

## Krome Section

### TWO NEW FRUITS FOR CULTIVATION IN SOUTH FLORIDA

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Although scores of plant species are cultivated in Florida primarily for their fruits, there is still a great interest among horticulturist and gardeners in the introduction and testing of new fruits.

Two species which have been found to be promising enough for trial in gardens of South Florida are *Lucuma hypoglauca* Standley and *Pouteria caimito* Radlk. Both are in the Sapotaceae, a family which includes such well known fruits as the canistel, mamey sapote, sapodilla and star apple.

*Lucuma hypoglauca* is native to El Salvador, where it is esteemed as a source of food (3). It is little known elsewhere. Seeds were received at the University of Florida Sub-Tropical Experiment Station from El Salvador in 1948. Seedlings were first set in the field in 1949. The oldest trees, which are now 16 years of age from seed, have a height of 10 to 12 feet and a spread of about 12 feet. Standley (3) described the species as a medium sized tree. From the small size of the specimens here, it can be concluded that the tree grows quite slowly. It is probable that in the shallow limestone soils of Dade County, it will not grow as fast or reach as large a size as it would under less austere soil conditions.

The tree is evergreen, with large, elliptic-oblong, dark green leaves. The young branches are densely foliated. Senescent leaves become bright red in color and usually remain on the branches for several weeks before abscission occurs, giving a pleasing contrast to the green leaves. The tree has a densely branching habit,

forming a compact, rounded crown. It is attractive at all times of the year unless damaged by cold or drought.

The small, subsessile flowers are clustered in the leaf axils. The trees at the Station first bore fruit in 1960 (1) at the age of 12 years. The fruit is oval-globose in shape (Fig. 1), with a thick, hard outer shell and 3 or 4 large, elliptical seeds. The soft, edible flesh is white in color, sweet, and has an agreeable flavor. The main crop of fruit matures during July and August. Those who have eaten the fruit in Florida do not consider it to be of as high quality as its relatives, the sapodilla and star apple.

The cold tolerance of *Lucuma hypoglauca* is not known, although trees at the Station survived the freeze of February 1958, when a low of 26.5° F. was recorded and air temperatures below 32° occurred for about 13 hours. Young seedlings, which are otherwise easy to grow, are easily injured by cold. Because of this, it is likely that culture of the species will be limited to the southern coastal region of Florida.

No selection work has been done with *Lucuma hypoglauca*, and vegetative propagation has not been investigated. The small size and attractive

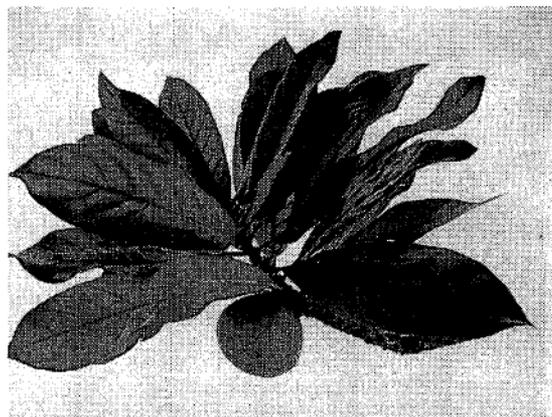


Figure 1.—*Lucuma hypoglauca*

habit and appearance of this tree recommend it for landscape use in South Florida.

*Pouteria caimito* Radlk. is relatively well known to tropical fruit enthusiasts, having been discussed by Popenoe (2) as one of the best of the sapotaceous fruits. It is native to the warm regions of Peru east of the Andes, and is grown extensively in the Amazon region and other parts of Brazil, where the fruit is called abiu.

The abiu has been introduced into Florida many times. Six separate accessions of seeds were made at the Station in the past, the first one in 1944. Seedlings usually grow well in the nursery, but there is a high mortality of young plants in the field. One reason for this is their susceptibility to cold injury. Young trees are easily killed by temperatures below 32° F. However, trees four years of age survived the freeze of 1958 at the Station. Young trees in the field frequently develop a chlorosis which is difficult to correct, and apparently indicates a lack of tolerance to the alkaline soils of the Homestead area. Regular soil application of chelated iron compounds and foliar application of solutions containing manganese and zinc will usually prevent this condition, or correct it if it has not developed to an extreme degree.

The largest tree at the Station is 10 feet in height at the age of 11 years. However, a tree in a warmer location of Dade County has attained greater size in less time. The tree is quite attractive in appearance. The bright green, lanceolate leaves are 4 to 8 inches in length, thin, and glabrous. The inconspicuous flowers are borne in the leaf axils on young branches.

Fruit was first borne at the Station in 1962, on trees nine years of age from seed. The fruit matured during the month of October. The fruit is ovate-elliptic, 2 to 4 inches long, and bright yellow in color (Fig. 2). The skin is tough and flexible. There are 2 or 3 large, oblong seeds. The translucent flesh is sweet and has an excellent flavor. Until fully ripe, it contains a milky latex which coagulates on exposure to air.



Figure 2.—*Pouteria caimito*

Great differences in fruit size and quality are reported to occur between seedling trees, so there is good possibility for improvement of a fruit which is already acclaimed as an excellent one. Vegetative propagation has not been investigated in Florida.

The attractive appearance and excellent fruit of this species recommend it for cultivation in the southern coastal region of Florida.

#### SUMMARY

*Lucuma hypoglauca* Standley is a small, attractive tree, which bears an edible fruit. Its size and appearance make it particularly suitable for landscape use. *Pouteria caimito* Radlk. bears a fruit with excellent eating quality. Both species are recommended for trial in gardens of South Florida. Because of their susceptibility to cold injury, their culture will be limited to the southern coastal region of the state.

#### LITERATURE CITED

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