

## PLANTS IN PROGRESS

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Several years ago, after once again seeing handsome springtime magnolias covered in brown mush (and it wasn't even a late freak frost), I decided to try some hybrids of my own to see if something could be done to improve the situation. Late bloom, of course, wasn't the only goal, but it certainly was a major one. I was also curious about the potential from the late spring bloomers that Dick Figlar has researched so well. These are mostly USDA Zone 7 and 8 "new" Asiatic evergreens in sections *Michelia* and *Manglietia*. So I set out with my little pollen-covered brushes to see what might come of it. I'd already told myself that I might have to wait years to see any results. Surprisingly, several crosses began blooming at 2, 3, and 4 years old. What follows is an interim report of some of these hybrids.

### The Triplets

To get started I got some seeds from the Seed Counter of some of Dennis Ledvina's crosses. I also contacted him about the same time to get some pointers, and he generously sent me additional seeds. One cross, *M.* 'Red Baron' × *M.* 'Rose Marie', produced three seedlings. One bloomed at 4 years old and the other two at 5 years old. The three sisters are labeled #18/1, #18/2, #18/3.

#18/2 got me all excited when I first spotted a flower bud. After all, with those parents, it had to be spectacular! It was a bit of a letdown when the bloom was a spindly, floppy, 4-5 tepalled, washed-out pink thing.

However, the next year the triplets outdid themselves. All three bloomed late, just at the time *M.* 'Daybreak' and *M.* 'Sun-sation' were in full flower. (Those two cultivars typically bloom later than most frosts.) #18/1 was a fine warm red; #18/2 was a nice medium red; and #18/3 was a good warm pink/white bicolor. All three begin bloom on bare branches and contin-



#18/2 first year of bloom was disappointingly weak in color and form



#18/3 Upright form that would make a good street tree

## Magnolia

ue well into foliage emergence, for at least a 3- to 4-week bloom period, with the later blooms lighter in color.



#18/1 (*Magnolia* 'Red Baron' × *M.* 'Rose Marie') in second year of bloom

#18/1 has a dense, multi-branched, upright oval growth habit and is very late to leaf out. #18/2 has a similar form, but leaves appear much earlier. #18/3 is a real maverick - a very vigorous, single-trunk, strong tree form, with great upright candelabra branching. It's now nearly 18' tall at 6 years old. (It's a shame magnolias are rarely used as street trees - #18/3 would be perfect.) In New Zealand, Vance Hooper would call it a timber tree.

All three have very healthy foliage with no sign of mildew or other afflictions at any point during the season, which is a real asset in the Richmond, VA, area where we are very prone to such problems. It's nice to see magnolia foliage looking as good here in September as it does in June.

The blooms on all three have pretty firm substance, but the shape does tend to get a little floppy as the bloom ages. I've made crosses with #18/1 and #18/2 with pollen from some very strongly tepaled cultivars, such as *M.* 'Athene', to see if it will firm up the shape. Hopefully, I'll have enough seeds from some of these crosses for the 2011 Seed Counter.

#18/1, the star of the pack, may be a candidate for registration, pending further evaluation. I am waiting to see if the color and other desirable traits are consistent over more than one or two years.

### The Two Sisters

Among Ledvina's seeds was the cross of *M.* 'First Love' × *M.* 'Rose Marie'. Two sisters, #25/1 and #25/3, bloomed at 3 years old. Once again, the



#25/1 was a little floppy in form

flowers were rather nondescript that first year, but the next produced some fine blooms. #25/1 had tepals with a solid warm red exterior and white interior, but was a bit floppy. #25/3 is a medium to light purple with a consistent and firmly held upright flare form. I've crossed it with *M.* 'Sunburst', which has a similar shape. Who knows what the color will be, but the offspring should have a pronounced flare.

According to mathematical calculations, there are five species included in the parental heritage of #25/1 and #25/3 seedlings: 54% *M. liliiflora*, 25% *M. acuminata*, 11% *M. denudata*, 7% *M. sprengeri* 'Diva', and 3% *M. campbellii*. Hopefully, the parents' hardiness trait will have been passed on to the offspring. (*M.* 'First Love' and *M.* 'Rose Marie' are zone 5 plants.) Both #25/1 and #25/3 have long bloom periods and some repeat bloom. Both sisters are very fertile, setting seeds even if the pollen brush is just waved in their direction. All of these characteristics make them excellent choices for further breeding.



#25/3 Close up and overall form

One drawback for me is that they start bloom a little too early - just after *M.* 'Galaxy', but before *M.* 'Elizabeth', so they are at risk for late frost damage. Unfortunately, another drawback is that the foliage is susceptible to mildew in late summer, at least here in Virginia. (I would note, though, that from communications with other magnoliaphiles, I'm discovering that the mildew factor is highly variable from one geographical region to another. In some areas it's rarely a problem, while in others it's quite disfiguring.)

### The Only Child

One of my first crosses, *M. acuminata* var. *subcordata* × *M.* 'Eskimo', produced only two seeds, and one seedling survived, the only child, which vigorously grew into a pleasing, dense, multi-stemmed oval. To my surprise, I noticed one remnant of a seed cone in the fall of its second year. The next year it bloomed prolifically. I was half hoping for a nice cantaloupe color with *M.* 'Eskimo's' form. What I got was a well-defined star shape with light purple overlay on a butter yellow exterior



*M. acuminata* var. *subcordata* × *M.* 'Eskimo'

and a white interior. It blooms quite late, in sync with *M.* 'Daybreak' and *M.* 'Sunsation'. (Those two cultivars set the standards for blooming after frosts.) It's very floriferous and showy since it blooms well before

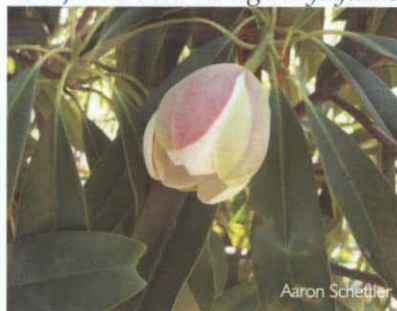
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the much later-appearing leaves. The leaves, when they do appear, are rather small with a wavy edge and good gray-green color. Its foliage has no damage from mildew, nor does it have any other serious afflictions throughout the season. Unfortunately, it has very poor fertility, seed or pollen. However, I have made a very few successful crosses with some very fertile seed parents, hoping to get the trait of blooming at 2 or 3 years old passed on to the offspring.

Pending another year of observation, the “only child” may be registered and given an official cultivar name. For now, I've given it the nickname 'Starfish' just for ease of identification. A few grafts of this hybrid have been distributed, and I'm currently testing cuttings to see if they will root as well. I'm optimistic that its distinctiveness will hold up over time.

## Kissing Cousins

Like several other breeders, I'm fascinated with the possibilities of hybrids using parents from the *Michelia* and *Manglietia* sections. I've been pleasantly surprised at how many subgenus *Magnolia* species will cross the sectional boundaries. It seems these “cousins” are not so distant, after all. Since 2006, I've successfully bred hybrids using three different *M. virginianas*, three different *M. sieboldii*, and recently, *M. 'Southern Belle'* (*M. sieboldii* × [*M. tripetala* × *M. obovata*]) and *M. 'R20 -1'* (*M. sieboldii* × *M. ashei*). I've been using *M. yuyuanensis* (= *M. fordiana* var. *yuyuanensis*) and



*Magnolia yuyuanensis*

*M. insignis*, particularly. I especially like the growth habit and form of *M. yuyuanensis*, a hardy plant in my area. I also know of other breeders who have successfully used *M. grandiflora* and *M. 'Silk Road'* (*M. tripetala* × [*M. tripetala* × *M. obovata*]) with *M. insignis*, resulting in what are clearly hybrid seedlings. We are continuing to try other crosses, exploring the possibilities.

So far, I've had one bloom on *M. yuyuanensis* × *M. insignis*. It's barely pink. The *M. insignis* parent was a pink form. I have *M. yuyuanensis* × *M. insignis* (red form) seedlings, none of which have bloomed yet. Hopefully, there'll be more color from the darker *M. insignis*. Another one which has bloomed recently is a cross of *M. virginiana* ('Havener' seedling) × *M. insignis* (red form). That bloom is also a pale pink. It may be that we'll need to make some back-crosses to get a reliable darker pink color. Possibly other *Manglietia* species will produce a darker pink/red. Both *M. garrettii* and *M. grandis* have fine red pigmentation and larger

blooms, so there is potential from those two as well. The biggest barrier to using those two species is acquiring the pollen to work with because, unfortunately, there are very few flowering plants available, at least in the western hemisphere.

Thus far, I've only produced hybrids in the *Michelia* section with a few interspecific crosses, using *M. laevifolia* and *M. figo* primarily. This spring I tried *M. maudiae*, *M. foveolata*, and even *M. champaca* on *M. laevifolia*. Some fine seedcones are developing well; nothing has aborted yet. Of course, I won't know what's a viable hybrid out of these attempts until next spring's germination.

The crosses I have written about here are of special interest to me, and I'll have more data on several other crosses I've made in the past few years as they eventually bloom and can be assessed. For breeders and all magnoliaphiles, this is clearly an exciting time as we push the boundaries of breeding possibilities.

*Editor's Note: Bill welcomes comments or questions at [w.smith6100@comcast.net](mailto:w.smith6100@comcast.net).*



Seedling *M. virginiana* 'Havener' × *M. insignis* (red form) from Bill Smith, grown at Meredith College, Raleigh, NC. Photographed on May 19, 2010