

PLANT PORTRAITS

SYCAMORE FIG

Leonid Enari

In the small village of Matariya, a few miles from Cairo, stands a large tree showing signs of extreme old age but still defying the future. Under its shade, if one is to believe a popular legend, Joseph and Mary with the infant Jesus, rested and took water from the nearby well during their flight to Egypt in 4 B.C. The tree is a sycamore fig (*Ficus sycomorus*).

With its large size, dense spreading head and light bark, the sycamore fig is

one of the most striking and most colorful trees of the continent of Africa. Palmer and Pitman, in their *Trees of Southern Africa*, mention the giant sycamore fig trees growing in the Mkuze Game Reserve in Zululand, trees so tall and wide the sun does not penetrate the dim green world below their branches. Some, they say, have a trunk circumference of 40 feet.

The bark is yellow, brown or, rarely,



Twenty years of growth! The sycamore fig growing on Tallac Knoll as it looks today and as it looked in 1954 when it was being examined by Los Angeles County Supervisor John Anson Ford (left) and Arboretum director, Dr. Russell Seibert.

white, and sometimes mottled. The outer bark often peels in small papery flakes.

The wood is soft and porous, but nevertheless very durable. Mummy-cases made of it over 3000 years ago have been found still in good condition in Egyptian tombs.

The leaves are ovate (egg-shaped), equilateral, entire, somewhat wavy, up to 6 inches broad, stalked, mid-green, shiny, and rough to the touch.

The fruits are globular, depressed, about 1 inch in diameter (larger in cultivated trees), densely hairy, green, yellow or pink in color, and carried either in dense branched clusters on the main branches or singly in the axils of the leaves. Originally, those trees bearing axillary figs were separated as *Ficus gnaphalocarpa* (Miq.) A. Rich, but they have now been included in *Ficus sycomorus* L.

All the species of the figs have fruits, or more properly, "fruits" with the same structure—a fleshy receptacle containing hundreds of tiny male and female flowers which are pollinated by insects entering the receptacle through a small opening at the top. This opening is known as the ostiole.

The pollination of the sycamore fig in the natural habitat has been studied by Professor J. Galil of the University of Tel Aviv in Israel. According to his account, pollination is effected by a small wasp, *Ceratosolen arabicus*. When the female flowers in a fig mature, the scales which seal off the ostiole part slightly allowing impregnated female wasps to enter, lay their eggs, and die there. The new generation that emerges from the eggs completes its life-cycle in about five weeks, which is immediately after the male flowers have matured. The young males appear first and pierce holes in the galls, which have meanwhile formed around the female insects in order to fertilize them. Because the ostiole has closed

again, the males begin eating holes through the outer wall of the fruit in the zone immediately below the ostiole, which is where the male flowers are attached. This causes the pollen sacs to rupture. At this stage, the life cycle of the male wasps is completed and they die. The females, however, exit through the holes eaten by the males carrying pollen on their bodies and enter the next young fig by the slightly opened ostiole, so pollinating the young flowers inside.

The sycamore fig has been an important article of food among the people of the Near East since the very dawn of civilization. However, since the figs are of inferior quality they are used mostly by the poor who cannot afford anything better.

It is customary for the cultivators of the sycamore fig three or four days before gathering, when the fruit is about an inch in diameter, to pare or scrape off a part of the center point, or to make a puncture with a sharp pointed instrument. Unless this cutting or piercing operation is performed on every fig, the fruit will secrete a quantity of watery juice and will not ripen.

The tree can be propagated by cuttings of well-matured wood. Two methods are used. One is to plant pieces of branches 3-to-6-inches long in the ground, leaving only the tip exposed and taking care that the ground will not dry out until the cuttings are rooted. Another way is to root cuttings in the nursery and transplant them later.

At the Los Angeles State and County Arboretum a sycamore fig can be seen in P12 atop Tallac Knoll, an area partly devoted to the plants of the Bible. The tree was received from the Los Angeles City Department of Parks and Recreation in January, 1953, was planted in the present location two months later, and has been bearing fruit for several years. The fruit, however, falls before reaching maturity.



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