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The Coconut in Florida

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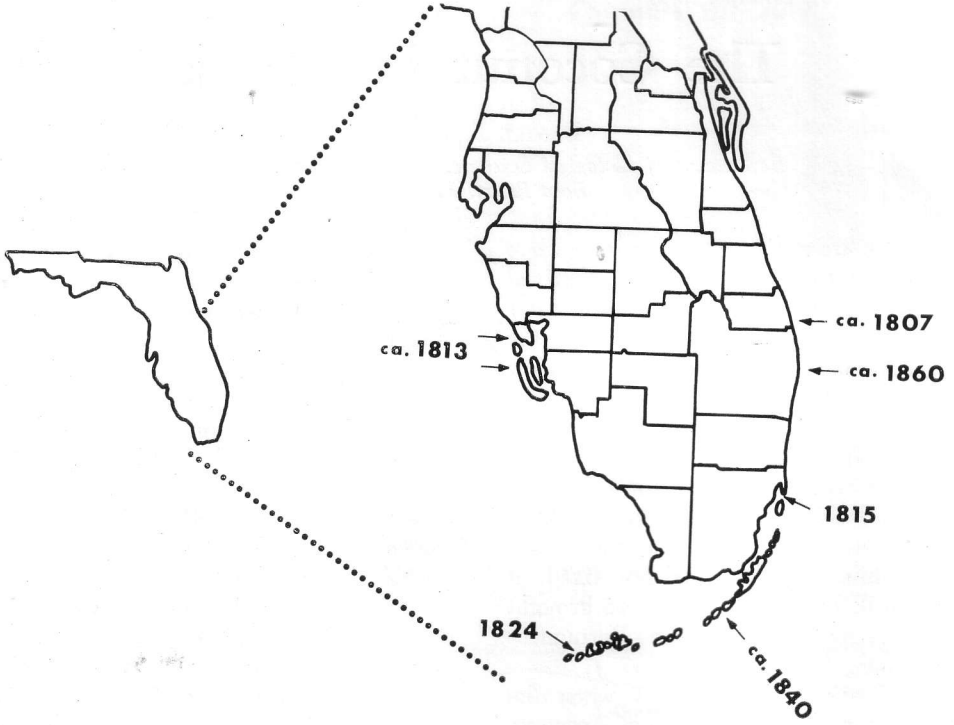
There are no records of exactly when the coconut (*Cocos nucifera* L.) arrived in the New World, but Oviedo (1526) recorded these Asian palms on the Pacific Coast of Mexico by 1516. They were on the Cocos Island west of Panama when it was discovered in the 1530s. In the Caribbean their history is more recent. Small (1929) thought that the palms were brought to the West Indies from Panama about the 1550s, and while the dates are not fixed, it seems likely that the trees were brought to the Americas by the Portuguese (Bruman, 1944; Harries, 1977).

Similarly, no one knows when the first coconuts came to Florida. Accounts by Solis de Meras (1567), Fontaneda (1575) and others in the 1500s, and by Jonathan Dickinson (1699) record only our native palms and saw palmettos. One translation of a letter written in 1568 by Brother Francisco de Villareal said that the Indians at Tequesta (modern Miami) ate "coconuts and palm grapes" (McNicoll, 1941). The plants in the letter are probably "hicaco"; these are not palms but the coco plum (*Chrysobalanus icaco* L.), which had been mentioned among the Ais Indians earlier (Solis de Meras, 1567; Barcia, 1723).

What may be the first mention of the coconut in Florida was made by Bernard Romans (1775). His statement is ambiguous: "The coco-nuts found on the shore [of Florida] likewise convince us, that Cuba sends much of her outcast this way" (Romans, 1775: 199). Whether they were only stranded nuts from Cuba or actual trees is not known. If they were trees, they must not have been common, because neither he nor other visitors in the following 30 years cited them as aids to navigation in the way they did the cabbage palm.

Forbes (1821) did not record the coconut on his visit in 1803. He thought that they might be planted here with economic profit (p. 152), but did not mention actual growing plants. It would be logical to assume that the many Spanish (Cuban) "ranchos" and plantations where gardening, turtling, and fishing had been carried on since the 1700s in Florida (Barcia, 1723; Romans, 1775) would have brought the plants. If they did, it has not been recorded, and the plants seem to have been introduced after the turn of the century.

The first account of the palms seems to be that by Vignoles (1823). On a surveying trip down the eastern coast of the peninsula in 1822, this visitor found an abandoned grove of coconuts about four miles north of Jupiter Inlet. This was formerly part of an old plantation started in 1807 by James Hutchinson (Nance, 1962: 303). Vignoles thought that it might have even been occupied before that time by a Padre Torres, although no details are given. The size or age of the palms was not recorded, but they were large enough to be used by pilots to gain their bearings (Vignoles, 1823: 47–48) and giving fruits which suggests "about fifteen years coming to perfection. . ." (Williams, 1837: 113) for an age. This would place the trees in the time period



1. Locations and early introduction dates of the coconut (*Cocos nucifera*) in southern Florida. The earliest recorded plants were grown on Jupiter Island ca. 1807 (Vignoles, 1823). Plants were on North Captiva Island and Boca Grande by ca. 1813 (Williams, 1837), and were started in Miami in 1815 (Williams, 1937). Coconuts were planted in Key West in 1824 (Williams, 1837). Trees on Indian Key may have been planted ca. 1840, and on Lake Worth ca. 1860.

of Hutchinson's settlement attempt. Coconuts at the Jupiter Island site are the oldest recorded in the historical documents.

By the year 1828 there were at least five distinct sites with coconut groves in Florida. The northern site on the southeastern coast was the same that Vignoles had seen on Jupiter Island and the trees remained (Williams, 1837: 43). There were also several palms in the vicinity of Miami where ". . . the shores is high and precipitous. . ." (Williams, 1837: 143). The palms had been planted there near 1815 according to Williams. This was probably the modern town of Coconut Grove since it was south of the Miami River and north of Coconut Point. Apparently this is the first record also of "Cocoanut Point."

Williams found the palm in Key West (p. 38), and recorded that "many of these trees planted in 1824, are now in full bearing. . ." (p. 113). The Calde family, who had previously lived on Indian Key, were found by Williams on Toampe Island (modern North Captiva Island). They had a village of 20 palmetto huts and ". . . several cocoanut trees in bearing. . ." (p. 33) along with a number of other crops and fruit trees. About five miles north at Boca Grande there was a ". . . stout, healthy, old, white-headed Spaniard. . ." (p. 25) who fished and farmed for a living. He

maintained 18 to 20 palmetto huts, and kept two schooners running to Havana with fish and turtles. Among the plants he cultivated were several coconuts.

There were coconuts on Indian Key in the 1850s (Small, 1929) and it is locally believed that these were planted by Henry Perrine who was killed there in 1840 by Indians. Oral tradition has maintained that the first settler on Lake Worth, a former gardener to the King of Saxony named August Lang, brought the first trees to that part of the coast in the 1860s.

Certainly the most famous of the coconut imports to Florida happened in 1878 when the wreck of the Spanish ship "Providencia" spread the trees along the coast near Lake Worth (Pierce, 1970). In the next few decades the trees made impressive palm forests. John K. Small, who travelled through much of southern Florida in the first three decades of the 1900s, reported that these trees were more impressive near Lake Worth than anywhere else in the state (Small, 1929). The profusion of these tropical palms led to a town being named "Palm City" in the late 1800s, which was shortly thereafter changed to "Palm Beach" (Pierce, 1970; Morris, 1974). This in turn gave rise to "West Palm Beach" and in 1909 to Palm Beach County.

Fascination with the coconut in the early days was stimulated not only by the ornamental and edible qualities of the palms, but a desire to turn them into profit. During 1877 there were groves of coconuts growing mixed with other fiber-bearing plants on Boca Chica and Sugar Loaf Keys (Small, 1929). Between 1882 and 1883 two men, Messrs. Field and Osborn, from New Jersey launched a coconut-planting campaign that put trees along the beaches from Key Biscayne to Boca Raton, a distance of forty miles. Some 316,000 nuts were imported from Trinidad, only to have the rabbits eat most of them (Small, 1929; Pierce, 1970). A few palms remained, and although they did not bring the profit their planters expected, they did increase the value of the land when it later sold. In the Great Freeze of 1894–1895 trees were killed in Jupiter (Small, 1929) and those farther south were damaged.

Another attempt at mass planting was made by Commodore W. J. Matheson in 1910. At this time the trees were planted in association with Australian pines (*Casuarina equisetifolia*) as windbreaks (Small, 1929). In the next decade about the only profit made directly from coconuts was to sell them to tourists. By 1921, this was an established business, although always on small scale.

The beginning of what appears to be the end of Florida's tall coconuts started in the West Indies about 1890. At the time no one knew what caused a disease that came to be called lethal yellowing. In 1955 this palm disease was noted in Key West, Florida. Slowly the blight moved up the Florida Keys, and few even knew what was happening. It was October of 1971 when Dade County began to count its losses—50 infected trees. The following October there were 2,000 dead palms, and a year later 20,000 were gone (McCoy, 1974). October of 1974 saw the elimination of 100,000 coconuts in Dade County alone, and by that year the problem had spread to two other counties.

State agricultural officials quarantined Dade, Broward, and Palm Beach Counties in 1974. In the spring of that year the first infected trees were found in the southern parts of Palm Beach County, but by August there were dying trees as far north as Palm Beach. As elsewhere, the disease seemed to follow the Intracoastal Canal north and then spread inland. The summer of 1975

heralded the first wave of dying trees through the inland regions and in southern Collier County. Trees are still dying.

Years of examination produced a dichotomy of opinion among plant pathologists. Some maintained that the disease was caused by a new type of plant pathogen first reported in the 1960s and located in coconuts in the early 1970s. The suspected pathogen, a mycoplasmalike organism (MLO), has not been convincingly implicated for others.

There is a usually effective method of combating mycoplasmas, with antibiotics like oxytetracycline. At best, treatment with drugs delays death of the tall varieties of palms. It has been estimated that, in a good program of inoculation, 90% of the trees are saved each year. Eventually, the trees will be lost because, by definition, lethal yellowing is ". . . an alway lethal . . . disease of coconut palms . . ." (McCoy, 1974).

The prevailing philosophy is to treat the tall varieties of coconuts and underplant with resistant strains. One cultivar of coconut thoroughly tested in Jamaica and found to be highly resistant is being used in Florida to underplant. This is the 'Malayan Dwarf' or 'Golden Malay.' According to the Florida Institute of Food & Agricultural Sciences about 98% of these plants survive, and there are some 250,000 of these palms now in Florida (Donselman, personal communication).

Popenoe (1977) discussed the effects of this disease on other palms in southern Florida. Not only is the coconut affected, but to date there are 23 different species of palms where the MLO has been associated with their death. An additional 8 or 12 species are suspected by Popenoe to be infected, but a disease organism has not been implicated. Whatever the cause, these other species are dying along with the tall coconuts in Florida.

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PALM QUESTIONS AND ANSWERS

Q. The leaves on my palms are being affected by something that appears to be a disease. There are brown spots appearing on several areas on each leaf. What is wrong and how can I control it?

A. South Florida's high humidity is ideal for the palm leafspot which is common on many species of palms and is caused by a fungus called *Stigmina palmivora* (Sacc.). In Florida the fungus has been officially reported on the following palm hosts:

Arecastrum romanzoffianum (Chamisso) Beccari
Butia capitata (Martius) Beccari var. *capitata*
Caryota mitis Loureiro
Phoenix canariensis Chabaud
Phoenix dactylifera Linnaeus
Phoenix loureirii Kunth.
Phoenix reclinata Jacquin
Phoenix roebelenii O'Brien
Phoenix rupicola Anderson
Roystonea regia O. F. Cook
Sabal palmetto (Walter) Loddiges
Thrinax microcarpa Sargent
Veitchia merrillii (Beccari) H. E. Moore

This disease is usually found on plants grown under glass or lath shade where insufficient light is provided. Any time that a palm is slowed down in growth due to poor cultural conditions, the plant does appear more susceptible to fungus and bacterial diseases.

The palm leafspot first appears as a minute, circular, tan spot which is transparent when held to the light. As this lesion develops it becomes circular to elongate, light to medium brown, depressed, with a dark brown to black spot in the center surrounded by a somewhat diffuse yellow halo. The yellow halo serves as a field characteristic to help identify the disease. Several of these lesions may coalesce to form irregular shaped spots on the rachis of the palm frond. Severity of the disease may be reduced by removing the infected leaves and spraying the foliage at regular intervals with a fungicide.

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