

Magnolia Portoricensis

Puerto Rico's Other Magnolia

by Richard B. Figlar

Even though Puerto Rico is an island with only 3435 square miles of land mass, it's home to two species of magnolia — *M. splendens* and *M. portoricensis*. During November 1981, while visiting the island on business, I had the opportunity to observe *M. splendens* in its native habitat in the upper Luquillo Mountains in eastern Puerto Rico. My time was limited during that visit and I was unable to see *M. portoricensis*, which grows in the central and western mountains of the island. Needless to say, when it came time for my wife Anita and me to select a location for our 1983 winter vacation, Puerto Rico was on the top of the list.

We coordinated the vacation plans with our friend and magnoliophile Julio Figueroa, who is also a plant researcher at the Institute of Tropical Forestry in Rio Piedras, Puerto Rico. Julio generously offered to accompany us and suggested the Maricao National Forest as the best location to see *M. portoricensis* because many of the magnolias grow right along the main road there. Since Maricao is located in the far western part of the island, it would also give us a chance to see quite a bit more of Puerto Rico than just the magnolias. We set the date for the trip to Maricao for Saturday, February 19, then scheduled our vacation around that date and started packing our bags.

Description. *Magnolia portoricensis*, locally called Jaguilla, grows in the

higher elevations of the central and western mountains known as the Upper Cordillera region. Mature trees reach 70 to 80 feet in height with trunk diameters of up to 3 feet. Except for in the most inaccessible areas, few large trees exist since the wood is highly prized (under the name laurel sabino) for use in cabinetwork and furniture. In addition, most of the range of *M. portoricensis* is on private land.

Its lustrous dark green leaves, which are broadly elliptic to almost orbicular, are 3 to 8 inches long by 2 to 6 inches wide. The leaves are thick and leathery with cuspidate tips and rounded bases. The overall leafblades are curved and conduplicate in the same fashion as those of *M. splendens*. Petioles are long, averaging about 1 inch in length. Flowers are described as very fragrant, 2 to 5 inches in diameter with 3 whitish green sepals and 7 or 8 white petals. The *virginiana*-like fruit cones are 1½ to 2 inches long. Flowering and fruiting is said to occur throughout the year.



Flower of *M. portoricensis* taken earlier by Julio Figueroa.

Unlike those of its close relative *M. splendens*, all the vegetative parts of *M. portoricensis* are glabrous.

Arrival. We arrived in San Juan a few days before Saturday so we could get some much deserved rest and relaxation before the trip to Maricao. The weather was beautiful with temperatures topping the 90°F mark, considered above normal for that time of year.

At our hotel Friday night we received a message from Julio indicating that he wouldn't be able to take us to Maricao on Saturday. He further suggested that Anita and I go anyway and that upon arriving at Maricao National Forest we should ask for Mr. Ruben Padron, who would be able to show us the site of the magnolias.

Disappointed that Julio wouldn't be able to join us, we got out the maps and planned our journey. Even though a modern expressway was available that would get us to Maricao in two hours or so, we decided to take the "scenic" route, which meant driving across the island on rural roads. This route would take us west on highway 2 for about 50 miles to near Arecibo; then south for some 30 miles on highway 10 almost to Adjuntas; then finally west on mountain roads (routes 135, 128, 366, and 120) to Maricao.

The Trip. We began our trip at 9 a.m., Saturday. Highway 2 parallels the north coast of the island so the road

was straight and flat and we made good time. The adventure got interesting when we headed south on highway 10 into the central mountains. This "highway" was transformed into a narrow, bumpy, almost two-lane road with hairpin turns being the rule more than the exception. We could not drive more than 20 miles per hour.

At this point vague fears began to cross our minds: would the roads be like this for the rest of the way? If so, could we get there before dark? What would happen if we got lost or broke down? Once again we consulted the maps and concluded that at worst we'd get to Maricao between 3 and 4 p.m. and that would leave us a couple of hours for exploration. We then settled down and enjoyed the spectacular scenery of the central mountains.

Along the way, especially around Utuado, we saw a beautiful orange flowering tree in full bloom without its leaves. We later learned from Julio that this is a non-native member of the legume family called *Erythrina poeppigiana*, which was introduced into Puerto Rico from Central and South America to provide filtered shade for coffee plantations. Indeed there were many coffee plants in cultivation throughout the area. Puerto Rico produces a top grade of coffee but most of it is drunk on the island. Besides coffee, citrus and bananas were abundant in the central mountain region — even on steep slopes. Some citrus trees had naturalized along the roadside and whenever we got hungry or thirsty we stopped and picked ourselves an orange or two. No doubt, many Magnolias had been axed long ago to make way for these three mountain crops.

Every so often I would surprise Anita by stopping the car suddenly to get a better look at what I hoped was our first magnolia. Time and time again I was fooled by the many species of tropical trees with magnolia-like foliage. The more persistent impostors



Author with *M. portoricensis* along Highway 120 in Maricao.



Top sides of *M. portoricensis* leaves at left and of *M. splendens* at right.



Leaf undersides of *M. portoricensis* at left and of *M. splendens* at right.

were *Ocotea cuneata* and *Clusia rosea*.

At last we made it to route 120 and the Maricao National Forest. We soon located the ranger station and met Ruben Padron. Minutes after we introduced ourselves, Ruben showed us a *M. portoricensis*, which was growing within walking distance of the small buildings there. Ruben told us that although *M. portoricensis* is somewhat scarce in the area, quite a few nice plants were growing along route 120 south of the entrance to the Ranger Station. Before we departed to check out these roadside populations, Ruben showed us two seedlings of *M. portoricensis* which he had germinated some months earlier. Another gentleman, Dr. Juan Ricart of the Catholic University of Puerto Rico also happened to be visiting and expressed his fascination with this magnolia and *M. splendens* and the fact that they exist here in Puerto Rico.

We then drove back to the main road and right away spotted several handsome *M. portoricensis* specimens. In fact, there were at least a dozen magnolias along a two to three mile stretch of route 120. Most of these were well developed, probably because of the additional sunlight they receive along the roadside. One magnolia looked particularly striking situated next to a grove of naturalized bamboo (*Bambusa vulgaris*), which enhanced the beauty of the magnolia's foliage (see photo). We explored the area, took

several pictures and jotted down lots of notes.

As luck would have it, one magnolia had a dehiscing seed cone which was about 12 feet up in the tree. Our challenge was to get the cone down without damaging it or losing its precious seeds. With no other workable alternatives, I put my notebook and camera down and started climbing the tree. I happily retrieved the cone and descended without incident. The six seeds this cone yielded later would produce 5 seedlings in our home in New York state.

After getting over the initial euphoria of seeing *M. portoricensis*, we took note of some of the plants associated with the magnolia here. *Cyrilla racemiflora* (Palo Colorado or Titi) and *Prestoea montana* (Sierra Palm) were present here, just as they were in the upper Luquillo rain forest growing alongside *M. splendens*. These trees were much smaller though. In fact the canopy of this forest was lower (only about 40 to 60 feet) and not as dense as the Luquillo rain forest, even though both areas are in the same lifezone, which is about 2500 feet above sea level. So far as temperatures are concerned, both Maricao and Luquillo locations have essentially the same average mean temperatures, 74°F in July and 68°F in January. Most likely it's the average annual rainfall that accounts for the difference in canopy cover. Luquillo receives as

much as 180 inches average annual rainfall. Maricao and other locations in the upper Cordillera get about 100 inches annually.

After a couple of hours we decided to head back to San Juan, this time via the expressway. As we drove away I couldn't help wishing we could have spent more time in the Maricao forest and learned more about *M. portoricensis* and the other vegetation there.

Splendens Revisited. We spent the next day on the beach relaxing. Later on that day I took Anita up to the El Yunque rain forest in the Luquillo Mountains so she could see *M. splendens*. El Yunque is a relatively short drive from San Juan.

In the rain forest it was difficult to get a good look at the foliage of *M. splendens* since most of the trees have grown tall in their competition for light. We were surprised to see a *M. splendens* 4 to 5 feet across at breast height growing along the park's Big Tree Trail (appropriately named). There were so many vines and ficus plants growing on the tree that it was difficult for us to tell if it really was a magnolia. Julio later confirmed that it was indeed a giant *M. splendens*.

Analysis. In comparing *M. splendens* to *M. portoricensis*, I find that they are more alike than many individual *M. grandiflora* trees are to each other. The only obvious differences are in the

shapes of the leaves, *M. portoricensis* having very broad leaves while those of *M. splendens* are narrowly elliptic; and in pubescence, *M. portoricensis* having no pubescence, while *M. splendens* has abundant pubescence on the leaf undersides and stems.

One interesting characteristic that occurs in both species is a small groove on the topside of the leaf petioles. In his book *Magnolias*, J.G. Millais called these "channeled petioles" or "furrowed petioles" in his descriptions of *M. guatemalensis* and *M. cubensis*, respectively, but he omitted this characteristic in his descriptions of the Puerto Rican magnolias. It would be interesting to see if all the tropical species of Section Theorhodon have grooved petioles. Whatever the case, I have never seen this feature on *M. grandiflora* or, for that matter, any other magnolia.

Like *M. splendens*, I believe *M. portoricensis* would make a fine ornamental for places with tropical to semitropical climates. Both species show a desirable tendency to become dense conical trees with possibly finer textured foliage than most *M. grandiflora*. Although its flowers are much smaller than that species, *M. portoricensis* would have the advantage of flowering throughout the entire year. Nevertheless, considering the overall merits of these fine Puerto Rican magnolias, they are still a long way from becoming any serious competition for selections of *M. grandiflora*.

As mentioned earlier in this report, five of the six seeds eventually germinated (83 percent). These had been cleaned and sown immediately — no cold treatment at all. One seedling was probably albino and died shortly after germinating and another succumbed to unknown causes. The remaining three are one year old now and making very slow progress as of this writing. The *M. splendens* seedlings that were germinated two years ago were equally slow in their

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