Society
Tampa

In preparing this list a great deal of consideration and observation was made in Central Florida and Florida West Coast. Only casual study was made for the East Coast South of Palm Beach and the greater Miami area. Since my thirty years experience has been in the Central Florida areas where our soil conditions are largely on the acid side and only minor areas do we have the rocky or alkaline condition found on the lower East Coast.

However, from my studies of Cuba, Jamaica, Haiti, Puerto Rico, Dominican Republic and the Virgin Islands, I see no reason why this list is not practical for these areas as well as Southern Alabama, Louisiana, Mississippi, Texas etc., The greater part of this list is comprised of the old fashioned easy to grow, profuse blooming varieties and many of these I have, personally, found growing oftentimes into huge bushes covered with great masses of flowers.

Likewise part of my list is made up of some Hybrids of recent introductions such as: Superba, Hurricania, Betty Chalk etc., This list includes both the rank tall growing varieties like: Single Scarlet, Mrs. Johnson and the dwarf slow growers like Bride and McIntyre. Single Flowers, Semi-doubles and full doubles.

Following is my list:

**American Beauty**—(Hawaiian) Very large single bright pink with white edges.

**Bride**—(Johnson, Hawaii) Very large, flat, crepey, overlapping type, appleblossom pink fading to white.

**Betty Chalk**—Brilliant self-colored violet-pink.

**Double Apricot**—(Anderson's 315) Loose airy double with narrow petals.

**Delores**—(Hendry) Double "Purple," color chart "Amethystine Pink."

**Dainty**—LaFrance Small flowered, satin pink but very profuse. Tall straight grower. Schizopetalus hybrid. In Texas called "Shirley Temple."

**Flamingo**—Some Shade, Columbia (Full Sun)—Double bright rose. The color of the columba rose.

**Florida Sunset** (Anderson's 132) (Hawaiian Rose)—Strong grower, profuse bloomer; red with yellowish edge. Named by State Federation of Garden Clubs.

**Hendry's Single Orange Yll**—The best golden orange strong grower.

**Hurricania and Hurricania Sports**—(Coffee) Strong growing loose bright pink.

**Jigora**—(From Texas) Gorgeous large orange with crimson and vermilion at base of petals. Very fragrant.

**Kama Pua**—(Hawaiian) Large fawn purplish-pink center.

**Kona**—Bright silver pink. Very even and symmetrical flower.

**Lillian Wilder**—(Hawaiian thru USDA) White with deep pink eye. Very similar to Old Honolulu but seems hairly, and occasional petaloids in flower.

**Minerva**—(Rosener 1913) Medium creamy pink. Strong grower.

**Mrs. Mary Johnson**—(J.L.J.) (Hawaii thru Christian) Very large creamy-pink with a lighter edge. Sometimes crested in hot weather.

**Mrs. Mary Morgan**—(Seminole Nurseries) Immense double light pink a little darker than Peachbloom. Very strong grower.

**McIntyre**—(Mr. Bush?)—Hawaii thru Christian) Large flat flower, reddish orange, white sone in center.

**Old Gold**—(Anderson) Large flat flower, old gold, shading to violet rose center.

**Purity**—(Ruth Wilcox) Pure white with pink style. Fragrant.

**Red**—Single Scarlet—The well known brilliant scarlet. Unexcelled for hedges.

**Red**—Double - Lamberti—

**Superba**—(Kersey origination - Coffee's name) Very large golden yellow with large white star in center. Vigorous grower and fine foliage (single)

**Yellow Buttercup**—(Holmes) A clear yellow sport from Hendry's Y-11.

**Yellow**—Delight—Clear yellow a shade darker than Mrs. Earl Anthony.

**Yellow California**—Large, flat, light yellow, pink eye. Strong grower.

**Yellow Mandalay**—(Hawaiian) Huge single yellow with large white center and purplish pink eye.

**Yellow Butterfly**—(Hendry's 111) Light yellow with white base. Large loose flower, delicious carnation-like fragrance.

**Crown of Bohemia**—(California) Magnificent golden yellow, amber bronze base.