

## *Ficus aurea*

## Family: Moraceae



A tree on Pine Island, Florida, in late July

### Strangler fig; golden fig

**Synonym (Discarded Names)::** *Ficus aurea* var. *latifolia*; *F. ciliolosa*; *F. isophlebia*; *F. jimenezii*

**Origin:** Florida; Southern Mexico to Panama; Western Caribbean islands

**U.S.D.A. Zone:** 9a-11 (Minimum 20°F)

**Growth Rate:** Fast

**Flowering Months:** All-year but flowers are borne inside of figs and are not visible

**Leaf Persistence:** Semi-deciduous

**Salt Tolerance:** Medium

**Drought Tolerance:** High

**Soil Requirements:** Wide

**Nutritional Requirements:** Low

**Potential Major Pests:** Croton scale

**Typical Dimensions:** 50' x 65'

**Propagation:** Seeds; air layers

**Human hazards:** None

**Uses:** Specimen; shade tree; parks, reclamation



Figs on tree in late April

### Natural Geographic Distribution

The strangler fig, *Ficus aurea*, is native to southern Mexico to Panama, the Bahamas, Cuba, Cayman Islands, Jamaica and Hispaniola. In Florida, it grows from Volusia and Hillsborough Counties on the east and west coasts, respectively, south to Key West. It is typically confined to areas of deep rich soil, whose elevation is usually higher than its surroundings and composed of hardwood vegetation (hammock) and along man-grove edges. The strangler fig provides significant food and cover for wildlife.



### Growth Habit, Morphology and Form

The strangler fig can grow from a seed buried in the ground and develop a rather typical trunk and roots. However, it often begins as an epiphyte and for a time derives needed nutrients and moisture from the air and rain.

Typically, birds eat the fig's fruit and deposit seeds between the leaf bases of the cabbage palm which serve as natural catchments. The cabbage palm, *Sabal palmetto*, and oak trees, *Quercus spp.*, are its most common hosts but the plant is capable of growing on the occasional house roof and in fissures of bare rock. Initially growth is dependent on sufficient humus for the seedling to become well rooted. Under favorable conditions of temperature and moisture, a seed germinates as an epiphyte on a host plant and begins immediately to send a root winding around the host toward the ground. The limitation of a restricted soil supply is overcome by the production of aerial roots which grow over the surface of the host tree or rock and can reach more distant grounds. As the roots grow, a dense crown of leaves is produced that shades the host tree's crown. The host is eventually weakened from the shading and the roots, at first lattice-like around the host's trunk, continue to coalesce to eventually form a massive woody root trunk. Despite this, *Ficus aurea* does not grow many aerial roots extending beyond trunk formation as is common among other ficus species. A tree that is established as an epiphyte continues to enlarge its crown and root system and is capable of enveloping and even killing its supporting host tree. In some cases, this may take many decades. There is, however, no parasitic feeding by the *Ficus*.

The origin of the name "strangler" is obvious. The tree is also, but less frequently, called the golden fig, which is reflected in its proper botanical name *Ficus aurea*. *Ficus* is the Latin name for fig tree and *aurea* is from the Latin word aurum meaning gold or the color of gold.



The tall, erect, high branching trunk of a tree started from the ground.



The stout, low branching trunk of a tree started as an epiphyte.



*Ficus aurea* becomes a large tree of up to 70 feet tall with a wider spreading crown. Trees originating from the soil are usually tall and erect. Epiphytic trees form a broader, lower branching trunk, compiled of fused aerial roots. The bark of trees is usually gray and smooth.



This epiphyte begins life at the base of a cabbage palm.



An aerial root wraps itself around the trunk of a cabbage palm.



Roots often merge to form a lattice-like trunk around its host.



A strangler fig on its cabbage palm host, April 2008.



By August 2011, the crown of the same cabbage palm-host is largely shaded.



### Morphology, Pollination and Latex Flow

The size and shape of the leaf is variable. The leaf is simple, entire, alternate, dark green, and somewhat leathery. The leaf blade is elliptical to oblong, with a cordate, acute or obtuse base and a pointed apex. Mature leaves are normally 4 to 7 inches long. Leaves on young plants or on sprouts of older trees are usually larger. The petiole is stout and short, often shorter than half the width of the blade. The petiole and the midrib are a pale yellow contrasting noticeably with the green of the leaf blade.

The tree produces no visible flowers. Instead, flowers are contained inside a hollow receptacle known as a fig. Within the cavity is a large number of minute male and female flowers. Thus each fig is an inflorescence within a hollow. Pollination is dependent on minute wasps, *Pegascapus jimenezi*, which spend almost their entire life within the cavity of the inflorescences. The fig functions as a wasp nursery and the wasps are dependent on the fig for food and shelter, but they are also responsible for seed set in this mutually beneficial relation. After pollination, each flower inside the fig produces a tiny fruit containing seeds. The “fruit” of *Ficus aurea* is the fig and its entire inflorescence. The figs are sessile or nearly so sometimes with peduncles up to 0.2 inches long. They originate in pairs in the axil of a leaf typically on new growth. It is globose and is about 3/4 inches in diameter at maturity. As it enlarges to maturity it changes color from green to red, burgundy or purple. The mature fig softens and attracts birds which eat the fig and disperse the seeds. Most figs ripen in spring and summer.

The presence of the remarkably specific pollinating wasps can account for the lack of hybridization between different *Ficus* species. The wasps necessary to pollinate each fig species are themselves of different species and presumably a wasp never gets into the wrong fig. In the past, none of the introduced *Ficus* species in Florida appeared to have their associated pollinating wasps. They may have appeared to developed ripe fruits, but these never contained seeds. In recent years, however, *Ficus altissima* and *F. microcarpa* have been designated as invasive species confirming the presence of their wasp pollinators.



The shapes and sizes of the leaf. From left to right, the lengths of these leaves are 4.25, 5.25 and 8.75 inches.



**Top:** Figs on tree in late April.

**Bottom:** Fig “fruit” in hand



**Top:** Tree on Sanibel, Florida

**Bottom:** This tree in Fort Myers is approximately 45 ft. tall and 75 ft. wide and reported to be more than 70 years old. It has a 5.5 ft. diameter trunk. Look carefully to see the cabbage palm host alive and “well” in its center.

A useful field characteristic of the strangler fig is the abundant milky white latex which oozes from cut surfaces. The latex is present in unripened figs and dissipates in the mature fruit.

### **Planting and Maintenance Guidelines**

The tree can be easily started from seeds. There is often no need to cover the seeds with soil and they can be placed for germination in full sun or partial shade. The strangler fig makes a fine specimen tree in residential and commercial landscapes, where there is adequate room. It will grow in a wide range of well-drained soils but needs some organic content to thrive. The strangle fig will tolerate brackish water and the occasional inundation by salt water. It can withstand hurricane force wind without toppling. However, the tree may be stripped bare of its leaves and suffer extensive broken branches. Recovery from severe wind damage usually takes a couple of years. The roots can be problematic around asphalt, septic tanks and drainfields. Its white sticky latex sap can gum up pruning instruments. In late winter and early spring, the tree is semi-deciduous shedding its leaves and creating a mess especially as the tree grows larger. The seeds of the strangler fig readily germinate especially in cracks in stone surfaces.





Damage from Hurricane Charley, Captiva, Florida, August, 2004



Recovery from Hurricane Charley, Captiva, Florida, November, 2007

### Pests

The [croton scale](#), can be a major problem of the strangler fig. It was first recognized on crotons in Marathon (Monroe County), Florida, in 2008 and is currently in several south Florida counties. The scale feeds on more than 50 Florida plant hosts by sucking the sap from plants. As a result, the scales excrete a sugary, sticky substance which in turn allows abundant growth of sooty mold. The damage was particularly noticeable on Sanibel Island. However, since 2009 affected trees appear less severely damaged over time and none have been reported to have been killed by the aggressive scale.



Female croton scales on the stem and leaves of a strangler fig.



Sooty mold on stem and leaves caused by the feeding of croton scales.



Strangler fig affected by croton scale in October 2008, Coral Gables. Note the blackened leaves due to sooty mold.



Strangler fig affected by croton scale in March 2009, Sanibel. Note defoliation and the blackened leaves due to sooty mold.

The *Ficus whitefly*, *Singhiella simplex*, is an occasional problem on some strangler figs. Heavy infestation causes leaf yellowing, rapid leaf defoliation, and branch dieback. Its feeding does not cause the development of sooty mold.

Several species of mites suck the sap from the upper surface of leaves. They include the Texas citrus mite (*Eutetranychus banksi*) and the Phytoseiid mite (*Amblyseius largoensis*). Their feeding produce the characteristic silver-cast of leaves. The mites are difficult to observe except with the use of a hand lens or other magnification.



Discolored leaves caused by the feeding of mites.



Male (top) and female (bottom) Texas citrus mites

Anthracnose, *Colletotrichum spp.*, is another potential problem but is rarely encountered. It causes significant leaf loss. This fungal pathogen spreads by irrigation water and rainfall. Spores are somewhat sticky and do not easily spread by air movement.



Anthracnose causes leaf spots and leaf loss, December, Fort Myers, Florida





Strangler fig and cabbage palm host, Fort Lauderdale

## References

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## Useful Links

[South Florida Native Plant Fact Sheets](#)

[Croton Scale Power Point](#)

All pictures were taken by Stephen Brown except where indicated.

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