

HYDRANGEA CULTURE AT SFA GARDENS[©]

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There are approximately 23 species of *Hydrangea* but only five are widely grown in the U.S.

Hydrangea macrophylla, *H. quercifolia* and to a lesser extent, *H. paniculata* are well adapted to East Texas. While *H. arborescens*, *H. aspera* and *H. petiolaris* survive, but are not well adapted.

The *Hydrangea* collection at Stephen F. Austin University (SFA) Gardens dates back to the first Arboretum plantings in 1986, but only with the construction of the Ruby Mize Azalea Garden (1997) and Gayla Mize Garden (2011) did the collection expand to its present size. The most current inventory for the *Hydrangea* collection can be found on the SFA Gardens website in three theme garden webpages: 1) Mast Arboretum (46 varieties), Ruby Mize Azalea Garden (232 varieties), and Gayla Mize Garden (39 varieties) <http://sfagardens.sfasu.edu>. While there is some duplication of varieties and the most recent plantings have yet to be added to the website database, the collection remains the most extensive in the southern USA.

SFA GARDENS

SFA Gardens comprises 128 acre (58 ha) of on-campus property at Stephen F. Austin State University, Nacogdoches, Texas. Tree, shrub and herbaceous perennial evaluation at SFA Gardens is scattered across gardens and landscapes. Nacogdoches is in Zone 8b with an average annual rainfall of 1219 mm (48 in.). June through August is characteristically hot and dry. In recorded history, 1 Sept. 2000 was the record high, 44.4° C (112° F), and 23 Dec. 1989 was the record low -17.8° C (0° F). Soils are generally well drained, slightly acidic, and the native flora is dominated by pine, oak, river birch, sweetgum, sycamore, Florida maple, hornbeam, elm,

hackberry, pecan and hickory.

EXPLOSION OF NEW VARIETIES

Since Michael Dirr's book, *Hydrangeas for American Gardens*, was released in 2004 (Dirr, 2004), there has been a virtual flood of new varieties entering the market place, many patented and trademarked to one brand or another. Dirr (2012) reported more extensive hydrangea breeding and advancement, and subsequent increase of varietal releases. The current flood of new plant materials is indeed bewildering. There is little doubt that the industry is moving increasingly to branded products (Scullin, 2014). This trend will continue. In early 2015, there are over 91 new varieties of lacecap and mophead hydrangeas that tout reblooming as an attribute, and most varieties are associated with major brands. Brands include: Endless Summer® (Bailey), Forever & Ever™, Cityline™, Edgy™, Everlasting™ (Plants Nouveau), Mystical™, Hovaria® (Kaleidoscope®), Japanese Lady Series (Halo™, Frau™, and Angel™), Let's Dance™ (Spring Meadow), Next Generation™ (Ball Ornamentals), and Showstopper Hydrangeas™, a series promoted by HGTV.

LACECAP AND MOPHEAD HYDRANGEA EVALUATION AT SFA GARDENS

We have been planting Hydrangea at SFA Gardens since 1985 when there were very few varieties available in the Texas market. In 1997, we initiated side by side trials at the Ruby Mize Azalea Garden. By 2005, we had accumulated over 250 varieties. With our usual enthusiasm, students measured plant height and width, number of blooms, size of blooms and date of the bloom show.

Over several years we have used groups of three visitors to rank the top picks. Those making the list of favorite lacecap and mophead Hydrangeas included 'Amethyst', 'All Summer Beauty', 'Nikko Blue', 'Uzu Ajasai', 'Ayesha', 'David Ramsey', 'Penny Mac', 'Endless Summer', 'Lady in Red', 'Dooley', 'Beaute Vendemoise', 'Souvenir du Pdt. Paul Doumer', 'Goliath', 'Badgers Choice', 'Red Ace', 'Kardinal Red', 'Tokyo Delight', 'Fuji Waterfall', 'Bluebird', 'Gori Otakga', 'Nightingale', 'Mowe', 'Blaumeise', 'Mousmee', 'Jogasaki', 'Taube', 'Lanarth White', and 'Peace'. In the variegated foliage

arena, 'Variegata', 'Lemon Zest', and 'White Wave' have been given high marks, although the latter tends to burn in our high heat summers. With the recent transfusion of new varieties, mostly branded product, we will repeat the process. Another focus over the years has been to maintain types that are rarely encountered, interesting wild collected specimens, and selections perhaps discarded from other programs but having merit.

OAKLEAF HYDRANGEA

Hydrangea quercifolia, Oakleaf Hydrangea, is a southern USA native that has performed well at the Pineywoods Native Plant Center. Drainage is critical. Dirr lists 27 varieties, many of which are no longer available in the trade (Dirr, 2009). 'Lowrey' was selected by Lynn Lowrey years ago near Angola Prison in Louisiana. At the Pineywoods Native Plant Center, we have planted many seedlings from our original clone and they have naturalized along the banks of a small stream named Sara's Branch. Our collection includes: 'Snowflake', 'Sikes Dwarf', 'Little Honey', 'Alice', 'Alison', 'Snow Queen', 'Ruby Slippers', and 'Munchkin'. We will be planting 'Turkey Heaven', a selection by Hayes Jackson.

PEEGEE HYDRANGEAS

Hydrangea paniculata, Peegee Hydrangea, performs well at SFA Gardens in full morning sun and needs good drainage. Dirr lists 34 varieties (Dirr, 2009). The current inventory of SFA Gardens can be found on our website. There are over sixty varieties available and we are on a mission to plant as many of these we can acquire. Images taken of northern grown plants suggest flower colors from dark pink to almost red, a trait we doubt we can duplicate here in the heat of the South.

LESSER KNOWN SPECIES

SFA Gardens has a number of specimens of *Schizophragma hydrangeoides*, which, if given enough time, can climb to the tops of our tall pine canopy. Flowering is superior with plants exposed to good morning sun. The species always elicits favorable comments. *Deucamaria barbara* is an underutilized

durable evergreen native vine that has performed well for many years. With three genotypes represented, including one variety named 'Barbara Ann', we continue to promote the species as one of our top vines for the South. *Dichroa fibrifuga* is an evergreen small shrub with blue flowers and fruit - a species I thought would be more successful in the trade than to date. 'Yamaguchi Select' has paler flowers, almost lavender, and opportunities for further selection exist.

CULTURE

Good soil drainage is critical to Hydrangeas in East Texas. Heavy rains and waterlogged soils often kill plants. Irrigation systems are required with our hot, dry summers. At SFA Gardens we utilize either sprinkler or drip irrigation. For plants utilizing sprinkler irrigation, the strategy is to apply water when plants show heavy wilt in the morning. For drip irrigation, the strategy is to apply ½ to 1 gal per day to plants utilizing a single emitter placed as close to the crown of the plant as possible. Oakleaf hydrangeas are particularly susceptible to poor drainage. At the Pineywoods Native Plant Center, we have observed that plants thrive along the edge of Sara's Branch, a stream that dissects the front of the property. In fact, it is here that we have found chance seedlings surviving into mature specimens, often germinating just above the water line at the base of the steep sloped banks. We believe that this is the first example of oakleaf hydrangeas "naturalizing" in East Texas.

CONCLUSIONS

Hydrangea remains a major commodity across a wide swath of the U.S. In the South it is the standard, ornamental plant which reflects the culture and nature of southern gardening. The popularity of the genus is reflected in the number of books and articles written about the species. The surge of trademarks and brands has led to introductions of old varieties under new names, an issue well covered by Tony Avent's online article (Avent, 2007). In 2015, the industry is now ripe with an explosion of new varieties, many extolling reblooming as a characteristic. While

many gardeners have long noticed reblooming, particularly for varieties cut back after bloom, the surge of new varieties touting the trait is really only a decade old. The verdict on which varieties are truly remontant has yet to be determined.

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