

Bigleaf in the Cumberlands

by James W. Kelly

Without a doubt, the bigleaf magnolia, *Magnolia macrophylla*, is one of the most spectacular of the trees of the temperate world. It has the largest undivided leaves of any temperate woody plant. Its gorgeous white flowers are often ten inches across, with magenta crescents at the bases of the three inner tepals. The splendid leaves, particularly on open grown trees, are often slightly decurved, exposing their glaucous reverses.

I have seen the bigleaf magnolia cultivated in several locations, mostly arboretums, but I have always wanted to see it in its habitat. Like the saguaro cactus in Arizona, such a distinct species would dominate the landscape. Since I would be near its habitat, I wanted to make every effort to see a wild population.

During the last week of June 1982, I was in West Asheville, North Carolina. I drove over to the University of Tennessee in Knoxville, to visit Dr. Aaron J. Sharp, a noted authority on Southern flora. We drove a considerable distance to the northwest, passing through Oak Ridge, then Wartburg to Route 27, into the Cumberland Mountains, a system of low mountains and ridges. Nine miles out of Wartburg we took a sharp turn to the left at the junction of Route 62, which brought us to a ridge. Halfway up the ridge we stopped along a clearing beneath a power line. Much to our regret, some fine specimens of *Magnolia macrophylla* and *M. tripetala* had just been cut down to keep the swath open. The leaves had not even wilted yet. However, on both sides of the road was undisturbed forest with many trees of all sizes of both species.

The weather was oppressively hot

and dusk was rapidly approaching, and we did not remain long. I collected fruiting herbarium specimens from both species of the felled magnolias. Even at that time, the fruits were quite large. On *M. macrophylla*, they would ultimately grow to the size of baseballs.

Two days later I returned to the same area shortly after ten o'clock in the morning before the weather became uncomfortably hot. This time I parked farther up the ridge near the side of a small ravine. I could not have picked a more beautiful day. The forest was still damp from an early morning shower. As in the case of *Magnolia fraseri* in the Smoky Mountains, the opening made by the road benefited the bigleaf and umbrella magnolias. More light reached the forest floor to about one hundred feet from the edge where the population was the densest. The parent bigleaf magnolia was a magnificent specimen about 45 feet tall by the edge of a stream. Its trunk was spotted from former lichen growth. Nearby was a large arborescent umbrella tree. The ecology of the area was most interesting.

As to the perpetuation of *M. macrophylla*, the forest appeared to have been cut about 60 years ago. White oak was the dominant species but none was much larger than a foot in diameter. Age estimation was difficult by sight because the soil was thin and underlain with flat rocks causing slower growth in the canopy. Apparently, the two large magnolias had been spared; thus the population of both species was regenerated. The smallest seedlings were virtually indistinguishable, but *M. macrophylla* develops cordate leaves in its second year, then followed by the typical auriculate ones with glaucous reverses.

Unlike *M. fraseri*, both the bigleaf magnolia and umbrella tree can