

Magnolia dealbata

by Graham Pattison

Magnolias as we know are distributed in Asia in the Old World and in the Americas in the New World. When we mention temperate plants in the New World, we usually think of the United States of America, but the distribution of many genera continues into Mexico and into Central America, the islands of the Caribbean Sea, and down to South America. Of the 20 species of magnolia from the tropical and subtropical regions of the New World, three species are native to Mexico: *Magnolia dealbata*, *M. sharpii*, and *M. schiedeana*. We will now talk at length about the first-named species.

Magnolia dealbata, which is in the section Rytidospermum of the genus *Magnolia*, is the only species found in the American tropics or subtropics that is deciduous.

Here in Mexico, *M. dealbata* is found in deciduous oak (*Quercus*) and sweetgum (*Liquidambar*) forests on the eastern and south central mountain ranges of the country, within the states of Veracruz, Oaxaca, San Luis Potosi, and Hidalgo. It is found only in small groups isolated in different parts of these states. The woodlands are between 1200 and 1500 metres above sea level. Because of its sporadic distribution, and also for reasons I will mention later, we have designated *M. dealbata* as a plant in danger of extinction.

In 1570, Philip II of Spain sent his

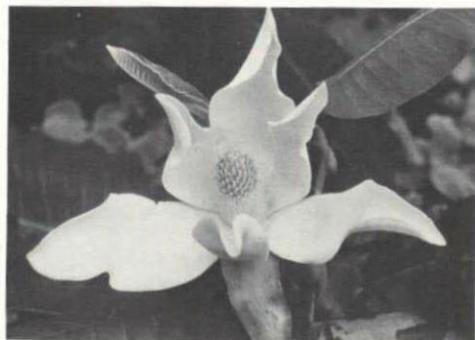
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court physician, Francisco Hernandez, on the first scientific expedition to New Spain, or Mexico. Among the latter's collections and observations he mentioned this magnolia, which was later described and figured in *Nova Plantarum Historia Mexicana* in 1631. It was the first magnolia to be described in print in Europe or the Americas. It was known at one time as *Magnolia mexicana*.

The Aztecs called it Eloxochitl, derived from elotl = green ear of corn with husk, and xochitl = flower. It is also known in Mexico as Nacho yate, palo de flores de elote, and as magnolia. The original locality noted by Francisco Hernandez was Huatla de Jimenez, Oaxaca, where it is still reportedly found, and in two other localities some 100 kilometres southeast and 200 km south, all in the state of Oaxaca. It has been reported in Hidalgo near Chapulhuacan, and in Veracruz at Huayacootla, some 20 km from Xalapa. The population here near Xalapa consists of about 50 trees with some regeneration, but not much, and the foliage is browsed by cattle.

The trees here are growing in both shade and sun, one tree in the middle of a maize field. The trees are up to 22 metres in height, but most appear to be sucker growth from older trees which have been long cut down. The trees flower when they reach a height of 6-8 m and are about 7-10 years old.

The magnolias in this stand are cut down or pruned each year for the annual harvest of flowers, which are used to decorate the churches and crosses at Easter time. When I visited this site this year, some two weeks after Easter, there were only a few buds and a few old flowers at the tops of the trees, the flowering time being between April and June. The plant has a medicinal use, in which the leaves are applied to sore tendons, having been



Flower of *Magnolia dealbata* specimen growing in Vera Cruz does not show purplish splotches inside the three inner tepals. Photo by author.

boiled first in water. The hot leaves are used as a poultice.

The plants are of very rapid growth, at least 1 metre a year, and the shoots are very pithy, this being possibly the reason for the difficulty of vegetative propagation. The leaves reach almost $\frac{3}{4}$ of a metre in length, the largest found so far being 70 cm in length. The flowers are a deep cream color and do not show any blotches of purple at the base of the inner tepals. They have a semi-sweet scent.

The propagation of this plant by seed has been quite successful. Seeds sown in Xalapa in the fall of 1983 germinated within 3 weeks and from this we have some 50 plants for distribution within Mexico. This year's seeds will be sown and grown on to replant back in the area around the village in a program intended to increase the population in the future. Seeds collected and sown in the fall of 1983 by James Russell, author of an article on the Veracruz population of *M. dealbata* in *MAGNOLIA* (Vol. XX No. 1 in 1984), germinated the following spring. Seeds collected by us in 1984 failed to germinate, possibly because they were not sown directly but stored dry for 3-4 weeks. Of the seed collected by Mr. Russell and distributed to various gardens as noted

in his article, the plants in Vancouver Botanic Gardens, under the watchful eye of Charles Tubesing, were about 15 cm. tall when I saw them in July 1984. This year we are making some seed available to the Magnolia Society for exchange purposes.

In the Botanic Garden Francisco Xavier Clavijero here in Xalapa, besides the plants mentioned earlier, we have a tree that is 2 m. high, grown from a small plant collected in Huayacootla some 8 or 9 years ago. The plant's small size is possibly because it is a transplant and growing in heavy shade. Vegetative propagation of *M. dealbata* has so far failed.

In Dandy's article, he mentions the distinguishing characters between *M. dealbata* and *M. macrophylla*, stating that the ripe carpels are beaked and the tepals are unspotted in *M. dealbata*, whereas the carpels are unbeaked and the inner tepals purple splotched in *M. macrophylla*; but we know from various authors that both of these species show, on different trees, flowers with both color forms. Could this plant be, in fact, a Mexican species with distribution into the United States, or is it a United States species with distribution into Mexico? Our further work will, we hope, clear up this point.

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BIBLIOGRAPHY

- Dandy, J.E. 1927 *Journal of the Royal Horticultural Society*, vol 52, p. 260-264.
Dodd, T. III. 1980 *Magnolia*, vol. XVI No. 1, p. 29-32.
Miller, R.F. 1975 *Rhodora*, vol. 77 p. 64-69.
Pfaffman, G. 1975 *Magnolia*, vol. XI No. 2, p. 9-14.
Russell, J. 1985 *Magnolia*, vol. XX No. 1, p. 11-12.
Spongberg, S. 1976 *Journal of the Arnold Arboretum*, vol. 57, p. 250-269.
Treseder, N. 1978 *Magnolias*. pub. Faber and Faber.