

Magnificent Magnolias

The Holly and Magnolia Collection, one of the oldest collections at the Arboretum, began more than 75 years ago. The hollies were planted first in 1937, with initial plantings of magnolias in 1943. Today, the 10-acre site containing the Collection is filled with majestic trees that provide a multi-season display of berries, flowers, and fragrance.



Together, the hollies and magnolias—both important landscape plants—herald the end of winter and the arrival of spring. Clusters of tiny flowers appear on the hollies' branches, their fragrance filling the springtime air. The Chinese holly (*Ilex cornuta*) is chiefly responsible for this lovely scent. The magnolias begin blooming at the same time, and they add a range of fragrances, from slight or barely detectable to the pleasant scents of the yulan (*Magnolia denudata*) and star (*M. stellata*) magnolias.

There are more than 200 species of magnolias. Characteristics vary; some are evergreen, some are deciduous. Some, like the lily magnolia (*M. lilliflora*) are relatively short and shrub-like, and others, such as *M. virginiana* grow to 80 feet or more. Native species are found in southeastern Asia, eastern North America, Central America, the Caribbean, and parts of South America.

What the magnolias may lack in olfactory appeal, they make up in a spectacular visual display of flowers in shades of pink, yellow, and white. The deciduous magnolias are particularly

showy because the flowers bloom before the leaves open. Magnolias enjoy a blooming season that begins in late February with the earliest Asian varieties such as *M. denudata* and *M. kobus*, although they risk the dangers of a late winter freeze. The Asian/native crosses such as *Magnolia* 'Elizabeth' bloom next and, unless winter has been mild, prime blooming season for most other magnolias is late March through early April. Those that are native to the Eastern United States (e.g., *M. virginiana* and *M. macrophylla* or bigleaf) flower in mid June. Depending on the type of magnolia, the blossoms last from one to three weeks. The Magnolia Society International website contains a complete listing of the varieties of magnolias, descriptions of their characteristics, and how to select a magnolia that's right for a particular garden.

The magnolia research program is one of the older programs in tree research at the Arboretum. In 1956, horticulturalist Dr. William Kosar began a magnolia breeding program to develop trees with a later blooming time to avoid bloom loss from late winter and early spring freezes. The result was eight hybrids

introduced in 1968. They are known collectively as the “girl magnolias,” named after the daughters of Dr. Kosar (Betty) and his colleague Dr. Francis de Vos (Ann, Judy, Randy, Ricki) and the wives of the Secretary of Agriculture (Jane) and the Director of the National Arboretum (Susan). The majority of these trees are located next to the main magnolia collection with others scattered throughout the Arboretum. In addition to blooming later, the smaller size of these hybrids makes them better landscape plants.

The breeding program ended in the 1990s, and research is no longer being conducted in the Magnolia Collection. Because of its long history, however, the Collection remains important for researchers and breeders who look to the Arboretum for its research history and the germplasm collection, which contains genetic material from the original plants, an important reference point for breeders. Much of the focus of current breeding efforts is on creating hybrids of tropical and temperate native varieties in order to introduce plants with a more lush appearance.



Although formal research has ended, the magnolias continue to be evaluated for release to the public. In addition, staff are always on the lookout for “witches’ brooms,” balls of compact branches densely packed so they resemble the bristles of a broom. These unusual growths are often the result of genetic mutations and offer exciting propagation possibilities such as dwarfed habit or variegated foliage. Because of their potential merit in propagating plants with new characteristics, witches’ brooms present opportunities for potential plant introductions.

Visitors who come to see the Magnolia Collection should be on the lookout for three huge trees, noticeably larger than the rest, that represent two native evergreen species—*M. virginiana* and *M. grandiflora*. Their towering size makes them easy to spot. In early spring, the magnolias surround the visitor with a dazzling floral display and a scent that’s a combination of magnolia fragrances. Regal, stately, and majestic are words used to describe magnolia trees. Perhaps the word that best describes the Arboretum’s collection is outstanding. 🌳

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Top: *M. stellata* 'Centennial' grows fragrant, silky flowers before its leaves every spring.
Bottom: The differences in flower color among magnolia varieties is visible each spring in the collection. Photo courtesy of the USNA.

Among the Magnolias



CAROLE BORDELON, SUPERVISORY RESEARCH HORTICULTURIST

In her twenty-nine years at the Arboretum, Carole Bordelon has held several positions and had numerous responsibilities. After five years as a gardener in the Bonsai collection, she became a horticulturalist in the Asian Collections and the Holly and Magnolia Collections.

A native of Baltimore, Carole studied entomology and botany at the University of Maryland. She has worked for the Maryland Department of Agriculture in the Mosquito Control Program and for a small company that reared beneficial wasps for the control of the Mexican bean beetle, an agriculture crops pest. But her interest in botany won out.

Currently, she is one of the two Supervisory Horticulturists who provide oversight to the Asian Collections, the Bonsai & Penjing Museum, the Azalea Collection, the Flowering Tree Collection, and the Holly and Magnolia

Collections. Carole has had the opportunity to travel to China to collect, as part of the North America-China Plant Exploration Consortium. On other occasions, she has visited China and Japan to see what types of plants are available and to share knowledge with colleagues.

Carole says that seeing the development of the Arboretum's gardens—"the growth of the trees in the Asian Collection, the robust beauty of the camellias, the diversity of the magnolias"—is immensely satisfying.

A gardener for more than forty years, she does lots of it on the quarter-acre of property where she lives with her husband, a retired botanist. They like to hike and travel, and their trips invariably include visits to local botanical gardens—just what someone who loves gardening would do.

PATRICK LYNCH, AGRICULTURAL SCIENCE RESEARCH TECHNICIAN

Although his day-to-day activities are primarily focused in the Holly and Magnolia Collections and the Asian Collections, Pat Lynch has duties throughout the Arboretum, such as mowing, equipment operation, and specialty pruning and planting. In the Holly and Magnolia Collections, he maintains the plantings through mulching, pruning, weed control, and inventory updates. He also tries to keep current on the newest cultivars of hollies and magnolias in the market.

Pat started as a FONA employee twenty years ago. Before coming to the Arboretum, he worked at a local nursery for fifteen years. He acquired his horticultural background through a three-year tech program in high school.

He credits his parents for instilling his interest in working with plants by giving him

part of their yard to plant a garden. (Pat thinks they did this to get him out from under foot, but whatever their motivation, the Arboretum undoubtedly has benefited from his early experience with gardening.)

Outside of work, Pat's activities are as varied as his job tasks. They include fishing, collecting glassware and art, cooking, and helping his five siblings with their many yard and landscape issues. Having grown up in the Baltimore-DC area, Pat enjoys having his family nearby. His chief love is spending time with his family, especially his twenty-one nieces and nephews.

The multi-skilled Pat is glad his job doesn't keep him indoors. "The most satisfying thing about my job," he says, "is that I'm outside and moving." 🌳





Among the tallest of the magnolias in the collection, *Magnolia virginiana* is one of two native evergreen species. Photo courtesy of USNA.