

M. Grandiflora in Michigan

by Richard D. Wiser

I have often admired *Magnolia grandiflora* on trips to the South and wished this beautiful tree could be grown here in Michigan. Little did I know that several Southern Magnolias have been growing in the Detroit area for many years. USDA zone 5b, where I live, is not the best place for *grandiflora*, but evidently the right plant in the right spot can succeed.

There is a tremendous amount of variability in *M. grandiflora*. Being hexaploid, it has two or three times as many chromosomes as most other magnolias. This allows for a wide range in individual plant characteristics, including hardiness. As seedling trees are brought here from the South, variations in cold tolerance quickly become evident. It would be a safe bet to say that more of these plants have died than lived, so I feel a survey of the survivors can give us some insight into what conditions suit *grandiflora* best here in what must be about the northern limits of its endurance.

First of all, none of the trees are growing in the open or in a western exposure. Most are on the south side of a building, a situation that provides maximum warmth and protection from north winds but leads to browning of the leaves from the winter sun. The trees seem to be quite indifferent to soil conditions. Most are growing in the heavy, slightly alkaline clay common in our area. Surprisingly, all are in locations where they get little or no care. I found no avid gardeners giving them any special attention — they are essentially on their own. Condition and retention of the leaves varies from tree to tree. Some remain quite evergreen,

while others are browned badly every year. Three of the trees bloom regularly. I have collected seed from one this fall and will attempt to germinate them in the spring.

The winter of '81-'82 was a rough one for broadleaf evergreens in this area. Our lowest temperature was in the -15° to -20° F. range but the real damage was done by unusually high and prolonged winds in January. As a result, all the *M. grandiflora* here was defoliated. Leaves were either ripped off by the wind or were desiccated, turned brown and fell off in the spring. The photographs with this article were taken in November 1982. I have been observing these trees for several years and none looked as good in 1982 as they normally do because no leaves



Harper Woods tree (fig. 1)



Detroit tree (fig. 2)

were carried over from 1981. So the problem in our area is not so much the hardiness of the wood — the trees continue to grow larger and suffer little dieback — but preservation of the leaves in good condition over the winter. This is much like the way *Pyracantha* behaves here in Michigan.

The following is a list of *M. grandiflora* trees now growing in this area with as much information as I could gather about each. To my knowledge, all are random seedlings.

Harper Woods Tree (Fig. 1): height 10 feet, diameter 3 ½ inches.

This tree was planted as a one-foot seedling from Florida in 1959. Growing on the north side of a two story high school building, it receives the least sun of any of the magnolias. As a result, it grows more slowly than the others and has never bloomed, but there also seems to be less browning of the leaves, probably because of shading from the winter sun. It is fully exposed to the north wind but suffers no winter dieback. There are two other smaller

specimens of *M. grandiflora* growing on the school grounds, planted at the same time, but they are not doing as well. This tree is growing in a heavy clay soil and the school custodian reports that it receives no special care, since he did not realize it was an unusual plant. He did agree, however, to cut back a much overgrown lilac crowding it on the west.

Detroit Tree (fig. 2): height 15 feet, diameter 4½ inches.

I was unable to get any background information on this tree. It grows on the south side of a house that has changed hands several times in the last few years and is now vacant. It is one of the tallest trees but also has some dead wood scattered among its branches. The foliage is quite handsome, being very glossy with generous indumentum on the undersides, but usually browns out each winter. There were fruit aggregates on the tree in the fall of 1980 and 1981, indicating it has bloomed. I was successful in rooting a hardwood cutting from this plant in November of 1980. It is now growing in a pot until it gets some size.

Huntington Woods Tree (Fig. 3): height 16 feet, diameter 6 inches.

This is the largest *grandiflora* I know of in this area. It was planted by a local nurseryman in 1968 as a three foot seedling from Alabama. It probably had more protection than any when first set out, being enclosed on three sides by a one story office building with an open brick wall to the west. (see photo)

The plant is quite vigorous and has outgrown its protection. The top is now about four feet above the roof line. Ownership of the building has changed since the tree was planted; consequently, no one pays any attention to it except the secretaries, who pick the flowers in summer to put on their desks. I have collected seed

from this tree (all sinkers) and they are now in cold storage for spring planting. The outer leaves brown some in the winter but the foliage is usually quite dense, so the inner leaves are shaded and remain green. This tree is usually unhurt by winter cold, but the portion above the building, which is fully exposed, did suffer some injury last winter.

Southfield Tree (Fig. 4): height 13 feet, diameter 3 inches.

This tree is from the same source and was planted at the same time as the Huntington Woods tree. When I talked to the owner he had no idea what the tree was, but reported that it usually remains evergreen all winter long. It is visible from the house through large windows and he says guests often comment on the 'green tree' outside in the snow. It grows in a southern exposure with some protection to the east and west from wings of the house. Crowded by other plants, it would do better with more sunlight. The owner gives it no care of any kind and says no blossoms have ever been observed. The soil is a stiff grey clay.

Farmington Hills Tree: height 5 feet, diameter 1½ inches.

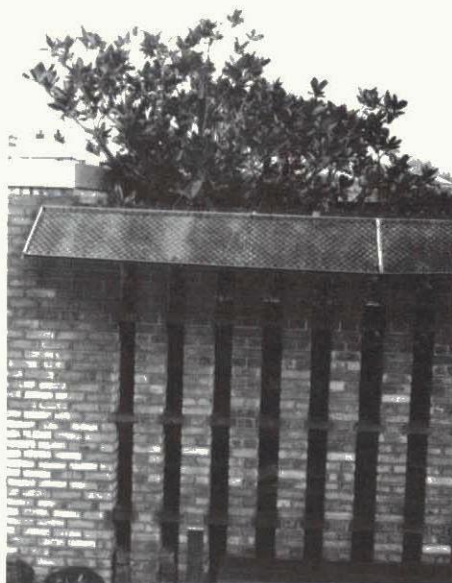
Although this tree is small now, I have included it because of its former size. The owner purchased it as a one foot plant at a local chain garden store approximately 20 years ago. Planted on the south side of the house, it grew into a 12-13 foot tree that bloomed reliably for several years. Three years ago a crack developed in the basement wall near where the tree was growing and the owner, thinking the magnolia roots were at fault, chopped it down with an ax. Since then, it has sprouted from the stump and grown quickly to its present size. Surprisingly, these vigorous shoots have suffered no winter dieback, growing on from the terminal bud each spring. This would

seem to indicate that the plant is very cold hardy. Because of the southern exposure, the leaves do brown out during most winters.

The northern gardener who wants to grow *Magnolia grandiflora* faces several obstacles. The first is that nurseries growing it are in parts of the country where winters are milder. Such nurseries are usually not interested in offering hardier cultivars or propagating from trees growing in the north. You can take your chances with seedlings but the odds will probably be against you. If a source is found for a hardy cultivar, obtaining good sized plants and having them shipped long distances can be a problem.

From what I have been able to gather, *M. grandiflora* 'Edith Bogue' seems to be about the hardiest cultivar growing in the north.

Testing of this and other supposedly hardy cultivars under uniform growing conditions in the north would also answer a lot of questions about their



Huntington Woods tree (fig. 3)



Southfield tree (fig. 4)

relative hardiness. I have some 2-3 foot seedlings of *M. grandiflora* 'Charles Dickens' that have been growing on the south side of my house for two years. Joe McDaniel, in a letter to me in 1980, said that seedlings of 'Charles Dickens' survived the recent hard winters in central Illinois better than most. My plants have been vigorous and unhurt except for some browning of the leaves. I also have a two foot plant of 'Edith Bogue,' growing at present in a pot, that I plan to set out in the spring. 'Victoria,' a cultivar popular in the Pacific Northwest, was selected on Vancouver Island, Canada and holds promise for hardiness.

To conclude, probably the most damaging conditions here in the north as far as the Southern Magnolia is concerned are (1) strong winter winds causing desiccation and sometimes tearing of the leaves from the tree, (2) bright winter sunshine on the foliage which leads to winter burn and extensive browning, (3) frozen soil that cuts off the water supply to the plant,

thereby contributing to the above conditions. Minimum temperatures can be a problem with random seedlings but with a hardy cultivar this should not be the determining factor, even here in Michigan.

I would recommend that the northern gardener start out with a plant of known hardiness, preferably as large as possible. Spring planting is best, to allow it to become established before winter. If the plant is in a container, it can be set directly into the garden. If it has been freshly dug I would suggest that it be placed in a good sized pot for the first year, given shelter over the winter and then planted out the following spring.

The planting site is all important. Ideally, it would protect against the three damaging conditions listed in the foregoing. I have read that the best location for *Magnolia grandiflora* in the north is on the east side of a building with conifers on either side of the tree. This would block the north and west wind as well as give shade from the low winter sun to the south. The tree would still get plenty of morning and overhead sun in the summer for good growth and flowering. It also could be espaliered against a wall to give maximum protection in questionable areas. A heavy mulch should be applied to keep the soil from freezing and a burlap screen erected around it for at least the first couple of winters, but as the tree grows, this will become less and less practicable.

Like many, I believe *Magnolia grandiflora* is the most ornamental tree native to the United States. The large, glossy evergreen leaves and enormous flowers also have made it popular throughout the world. I also feel it is a truly versatile and adaptable plant worthy of wider use in this country. Its outstanding qualities are more than enough reward for the extra effort in getting one established where you live. I hope this article will encourage others to at least give it a try.