

# A PRELIMINARY REPORT ON THE USE OF INTRODUCED TROPICAL FRUIT TREES AND SHRUBS FOR WILDLIFE UTILIZATION IN SOUTH FLORIDA\*

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The introduction of tropical trees and shrubs is being tried in south Florida to help fill the gap created by the absence of oaks and other preferred plants. The topography of the southeastern section of the state does not favor the upland hardwoods, in that the land is flat and subject to flooding for extended periods. The climate in this area is such that there is only an occasional winter frost which does not damage the tropical species from other parts of the world.

Most of the planting will be done on the J. W. Corbett Wildlife Management Area located in Palm Beach County. This area is owned by the Commission and contains 52,000 acres. The land varies from 10 feet to 25 feet above sea level and is subject to flooding of approximately 60-70% of the area during the rainy season. The yearly rainfall (Sturrock, 1959) is 65 inches with most of it occurring in the late summer and early fall. The mean winter temperatures (November through March) is 44 degrees. The vegetation types of the area consist of 10% pine palmetto, 22% scattered pine wiregrass, 25% wiregrass flats, and 40% in ponds and cypress sloughs.

The use of introduced desirable plants is not new in south Florida. The Florida Forest Service, for example, has tried numerous tropical timber trees that might provide a fast growing pulpwood tree suited to the topography of this region. Last fall the Forest Service produced sufficient quantities of three species of eucalyptus to be sold to selected landowners. This is the first large scale planting of this species in plantations in Florida.

In order to test the adaptability of tropical plants, quite a number of species will have to be introduced on an experimental basis. Most of the species have been used for ornamental plantings for some time in the populous coastal areas, therefore, a local seed source is available that is free from diseases. Tropical trees and shrubs are available for specific purposes and habitats of various hydrological levels. The chemical analysis of the fruit contains numerous vitamins and minerals that are essential for the healthy growth of humans and animals.

The procedure employed to date has been sexual propagation of the selected trees and shrubs. Seeds were collected from desired parent trees and planted in either seed flats or directly in pots. The smaller seeds have to be grown in seed flats and later transplanted into pots. The pots used have been made from 24 pound roofing felt. The most convenient size is that of a quart can, the felt is cut 9 inches by 12 inches and stapled in 3 places. The bottom is left open which necessitates the placing of these containers on sheets of tin or similar material to contain the root growth in the pots. The seedlings do not have to be removed from this container when planted in the field. Contact with the soil causes the pot to deteriorate in 10 to 14 days. This procedure eliminates the possible damage to the root systems when the plant is removed from the container for planting. The method described above greatly reduces the handling and planting cost.

Seedlings of five species of tropical plants have been planted in the field, Florida gooseberry, eggfruit, carissa, rose apple and red and yellow cattley guava. These plants all survived well and have become established. The seed planting for next year's seedlings has been started. It has been scheduled to grow a total of 14,000 seedlings of 9 different species for planting as a part of this project. The number of each species will depend upon the availability of seed. The species include Philippine Mango, white sapote, rose apple, red and yellow cattley guava, calamondin, barbados cherry, surinam cherry, and tamarand.

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These species were selected on the basis of some specific character or adaptation. The various species will be discussed individually later.

The seedlings have been and will be planted in the pine palmetto and wiregrass types. The planting site has not received any treatment prior to planting. It is believed that the negative vegetation will furnish protection from cool weather and damaging wind during the first winter. If the seedlings grow well following this treatment, a large scale planting operation can be initiated at a minimal cost. To date this planting technique has proved quite successful.

#### DESCRIPTION OF SELECTED SPECIES\*

Philippine Mango (*Mangifera indica* L.). The mango well deserves the title "King of Fruits". In many places in the tropics it is the chief food fruit in the summer. In well drained, deep, sandy soils it makes a large tree. Seeds are polyembryonic and their seedlings reproduce very true to form.

White Sapote (*Casimiroa edulis* Llave Lex). This is an open growing tree with brittle branches. On low wet soils the tree usually grows too freely to the detriment of fruit bearing. The very thin papery skin of the fruit encloses a soft yellow pulp of a peculiar though agreeable flavor.

Rose-apple (*Syzygium jambos* (L) Alston). The tree is well adapted to southern Florida conditions and fruits abundantly. It grows well and fruits well on any soil that is not water-logged. The fruit has a rose-petal flavored shell insipidly sweet and dry for eating as a fresh fruit. The Rose-apple is an evergreen tree with low spreading branches and a dense top.

Red Cattley Guava (*Psidium cattleianum* Sabine). The bush is fairly fast growing and in good soil will reach a height of twelve to fifteen feet. The fruit averages one inch in diameter, with a thick soft shell enclosing a sweet pulp with the pronounced strawberry flavor containing many small hard seeds.

Yellow Cattley Guava (*Psidium cattleianum* var. *lucidum*). This guava is of a low spreading form of growth with a light green foliage. The fruit, which is larger than the red one, is much sweeter, but less flavorsome. The plant is quite hardy and is more suitable for low wet lands and will withstand flooding conditions.

Calamondin (*Citrus mitis* Blanco). This is a slender branched tree of an upright form of growth, reaching fifteen to twenty feet in height. The tree is quite hardy and will withstand much cold weather without injury. It is adaptable to the light sandy soils and is very drought resistant. The fruit is round with a thin orange colored peel.

Barbados Cherry (*Malpighia glabra* L.). This is a large, strong-growing bush reaching a height of ten to twelve feet. The acid of the fruit is malic, giving the fruit a decidedly apple flavor. The plants are tender when young, but become hardy on the development of woody growth and will withstand some frost without injury.

Surinam Cherry (*Eugenia uniflora* L.). This plant is perfectly hardy into central Florida and is adaptable to almost all soil conditions not subject to flooding. The pulp of the fruit is juicy, acide and highly aromatic.

Tamarind (*Tamarindus indica* L.). The tree attains a large size with a spready top of fine foliage, and its hard, fine-grained wood is excellent for cabinet work. It is quite adaptable to the climatic and soil conditions of southern Florida. The tree is very resistant to winds and is recommended in the tropics for planting as a windbreak tree. The soft brown pulp of the fruit is granular and is, at the same time, the sweetest and the sourest of fruits, being very high in sugar and tartaric acid. Tamarinds are a good source of thiamine and niacin, but have little carotene or ascorbic acid. The pulp is one of the ingredients of Worcestershire sauce.

#### LITERATURE CITED

Sturrock, David, 1959. Fruits for Southern Florida. Southeastern Printing Co. Stuart, Florida.

\*Sturrock, David. 1959. Fruits for Southern Florida. Southeastern Printing Co., Inc., Stuart, Florida.