

Happy Hydrangeas

One group of plants that has a near universal appeal among gardeners is the Hydrangea. Admittedly, I have long been infatuated by this group of plants myself! This adoration is compounded by the onslaught of new cultivar introductions over the past 25 years, ensuring that there is now at least one Hydrangea suitable for nearly every garden! However, there is still much mystery to this group of plants, with much of that mystery focusing upon how various Hydrangeas should best be pruned. Hopefully, some of the mystery can be resolved!

Hydrangea was first penned by the Swedish Botanist, Physician and Zoologist, Carl Linnaeus (1707-1778) in 1753. The name is derived from the Greek *Hydor*, meaning water and *Angos*, meaning vessel or jar. Thus, its direct translation is water jar! The name refers to either the general shape of the showy sterile florets, which are shaped like a cup or it may refer to the seed pods, which resemble miniature water jars. Although most likely not the affiliation with water that Linnaeus was considering, many species will also wilt painfully during periods of drought and need copious amounts of water during periods of prolonged drought! The four species of *Hydrangea* that are most frequently used in NJ gardens are native to 4 distinct regions of the world, which proves helpful when deciding how to prune the plants. Those native to colder regions of the world produce flower buds on new wood. If the previous year's growth was frozen to the ground during extreme cold spells or possibly grazed by a hungry animal, the plant would be able to rebound, produce flowers and seed during the following year, ensuring new future plants. By contrast, if the plant is native to warmer winter climates and winters wrath is no longer a concern, it is more energy efficient for the plant to produce the flower buds on the previous year's wood, and avoid the need to push 3-6' of new growth before blooming.

Hydrangea arborescens, the Smooth Hydrangea, is native from New York to Florida and West to Missouri. In the wild, the plants are typically found growing in shaded sites in soils that are often moist or humus rich. The species epithet of *arborescens* refers to the similarity of the form of plants found in the wild to that of a tree. Since it is native to the cold climates of New England, it blooms on new wood. Consequently, this plant can be pruned to the ground at any point from January through late March (image on right). This also helps



the overall shape of

the plant, as the stems or canes will often collapse under snow and ice load. The flowers are white and normally appear in a flat or slightly mounded configuration called a cyme (pictured at left). The center of the cyme consists of fertile florets, which produce seeds and contain both anthers and a stigma. In turn, they are ringed by sterile florets which have petals. This type of flower arrangement is referred to as a lace-cap flower. Lace-cap flowers are ideal



where the plant is situated for close-up and personal viewing. However, if the plant is to be viewed from afar, consider the Hortensia or mop head hydrangeas. This group features large balls of predominantly showy sterile florets. They are called Hortensias since they occur under horticultural cultivation and very rarely in the wild. The reduced number of fertile florets and the subsequent reduced production of seed does not permit them to be as successful at reproducing themselves as do the lace-caps! For the gardener, the Hortensias provide a nice display, even at 60 MPH and the large balls of lacy florets provides the garden with a more



harlequin appearance. For *Hydrangea arborescens*, a very attractive Hortensia is 'Annabelle' (pictured at left). Discovered near Anna, Illinois, this plant produces large green flowers in early June, which mature to pure white by mid-June before fading to green and finally to tan for winter. A wonderful plant for the Garden! Very similar in appearance is the selection named Incrediball™. Although it is reputed that in fertile soils the flower stems of Incrediball are less likely to flop following heavy rains, I have seen both perform very

admirably in the Garden. The key of course is to amend the soils with ample amounts of compost to maintain adequate soil moisture and to avoid fertilizers, which will result in stems that collapse more readily.

Also possessing Lacecap and Hortensia shaped flowers is *Hydrangea macrophylla*. It is native to the warmer, coastal regions of Japan and China and consequently, it blooms on the previous year's growth. The plants have relatively large, glossy foliage that gave rise to the species epithet, *macrophylla*, meaning large leaves. Flowers can be pink or blue, resulting from the impact of the soil pH on pigments in the flowers called Anthocyanin. Anthocyanins change color depending upon the pH; in acid conditions it is blue, in neutral it is violet and in alkaline soils it is red or pink. Consequently, a soil pH of 6.0-7.0 or above results in pink flowers, while pH values below 6.0 result in blue flower colors. The flowers are produced from the terminal buds on the stems. If these buds are desiccated by strong winter winds or if the plant is 'sheared'



during late summer or autumn, no flowers will be produced the following summer. Hence, it is important to select cultivars that are from a more northerly and colder native range of Asia and pruning should be conducted through the thinning of the stems, not shearing. Pruning is best conducted during the winter months, following foliage drop, allowing the stems to be easily viewed. The stems that are produced the preceding summer are cinnamon brown and should not be pruned. The balance of the stems are light grey in color; based upon the age of the plant, anywhere from none to 8-12 of the largest and oldest stems should be removed, promoting the production of newer canes, which will yield larger

flowers! Provide a site in full sun to partial shade and soils that are well-drained but, do not dry out frequently. As before, the addition of compost is always beneficial. Of the Lacecap forms available on the market, I have found ‘Blue Wave’ and ‘Tokyo Delight’ (picture above left) to be very winter hardy. As a bonus, both provide the benefit of fall color – an unusual trait for Large Leaved Hydrangeas! Of the Hortensia types, ‘Nikko Blue’ is an old but noteworthy selection as is a more recent introduction, Endless Summer®. Endless Summer® will actually rebloom in August and September on new branches that have sprouted from older stems. Following the icy and prolonged winter of 2014, the canes of most Endless Summer® cultivars died to the ground and most plants failed to bloom. It became evident that in order for flowering stems and flowers to reappear later in the season, an existing older stem needs to exist as the originator of these shoots - new shoots produced from the base do not bloom on current season’s growth! Thus, it is best to prune Endless Summer by the thinning of old canes, just as is done with the other cultivars, and not by cutting the plant to the ground.

The remaining two Hydrangeas that are commonly used in Gardens are *Hydrangea paniculata* and *Hydrangea quercifolia*. Both of these plants produce a white cone shaped flower called a



panicle, which consists of a central stem that in turn is branched, producing a cone shaped flower. *Hydrangea paniculata*, the Panicle Hydrangea is native to cold, mountainous regions of Japan and China and blooms on new wood. Unfortunately, pruning is not as straight forward as with the Smooth Hydrangea. Similar to the previous two species, some plants have copious amounts of sterile florets while other plants have more limited quantities. Selections such as *Hydrangea paniculata* ‘Unique’ (at left) have a more open panicle

with a large number of fertile flowers. These types of plants can be treated in several different manners: they can be pruned back heavily, nearly to the ground; pruned moderately, leaving a 3-4’ tall framework for the new growth to grow from; or simply not pruned at all! If the plants are pruned heavily to the ground, they respond with 5-6’ tall canes with noticeably larger flowers. Since ‘Unique’ has less sterile florets in a panicle to catch rainwater, heavy rains will not weigh down the flower, allowing the plant to stand ‘proud’ throughout the summer. Other plants, such as *H. paniculata* ‘Limelight’ (at right) produce large quantities of sterile florets; if these stems are cut back severely the tall canes are not able to support the heavy panicles and



will bend to the ground under the weight. Thus, they should be cut back to a 3-4' tall framework or not at all, which will yield a more modest 1-2' spurt of new growth that can adequately support the flowers. Of all the species, *Hydrangea paniculata* has probably seen the most activity with the release of new cultivars. The most significant improvements focus upon selections whose flowers age from white to pink in late summer and early fall. Traditionally, the flowers have faded to tan. Plants such as *Hydrangea paniculata* 'Quick Fire' (at right), 'Pink Diamond' and 'Limelight' present this floral color change, which not only provides extended interest, but also more potential plant combinations in the Garden. They look great combined with the red fall color of *Itea virginica* 'Henry's Garnet' or the wonderful golden yellow of *Amsonia hubrichtii*. Most selections of Panicle Hydrangea typically grow to between 8' and nearly 20' tall with time. If this exceeds the Garden's space allocations, there are several compact forms, including Little Lime™ and 'Dharuma' that grow to a more diminutive 4' tall!



The last of the quartet of popular Garden Hydrangeas is *Hydrangea quercifolia*, or the Oak Leaf Hydrangea. It is native to shady, woodland regions of Georgia, Alabama and parts of Florida. Amazingly, it is also very hardy in New Jersey! As the name implies, the leaf shape is very reminiscent to that of an Oak and they develop fantastic fall color! Similar to *Hydrangea paniculata*, they also produce a panicle flower. However, since they are native to a warmer climates, the flower is produced on previous year's growth and – considering that these plant wish to grow from 8 to 10 tall – it is nearly impossible to keep them at a more restricted size while not removing any flowers! At best, the plants can be lightly shaped as they will often throw a branch that disrupts the overall rounded form of the plant. Plants are best located away from buildings or other architectural entities that could be 'eaten' as they age, allowing them to become a perfect screen or backdrop to the garden. If a smaller plant is of need, 'Peewee' and 'Ruby Slippers' are two selections that mature to 4' tall. The advantage to 'Ruby Slippers' is the attractive aging of the flowers as it passes from a clean white during summer to a rich red during late summer and fall – a very stunning plant! The flowers of Peewee simply age to tan. Of the remaining selections available, 'Snow Flake' (picture above) is a unique plant, producing very attractive double, or hose-in-hose flowers. It too slowly fades to



red as fall approaches, with its only downside being the sheer weight of the flower. The weight produced by the extra flower petals causes the flowers to droop down, which may prove to be unattractive to some gardeners. Amazingly drought and heat tolerant once established, Oak Leaf Hydrangea is as much at home in the sun as the shade in NJ. It simply needs space to grow!

Hydrangeas has been one of the great staples for the Garden during the past century. With the numerous additional selections that have been added to the list over the past 20 plus years, it is certainly guaranteed to will retain this honor throughout the next century. The key is identifying the plants native provenance or 'home' as that will foretell how best to prune the plant since, as we all know, a properly pruned Hydrangea is a Happy Hydrangea!