

# The star magnolia in its lair

By Lennarth Jonsson

In January 1985, I paid a short visit to Japan. I had one day off and fortunately was able to spend a few unforgettable hours with some Japanese friends in the area where *Magnolia stellata* is native. Of course the time was too short for close observation and, alas, in the off-season. This should be kept in mind while reading this report.

First, a few words about the winter on the southern slopes of Ontake Mountain (3000 meters above sea level), namely the Pacific side. The winter here in January looked like it does in March in my home area of Sweden, where March usually includes a period of blue sky and frost in the shadows but is quite decent in the sun. Nights have lows down to 20-25° F. Snow and ice remains where the noonday sun cannot reach it.

This weather can be hard on evergreens and it tempts deciduous species used to continental climate to start to grow. To me this kind of weather is not really winter, although all the deciduous plants were still dormant where I traveled.

So it cannot be the present climate that has given *M. stellata* its hardiness. However, everybody is aware that climate varies through the ages and will continue to do so. The Swedish dendrologist, Tor Nitzelius, has shown that many Japanese species from regions with mild climates today are hardy in southwest Sweden. For example, Tor has a local form of *Magnolia hypoleuca* collected on Mount Daisen (35° 24' N 133° 35'E) at 900 meters in his garden (about 21° farther north than the native locus). This form starts later than those of more

northern provenance.

My Japanese friends confirmed that the flora of the Sanin region (on the western side of the divide) is very old and was established in the glacial periods when the Strait of Korea was blocked and only cold northern sea currents could enter. Of course the climate of Japan must have been much harsher then and perhaps more similar to that of Scandinavia today.

Official climatic data of the zone where *M. stellata* is native states: vertical climate zones, continental climate type in intermountainous basins, where the frost free period is 160-180 days. Less precipitation than on the hillsides.

The winter in Japan is governed by the cold air from Siberian high pressures which becomes humid when crossing the sea. These winds bring enormous amounts of snow to the western slopes of the divide. I remember one night in Maizuru (western Honshu) it was raining heavily and I was told that the mountains nearer the coast had a snow cover of 1 meter (at an altitude of 1200 meters). In winter the Pacific side is in a rain shadow and the sky often remains blue; however, nowhere in Japan is the annual precipitation less than 1 meter (40 inches).

During the previous evening I had met my friends, Mikinori Ogisu and Seiju Yamaguchi. Mr. Yamaguchi is a nurseryman living at Mizunami, situated in the native area of *M. stellata*. He is an ingenious and generous man with a keen interest in botany. Although he doesn't speak English, our minds were in immediate rapport. If he were more of a businessman, he would likely become as well known as the late

Mr. K. Wada.

Dr. Shuichi Hirao, whom I visited, told me that he considered Mikinori Ogisu one of Japan's most skilled young botanists. Dr. Hirao should know since he has long been active in several societies and is the present secretary of the Iris Society of Japan.

It was a great occasion to meet Mikorini Ogisu, with whom I have corresponded for some years. He speaks perfect English and prefers to call himself a naturalist. No doubt he is exceptional among Japanese because of his independence from institutions. He goes his own way and together with Mr. Yamaguchi works mightily to protect unique environments in Japan.

In the matter of accuracy he is typically Japanese and does not hesitate to confirm an observation in the wild by several subsequent visits to avoid any mistakes. In this way he has limited his publishing of papers, though he showed me several articles ready for completing "after some further checks." Among them was one on *Magnolia stellata*, which he promised will be published in *MAGNOLIA*. I'm sure many look forward to reading it.

Mr. Ogisu has studied not only the flora of Japan, but also those of Korea and China. In 1982-84 he became the first foreigner to study botany at the University of Sichuan in Cheng-du after the war. Thus he was allowed to go along on many field trips in Sichuan, among them one to the river Jinsha on the Yunnan border. He was permitted only to take pictures, and he showed me several outstanding ones of endemic species, including *Rosa chinensis* f. *spontanea*, not seen in the wild by foreigners since the 1930s. As he is a young man, I have no doubt he will publish much of interest on the flora of the Far East.

We spent a night at a traditional hostelry and got up early in the

morning before the sun had swept away the night frost. We were soon on our way to *M. stellata*. According to Mr. Ogisu, *M. stellata* is endemic to a small area in the Prefecture Gifu (35° 20-35' N 137° 10-30' E). It grows around a lake that existed in ancient times, not far from the river Kiso. There is considerable farming, although this is not the most fertile of soils.

The topography is quite hilly, 400-700 meters, and some hills are quite steep. On the hillside there were woods, with rice paddies in between. This reminded me of my home province in Sweden where the fields often are on drained lakes or swamps between hills made by the melting glaciers.

Walking around in these woods was incredible, since we were surrounded by species usually seen in the west only in botanic gardens and arboreta. I was aware of the considerable variation in the Japanese flora but when you are actually there you have to concentrate on a few species, or you will get lost. The same type of farming as in Scandinavia is practiced: the farmers clear the woods of trees and shrubs of less economic value and then plant conifers, in the Japanese case *Cryptomeria japonica*.

I was astonished to see that *C. japonica* foliage was brown, even gray. In Scandinavia I had thought that this color was due to our colder climate, but the Japanese told me this is its natural color. Thanks to Mr. Yamaguchi's efforts, some areas have been saved from clear-cutting for the future.

We went first to a small farm in Nakatsugawa. Mr. Yamaguchi took us out along a row of rice paddies. The ground was frozen so hard it was not difficult to walk around. On one side it was flat and almost marshy. At a distance I saw high, dense shrubs similar to aspen

(*Populus tremula* L.) or birch (*Betula verrucosa* Ehrh.).

The other side, a slope, had an open forest of trees with light grey trunks that looked like poplars. But of course these were a much nobler species, *M. stellata*! On the wet side these grew shrubby, to a height of 6-7 meters. They were quite dense shrubs and I suspect the farmer considers them troublesome. At least he had tried to clear some of them out, but they had sprouted from the stumps even more densely.

On the slope side, which was obviously dryer, *M. stellata* was growing as a single-trunked tree, at least 7 meters high. I tried reaching around one trunk with my arm and estimated its diameter to be 8-10 inches. The farmer did not seem to like these giant *M. stellata* trees either and had chopped down some of them. However, *M. stellata* is not easily killed in Japan! But the cutting produced the same dense shrubs sprouting from the stumps as on the wet side. In Sweden we have had similar experiences with birch and aspen, but never Magnolia!

My friends had selected this place to show me that the form that *M. stellata* takes depends on the ground conditions in its native area. There is another area, the Peninsula Atsumi in the Prefecture Aichi (35° N 137° E), where *M. stellata* obviously is native. Its habit there is a slender shrub, according to my



*Magnolia stellata* at least 7 meters high on the slope side of Nakatsugawa farm.

friends. The slides they showed me were of specimens 2-3 meters high, with no tree-like forms. On the other hand the ground there is said to be marshy also.

The climate of this peninsula is characterized as warm and temperate. Tor Nitzelius, who made seed collections there in 1976, told me that *M. stellata* preferred more or less boggy situations. It occurred together with *Mallotus japonicus*, *Clerodendron trichotomum*, *Dendropanax trifidus*, *Smilax china*, etc. Although these are definitely warm temperate species, the seedlings of *M. stellata* from this collection (at only 50 meters altitude) have proved more hardy in south Sweden.

We left this area for another not far from Mr. Yamaguchi's home. We arrived at a very hilly area of about 500 meters, and parked at the foot of steep hillsides. In between these there was a brook covered by shrubby, slender *M. stellata* growing like the willows or bog myrtles do at home. Up the hillside *M. stellata*'s habit changed to a more tree-like form with a single trunk. We climbed up the hillside by a path to a point about 100 meters above the road. My friends told me that from here we would encounter the hybrid *M. x proctoriana*. Farther up the hill were stands of *M. salicifolia* and in between these and the *M. stellata* there was an intermediate zone of hybrids.

Mr. Yamaguchi, not at all affected by our climbing, ran up and down the hillside, climbed into the trees and collected twigs of both the species and their hybrids. We examined these twigs carefully and after being told the differences I could easily separate the three kinds of Magnolia while they were completely dormant.

Examining the pedicles (in this case the furry buds) left no doubt that those of *M. stellata* were densely pubescent, those of *M. x*