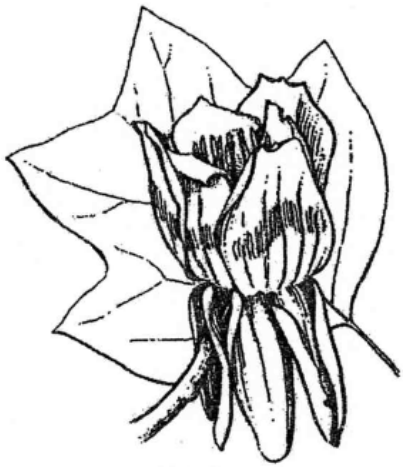
The Magnolias of Ohio

By Guy Denny

Although we often think of flowering magnolia trees as being characteristic of the deep south, there are eight species of tree-size magnolias native to the United States, half of which occur in Ohio. Ohio's native magnolias include Tulip-tree, Cucumber-tree, Umbrella Magnolia, and Bigleaf Magnolia.

The magnolia family, *Magnoliaceae*, is represented by two genera in North America, *Magnolia* and *Liriodendron*. This family has a very ancient lineage in the broad-leaved group. Fossils of numerous, now extinct magnolia species have been found which date back about 60 million years to the upper Cretaceous Period. Many taxonomists consider the least specialized types of flora structure to be the most primitive. On this basis, the magnolias are considered to be among the world's most primitive flowering trees. They are thought to be the first plants to bear seeds in a protective ovary or fruit.



Tulip-tree

The Tulip-tree *(Liriodendron tulipifera L.*) is the most abundant and widespread magnolia in North America. It is also one of the tallest and most valuable hardwood trees in the eastern United States. Its characteristic straight, limbless trunk reaches a height of about 125 feet, but has been known to grow as tall as 198 feet.

Tulip-tree occurs in a region bounded by southern New England through New York to southern Michigan and then south to west central Louisiana and northern Florida. It also occurs in southern Ontario. It is most abundant and reaches its largest size in the Appalachian Mountains. In Ohio, some of the largest specimens can be seen at Ohio University's Dysart Woods in Belmont County, about 11 miles southwest of St. Clairsville. The largest tree in this woods is a Tulip-tree with a diameter of 58 inches and a height of more than 130 feet.

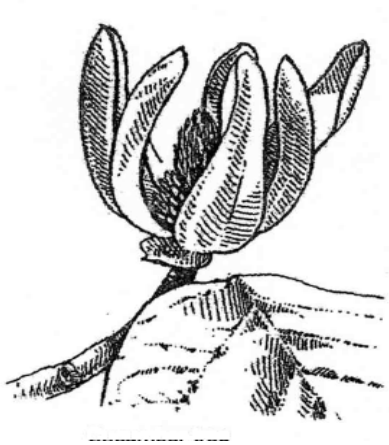
The genus *Liriodendron* comes from the Greek *Lirion*, "lily or tulip" and *dendron*, "Tree". The attractive, but not conspicuous, tulip-like flowers of this tree appear in mid-June after the new leaves unfold from the distinctive duck-billed buds. The specific name *tulipifera* is of Latin origin and refers to the tulip-like blossoms which are about tulip size and bear six greenish-yellow petals, each with a distinctive bright orange patch at its base.

Although the light-colored wood is marketed under the name yellow poplar, tulip-tree is a magnolia, not a poplar.

Although the Cucumber-tree (*Magnolia acuminate L.*) is a large tree attaining a height of about 80-90 feet, it is not abundant enough to be commercially important for its lumber. However, it is the most hardy of the magnolia trees in North America. Consequently, its seedlings are used as root stock on which several varieties of ornamental magnolias are grafted.

Cucumber-tree or Cucumber Magnolia is a tree of the Appalachian Mountains and Ozark regions and intervening portions of the Ohio and Mississippi Valley. Like tulip-tree, it also occurs in southern Ontario. Nowhere is it common. Rather, it is usually scattered throughout the forest with other species. In Ohio, Cucumber-tree occurs mostly in the unglaciated portion of our state and more frequently in the northeastern quarter of the state.

The genus *Magnolia* was named in honor of Pierre Magnal, an early eighteenth century professor of botany from Montpelier, France. The specific name *acuminate*, meaning "pointed", refers to the distinctive, abruptly acuminate or sharp-pointed leaves. The common name Cucumber-tree refers to the fleshy fruit which resembles a 2- to 4-inch-long cucumber. Although green at first, they eventually turn rose-colored when ripe and then release several one-half-inch-long, bright scarlet seeds which hang suspended by slender threads from the fruit for some time before falling to the ground. This mechanism for seed dispersal is also shared with both Umbrella and Bigleaf Magnolia, which have somewhat similar, but more stubby, conelike fruit.



Cucumber-tree

Bigleaf Magnolia

Umbrella Magnolia

The famous French naturalist and explorer, Andre Michaux, who botanized this country in the late 1700's, reported that in the Allegheny region, the early settlers collected the cone-like fruits in midsummer, steeped them in whiskey, and took a glass of this bitter liquor once a day to ward off "autumnal fever". It is likely that participants would have indulged in this practice even in the absence of the Cucumber-tree.

The bell-shaped flowers, which precede the small "cucumber" in late May, are only 1 ½ to 2 inches wide, smaller than those of the other magnolias. These flowers are also inconspicuous, since they are essentially the same greenish-yellow color as the. spring foliage.

The Umbrella Magnolia (*Magnolia tripetala L.*) is a small tree which usually doesn't attain a height over 30 feet. This is also a tree of the Appalachian Mountains where it is rare and local from southern Pennsylvania, south to southern Alabama, west to central Kentucky and southwestern Arkansas. It is an endangered species in Ohio, known only from Scioto, Jackson, and, less frequently, Vinton County. There is a 1929 record for its having once occurred in Hocking County.

The specific name *tripetala* means "with three petals", referring to the three petal-like sepals. Actually, there are six or nine creamy-white petals. The not especially fragrant large flowers, which appear in late May, are about 6 to 11 inches in diameter. The large tropical looking leaves, which are 18 to 25 inches long, are often clustered near the ends of the branches in an umbrella-like manner, giving rise to the common name Umbrella Magnolia. Two excellent places to see and photograph this beautiful endangered species are along the moist stream valleys of Shawnee State Forest in Scioto County and Lake Katharine State Nature Preserve in Jackson County.

The Bigleaf Magnolia (*Magnolia macrophylla Michx*) is the rarest and most spectacular of all our magnolias. When Andre Michaux named this species *macrophylla*, meaning large-leaved, he was making a reference to the fact that this species has the largest entire leaves of any tree in North America. Unlike the similar yet somewhat smaller leaves of the Umbrella Magnolia which are tapered at both ends, the leaves of the Bigleaf Magnolia are 20 to 30 inches long and distinctively narrowly cordate at the base.

No less spectacular than the giant leaves are the giant showy flowers of the Bigleaf Magnolia which appears in June after flowering of the Umbrella Magnolia. Each flower is 12 to 18 inches in diameter with six white petals, each of which has a distinctive rose-colored spot at the base.

Unlike the smaller Umbrella Magnolia, Bigleaf Magnolia can grow to a height of nearly 60 feet. It also tends to occupy the higher and drier areas of ravines. It is a relatively rare tree, widely scattered throughout the Piedmont region of North Carolina, south to Florida and west to Kentucky and Louisiana. In Ohio, this state endangered species is known only from the Rock Run area of Jackson County. The bulk of the Ohio population of Bigleaf Magnolia is protected within the boundaries of Lake Katharine State Nature Preserve, along with a large population of Umbrella Magnolias. Both of these species are considered to have reached Ohio millions of years ago by virtue of seeds being carried along the preglacial Teays River system which had its headwaters in the Piedmont region of North Carolina. Although continental glaciation during the Ice Age subsequently buried the Teays System, gave rise to the present-day Ohio River system, and eliminated most of these Teays-age relicts from Ohio, some, like the Umbrella and Bigleaf Magnolias, survived and remain today as a part of our diverse natural heritage.

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