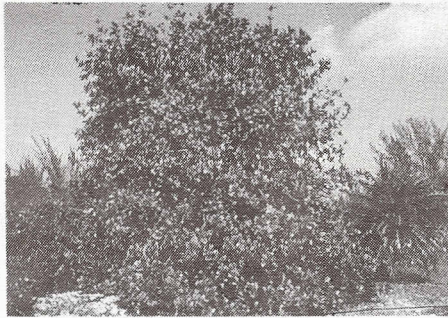


Black Calabash Bears Fruit in Florida!

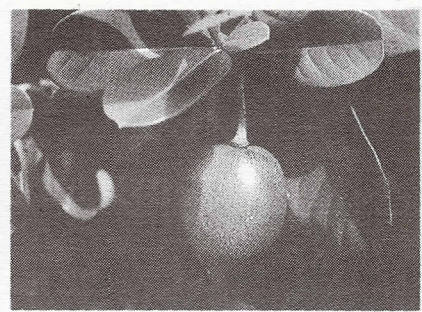
by Daniel F. Austin



Black Calabash: Habit



Blossom



Fruit

Photos compliments of Laurel Press publisher of *Native Trees and Shrubs of the Florida Keys*.

A few years ago I expressed the opinion that the black calabash (*Amphitecna latifolia*) was not native to southern Florida (*The Palmetto*, Spring 1992). One of the lines of evidence I cited was that, to the best of my knowledge, no one had ever seen the Florida trees in fruit. Unknown to me, this comment vexed my long-time friends and colleagues, Taylor Alexander and Stanley Kiem. They planned a surprise for me, but its full impact was never implemented because of Hurricane Andrew.

Then in the fall of 1994, I received a package in the mail from Taylor Alexander. I had not spoken with him in some time, and I was curious at what he might have sent. When I opened the package, there lay two fresh fruits from the black calabash. Before I even read the note, I knew that it was Taylor's way of telling me that I did not have my facts straight in the *Palmetto* article. To provide the entire flavor of the event, I quote the accompanying letter dated 11/6/94.

"This note is in reference to your article in *The Palmetto*, Spring 1992. The enclosed fruits of the black calabash are evidence that the species fruits regularly in the Miami area. When I first read the article, I decided to wait until I could pick up a big bag full and send them to you. Hurricane Andrew stopped that idea when several plants that I have been

watching for years were severely damaged. Stanley Kiem and I both have long-standing knowledge of regular fruiting in several locations, including Fairchild's Garden. Shortly after WWII, I collected seed from a large stand in Brickell Hammock (now the location of several buildings) and grew about 18 plants that were planted in several locations, including the U[niversity] of M[iami] Gifford Arboretum. all of these have flowered and fruited year after year. I have seen plants on Key Largo — again where houses and developments now stand. They were spread out in several places in Brickell Hammock before development.

"When one reads Bernard Romans 1775 '... timber cutters have taken (Keys) mahogany, lignum vitae, mastic, etc. ... none remains.' John Williams, 1837 — Knights Key area, '10-15 settlers have build houses & cleared fields,' and other old records tell of the destruction. I saw the extent of lime groves on Key Largo in early '40s. All of these references make me question statements about what grew here before the Spanish arrived — as well as the English timber cutters."

The letter concludes with: "In any event — black calabash does fruit regularly locally. Whether or not it is native is — to me — not so impor-

tant."

I concede to Alexander's experience and knowledge. Black calabash fruits in Florida!

Still, my curiosity is not entirely satisfied. Now I wonder what pollinates the trees? If the plants are correctly assumed to be bat-pollinated outside Florida, where are the bats that do the job here? All the bats known in Florida are insectivorous. If perhaps birds have assumed the role, which ones are responsible? Many other bat-pollinated species are known to have bird pollinators either in their homelands or areas where they have been introduced. We have only to look next door at the sausage tree (*Kigelia pinnata*) from Africa to find a bat-flower that is pollinated in Miami by the exotic spot-breasted orioles. Could these be pollinators of black calabash? Not likely, since Alexander found the plants in fruit in the early 1940s and these orioles were not introduced until the late 1940s (Robertson, W.B.J. and G.E. Woolfenden. 1992. *Florida Bird Species: An Annotated List*. Gainesville, Florida Ornithological Society Special Publ. No. 6). Is it possible that the plants in Dade County are autogamous (self-pollinated)? Unless someone that I am not aware of has made a study, autogamy seems unlikely because plants cultivated in Palm Beach

County that I watch never set fruits. Moreover, why are the spot-breasted orioles (or whatever pollinates the trees in Dade County) not doing the same in Palm Beach County? Both are here.

I agree with Alexander that deciding whether or not the black calabash is a native or exotic introduction is not really important, except to the academic community. Indeed, it is a problem that will probably never be resolved for that species and an array of others.

Never the lessl, deciding what is native and what is exotic remains an important topic for people other than academicians.

Florida is experiencing an incredible (even to the public, not to mention the scientific community) onslaught of exotic organisms. Many of these exotics are replacing our native species, especially our endangered natives. These statements are true of both plants and animals. To fully appreciate the extent of this deluge, I recommend that you read *Harmful Non-Indigenous Species in the United States* (U.S. Congress, Office of Technology Assessment, OTA-F-565, Washington, D.C., Government Printing Office, Sept. 1993) or *An Assess-*

ment of Invasive Non-indigenous Species in Florida's Public Lands (Schmitz, D.C. and T.C. Brown, editors, Florida Department of Environmental Protection, Bureau of Aquatic Plant Management, Technical Report No. TSS-94-100, Tallahassee, 1994).

It is necessary to have the facts in order to prepare accurate lists of what is native or exotic. Unless the data are accurate, we are prone to mislead people by including non-natives as natives and natives as non-natives. If the public is misled, they are less prone to support needed control of exotic pests. What would the state be like without the expenditure of the millions of dollars it costs each year to control melaleuca, water hyacinth, and hydrilla, much less the

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other pest plants that are here? Just consider the lunatic "Melaleuca Control Act of 1995" now before the Legislature of the State of Florida which proposes to replace that exotic tree with urbanization!

As I said the last time I wrote about black calabash, we must exchange information with each other. I threw out the gauntlet and said the black calabash did not fruit in Florida. Alexander accepted the challenge, and proved me wrong. Will someone else take up my challenge to show the black calabash is an exotic?

Daniel F. Austin, Biology Professor, Florida Atlantic University, is a long-time member of the Florida Native Plant Society and observer of the changes in Florida vegetation since 1970.



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