

The *Magnolia* collection at the JC Raulston Arboretum at NC State University

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The JC Raulston Arboretum

The JC Raulston Arboretum (JCRA) is a nationally acclaimed garden with one of the most diverse collections of cold-hardy temperate zone plants in the southeastern United States. As a part of the Department of Horticultural Science at NC State University in Raleigh, NC, the JCRA is primarily a research and teaching garden that focuses on the evaluation, selection and display of plant material gathered from around the world and planted in landscape settings. Plants especially adapted to Piedmont North Carolina conditions are identified in an effort to increase the diversity in southern landscapes. The JCRA's 10 acres and nursery contains over 8300 accessions of over 5000 different taxa.

The JCRA's location in the central piedmont of North Carolina allows us to grow a wide diversity of plant material. Our temperatures generally range from about -12°C (10°F) to 35°C (95°F), but temperatures much lower and higher are not unknown. The average annual precipitation measures 109cm (43 in) and in most months the area receives about 7.5-10cm (3-4in).

The *Magnolia* collection

Magnolias have been an important part of the collections of the JCRA from its inception and we are currently applying to be part of the multi-institution North American Plant Collections Consortium *Magnolia* collection. The first accessioned magnolia dates to 1977, less than a year after the arboretum founder and namesake, J.C. Raulston, arrived at NC State University. This *Magnolia* ×*loebneri* 'Merrill' still graces the Klein-Pringle White Garden where it welcomes the spring with a glorious floral display.

The JCRA's *Magnolia* collection represents a broad diversity of both species and cultivars comprised of 133 different taxa, including 32 species. We currently hold accessions from 8 of the 12 sections of the genus *Magnolia*, lacking only taxa in the mostly tropical *Talauma*, *Kmeria*, and *Manglietiastrum* sections and our own North Carolina native *Auriculata* section. We have a particular focus on members of section *Michelia*, with 19 taxa in this group alone. The complete list of magnolias planted on the grounds of the JCRA can be found on our website (www.ncsu.edu/jcraulstonarboretum) under the "Current Plantings" heading in the "Horticulture" tab. Photographs of many of our magnolias can also be found on the website in the "Photography" section.

The evergreen plants in section *Michelia* are especially valuable since they provide structure, and often flowers, during our relatively mild winters. *Magnolia ernestii* has made a handsome, narrowly upright evergreen tree in the southwest corner of the Japanese Garden where it now towers over the 8ft wall. The glossy green leaves are quite attractive and the flowers, although not terribly showy, are delightfully fragrant when they appear in late winter to early spring. Our plants (another grows in the Winter Garden) were acquired in 1995 and 1997 and have grown to nearly 20ft in that time. Another choice plant in this section rising above the lath house is *M. cavaleriei*, which begins flowering in December and continues to March. The large, loose white flowers often exhibit winter damage, but can be stunning against the clear blue winter sky. Another section member that hasn't yet made it out of the nursery is *M. compressa*, which I collected in Taiwan in 2009. These seedlings come from plants growing at over 2100m (7000ft) in central Taiwan and should prove to be hardy. In the wild these trees had straight, smooth trunks and were identifiable mainly by the occasional fruit found among the leaf litter on the ground. We hope to be able to distribute this collection in the not too distant future if it proves to be garden-worthy.



Magnolia cavaleriei

M. lotungensis in section *Gynopodium* has been happily growing in our lath house since 1998 and finally consented to flower a decade later. The creamy cup-shaped flowers are quite lovely in April and May, but can be



Magnolia lotungensis

difficult to see since they are generally above the roof of the structure. It forms a very distinctive upright, narrow pyramid with new foliage often tinted red when it first emerges in the spring. I am told it is used as a street tree in Yunnan where it is native and I have seen it growing in gardens in Hangzhou. Nearby in our new Asian Valley from section *Gwillimia* is a very attractive pink-flowered form of *M. delavayi*. The large foliage has suffered some winter

damage, but has still flowered well. We will be watching this form closely to see if it proves to be reliably hardy with age.

Magnolia

Another mostly ever-green section, *Manglietia*, is home to *M. fordiana*, a lovely narrow-leaved tree with cupped white flowers. Our plants are still relatively young, but I get to enjoy the related and similar *M. yuyuanensis* as a hedge outside my office in full flower as



Magnolia fordiana (photo by A. Schettler)

I write this article in late April. Both make beautiful specimens, but can be painfully slow to flower and difficult to propagate. Our hedge was planted with the intention of coppicing in the hopes that the young vigorous shoots would root more readily, but to date we have balked at the seeming sacrilege when confronting them with the pruning saw.

The JCRA, of course, also has significant collections of deciduous magnolias in section *Yulania*, with a multitude of plants ranging from *M. amoena* to *M. zenii*. We love the delicate pink to white flowers deepening to burgundy at the base of the tepals in both species and the purplish anthers of the former species, which are reddish in the latter. The large flowers on bare early spring branches of this section are highlights of the eastern end of the Arboretum, where the bulk of the magnolia collection is situated.

While we hold significant collections of species magnolias, cultivars also are well represented at the JCRA. *Magnolia* 'Coral Lake' is a particular favorite of visitors because of its very late, large, double pink flowers highlighted with streaks of yellow. It has been thriving at the head of our Scree



Magnolia 'Coral Lake' (photo by A. Schettler)

Garden where its April flowers and upright habit form a colorful sentry. An older selection, but still one of my personal favorites, is *M. stellata* 'Chrysanthemiflora'. The clear pink color of the multitude of tepals (36-40) on a small-statured tree are unmistakable and, in my mind, are

unsurpassed by any other pink star magnolia. In a nod of appreciation to the diversity of our own native evergreen magnolias, the collection holds 11 taxa of *M. virginiana* and 18 of *M. grandiflora*. The small-leaved selections of *M. virginiana* 'Perdido' and *M. v.* 'Coosa' add an unusual texture to the magnolia collection and should be more widely grown, especially in smaller gardens. The white flowers of both are medium-sized but appear relatively large against the undersized leaves and have the clean, lemony fragrance typical of the species.



Magnolia virginiana var. *australis* 'Coosa'

Increasing awareness

The JC Raulston Arboretum has always endeavored to increase the diversity of the American landscape through evaluation of plant material, display of novel and superior selections, and dissemination of knowledge and plants. Over the last 15 years, the JCRA has distributed thousands of plants to nurserymen, other gardens, and Arboretum members. Among these allotments have been magnolia distributions in larger numbers, including *M. sieboldii*, *M. figo* 'Port Wine', *M. zenii*, *M. yuyuanensis*, *M. chapensis*, *M. laevifolia* 'Michelle', *M. denudata* 'Forrest's Pink', and *M. insignis*, among many others. Hopefully, this results in creating more magnolia enthusiasts in the process.

We are in the process of evaluating our collection, making systematic removals of plants which no longer fit into our collection priorities and aggressively adding new forms. Our dynamic collection keeps the JCRA fresh and ensures that there is always something new to see on each visit. After all, life is too short for boring plants.