Magnolia sprengeri var. *elongata* in the wild, in cultivation and some hybrids developed at Arboretum Wespelaar, Belgium

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Much has been written about both varieties of *Magnolia sprengeri*, and understanding the confusion is important. The best report on the history and introduction of *M. s.* var. *sprengeri* and *M. s.* var. *elongata* is that of G.H. Johnstone (1955). A good summary was later written by Neil Treseder (1978). Following Johnstone's suggestion, Treseder placed the two varieties under the names of *M. s.* var. *diva* and *M. s.* var. *elongata*. However, realizing that nomenclature rules require that one of these varieties (the typical one) be given the name *M. s.* var. *sprengeri*, Stephen Spongberg (1976) decided to "provisionally and arbitrarily" reclassify these two taxa under the names *M. s.* var. *sprengeri* and *M. s.* var. e*longata*. These denominations have been used ever since. However, *M. s.* var. *elongata* remains a rare and misunderstood taxon, whereas var. *M. s.* var. *sprengeri* has become one of the stars of our gardens.

Those who have had a chance to observe both varieties growing in botanical gardens may come to believe that they do not belong to the same species, but I guess that no one will want to suggest a change in the taxonomy until wild collected material of *M. s.* var. *elongata* is reintroduced and, more specifically, determined to be completely distinct. In my personal opinion, and on the basis of our present knowledge, it would be

Fig. 1. *Magnolia sprengeri* var. *sprengeri* compared to *Magnolia sprengeri* var. *elongata* and other taxa.

more than justified to raise *M. s.* var. *elongata* to specific rank. The two taxa as we know them are so far apart that one should have difficultly maintaining them under the same species name. [See comparative illustration of *M. s.* var. *sprengeri* and some cultivar and *M. s.* var. *elongata*, etc, Fig. 1] Quite specifically and as can be seen on Fig. 2, *M. s.* var. *elongata* has a much shorter, more compact and more rigid flower.

Fig. 2. *Magnolia sprengeri* var. *elongata* ("Kew Form").

Several early introductions of *M. sprengeri* had been made by Wilson while collecting for Veitch (1903) and for the Arnold Arboretum (1909). All expeditions placed both varieties of *M. sprengeri* in Western Hubei. It was found there again recently by a joint Chinese-Swedish expedition (1999) and then further north in Shaanxi. But only the pink form (var. *sprengeri*) was found in these recent expeditions; there was no mention of var. *elongata*!

During a visit to the Morris Arboretum in Philadelphia, PA, I came upon a plant of what I believe to be var. *elongata*, which I recognized by both the bud and the obovate leaf. In a recent personal communication, Anthony S. Aiello indicated that "the seed of this plant was collected in Shaanxi province in 1996, near the Foping Nature Preserve, at 1270 meters altitude, 33 °23′ N and 107 °56′ E. We moved the tree into the garden in 2002. Since then we have usually experienced winters where the temperatures can reach to -12C. As I've mentioned the tree shows no vegetative damage at these temperatures but the flower buds freeze and do not expand at all in spring."

Luckily, the spring of 2010 was favorable to magnolias and the plant has flowered (See Fig. 3). The flower is clearly short and thick, although the color is much more intense than on the specimen in cultivation in Europe. The flower has twelve tepals (typical of *M. sprengeri*) and within the range of var. *elongata* (short, nearly succulent tepals): in particular, I noticed the cream color on the outer tepals of the opening flowers. So it seems that we have a recent re-introduction of this taxon in the USA. It is unfortunate that the Morris Arboretum plant is a low-altitude collection (1270m), as it will be useless for most of our colder temperate gardens. But this should encourage botanists to seek this plant again, and at higher

levels in these mountains and further north in Shaanxi province. I would hope that this might help determine the range of characteristics in comparison with *Magnolia sprengeri* var. *sprengeri*. This would either confirm or disprove that this is indeed a natural taxon and separate species. Alternatively, var. *elongata* would remain within *sprengeri* and demonstrate the very large natural variability for the *sprengeri* range.

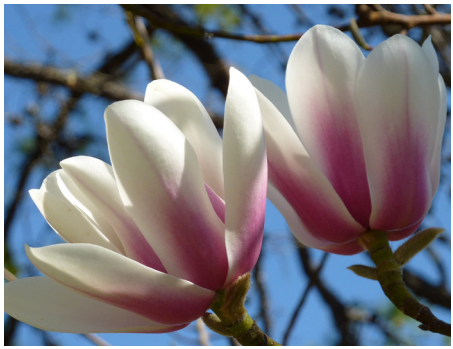

Fig. 3. *M. s.* var. *elongata* at Morris Arborertum, April 2010, from Foping Nature Preserve, Shaanxi. (photo by A. Aiello)

Magnolia sprengeri var. *elongata* in cultivation

There are apparently two forms of *M. sprengeri* var. *elongata* in cultivation, as described by Johnstone ("Bodnant form" and "Kew form"). At Arboretum Wespelaar, we probably grow the Kew form with its creamy thick tepals [Fig. 2]. The Bodnant form, with a redder base and stripe to the tepals, is probably represented at Villa Taranto [Fig. 8]. We do not grow this form at Wespelaar and all comments hereafter refer to the Kew form.

All plants of var. *elongata* that I have seen have a typical obovate, abruptly acuminate, nearly cuspidate leaf [Fig. 4]. Further, the underside of the leaf is often glaucous which is quite unusual in the *Yulania* section. This leaf is unmistakable when compared to var. *sprengeri* [Fig. 5]. In addition to the very obovate leaf, var. *elongata* has a most typical triangular, hairy flower bud [left in Fig. 5].

Fig. 4. Typical obovate leaves, on var. *elongata* at Morris Arboretum, from Foping Nature Preserve, Shaanxi.

Fig. 5. Glaucous underside to leaves and more triangular bud on *M. s.* var. *elongata* (left) compared to *M. s.* var. *sprengeri* (right).

Fig. 6. *Magnolia sprengeri* var. *elongata*, female stage, tight red stamens.

In maritime climates, the flowers of var. *elongata* are quite susceptible to spring frost and one needs a perfectly frostless spring and then a warm day to see the flowers at their best. The flower opens a light cream color, and if the temperature reaches around 20°C, will spread open to reveal twelve spathulate tepals with strikingly red stamens [Fig. 6]. The tepals are thick, nearly succulent and again quite distinct from those of var. *sprengeri* (much longer and less rigidly held).

A day later the stamens will open and often be rather flat and wide. The flower at that stage can be quite spectacular with its central chrysanthemum-like androecium [Fig. 7]. This is a characteristic which has been increased in some of its hybrids [Figs. 9 and 10].

Unfortunately, this is not a good plant for the typical western European garden. The best plant I have seen is surely the one growing at Villa Taranto on the Italian lakes, which enjoys the right climate. Flowers (probably the Bodnant form) were clean and well opened [Fig. 8]. I saw a plant at Chollipo Arboretum in Korea, the climate of which should be equally favorable to this plant (most probably a Hillier Nurseries' provenance). As

Fig. 7. *Magnolia sprengeri* var. *elongata*: male phase, showing large flat stamen.

Fig. 8. *Magnolia sprengeri* var. *elongata* at Villa Taranto in perfect mild climate. (Possibly the "Bodnant form").

discussed above, the climate of Philadelphia does not seem much more favorable, but one would still hope that the Morris Arboretum would try one of the original clones mentioned by Johnstone. I wonder if the taxon has been tried on the Pacific west coast? The great David Lam Asiatic Garden in University of Britich Columbia Botanic Garden in Vancouver should definitely have one.

Recent correspondence with Erland Ejder has indicated that white forms of *sprengeri* var. *sprengeri* have been found in China (Again, see his excellent article in The Plantsman Vol.7, 2008). I could quite understand that there would be a white-looking var. *sprengeri* and more or less pink foms of var. *elongata*. But the question remains: is there a continuous range of intermediates between what we know in cultivation as var. *elongata* and var. *sprengeri*, taking into consideration buds, leaf shape and colour, texture and size of flowers? Alternatively, is there a distinct gap between the two forms, which would justify maintaining the present taxonomy or even going further and raising var. *elongata* to species rank? Let us hope that further expeditions will answer this question.

Hybrids developed at Arboretum Wespelaar

Var. *elongata* rarely sets seed in Belgium. Even in good years, there are but a few open pollinated flowers with but a few fertile seeds; however, it is a good pollinator in controlled crosses. I have used pollen of var. *elongata* with success on 'Manchu Fan', 'Pegasus', 'David Clulow', etc. One of our best crosses was made on *M.* 'David Clulow.' Several seedlings have been raised and show great variation in the color of the stamens [Fig. 10]. The best has been named *M.* 'Joli Pompon'. As the illustration demonstrates, the stamens on this clone are flattened, pinkish-white and almost petaloid, really chrysanthemum-like [Fig. 9].

Fig. 9. *Magnolia* 'Jolly Pompon' (*M.* 'David Clulow' × *M. s.* var. *elongata*).

The hybrids with 'Manchu Fan' are also vigorous, rather upright plants, but the flowers are less spectacular than the 'David Clulow' hybrids. A cross with 'Pegasus' has exhibited a good tree-like form, with a narrow star-like flower.

Magnolia (*campbellii* × *sprengeri* var. *elongata*) has not yet flowered, twenty-five years after the cross, made by Harry Heineman, was offered to the

Fig. 10. Sister seedling of *M.* 'Joli Pompon' (*M.* 'David Clulow' × *M. s.* var. *elongata*).

seed counter of the Society. Has anyone else succeeded? Our tree is growing like a poplar on a straight stem. It will probably be disappointing and therefore cut. Indeed, my experience is that less than five percent of any cross is worth keeping, being superior to or in some way distinct from its parents. But it is fun to wait…it is always nice to think that we may get a hardy sibling from the great *campbellii.*

After the article was submitted the author noted: It did flower in April 2010 and produced a rather dull *veitchi*-like flower which will not justify keeping this hybrid. But I will give it another few years to confirm this apparent mediocrity!

References

Aiello, A. S. The Gayle E. Maloney Director of Horticulture and Curator Morris Arboretum of the University of Pennsylvania. pers. comm. aiello@upenn.edu.

Johnstone, G. H. 1955. Asiatic Magnolias in Cultivation. pp. 79-82; 87-89. RHS, London.

Kang, Y. X., E. Ejder, Y. L. Wang, H. Sjöman, M.Yang. 2008. Magnolia sprengeri 'Diva' and its relatives in China, The Plantsman 7(4): 212-217.

Liu, Y.H., ed-in-chief. 2004. Magnolias of China. Beijing Science & Technology Press.

Spongberg, S. 1976. Magnoliaceae Hardy in Temperate North America. Journal of the Arnold Arboretum 57(3): 286-288.

Treseder, N. G. 1978. Magnolias. pp. 107-111. Faber & Faber, London & Boston.