

A Diversity of *Hydrangea*

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The genus *Hydrangea* is one of the richest and most diverse group of plants known to horticulture. In the most recent taxonomic review 37 different species and 17 subspecies were identified. L.H. Bailey had the count at roughly 80 species. As you can clearly see taxonomists tend to lump, while horticulturists prefer to split. In any case the classification of *Hydrangea* is muddy at best. Please forgive me if my classification differs from yours.

My intention today is to give you a very brief overview of the genus *Hydrangea* and those species that have the greatest potential as landscape ornamentals. For each species I will discuss several of the more interesting cultivars to show the wonderful diversity available for horticultural use.

Hydrangea anomala* ssp. *petiolaris (eastern Asia, Zone 4) is a beautiful vine that climbs by aerial rootlets. It has glossy, heart-shaped leaves and white lacy blooms (corymbs) in early summer. It can be grown as a shrub, groundcover, or as a vine depending upon culture. You have not lived until you have seen this plant in full bloom climbing a tall tree. It is very happy on a north facing or otherwise shady brick wall. I know of four cultivars, but the availability on all is quite limited. 'Skylands Giant' is a selection with very large blooms; 'Cordifolia' is a selection with very small leaves, and I have seen a very nice unreleased and unnamed variegated selection.

Hydrangea arborescens (eastern U.S, Zone 3), is a wonderful, hardy plant that blooms in midsummer. It has the great advantage of blooming on the current seasons wood. This results in very reliable blooming regardless of frost or winter injury. The species is not a spectacular plant with its small mostly fertile flowers, but there are some noteworthy cultivars. 'Annabelle', introduced by Joe McDaniels of Champaign, Illinois, is the most commonly grown cultivar. One is hard pressed to find any other cultivar of *Hydrangea arborescens* being sold today. There are some nurseries unknowingly selling *H. arborescens* 'Grandiflora' as 'Annabelle'. True 'Annabelle' has very large, perfectly symmetrical blooms, while the blooms of 'Grandiflora' are often quartered and irregular. 'Annabelle' is very showy, but due to the mammoth size of its blooms it often collapses under its own weight. There is a need for more selections of *H. arborescens*. I would like to see a sturdier mophead than 'Annabelle' and I feel there should be more lace-caps in the trade. I personally find *H. arborescens* subsp. *discolor* which has light downy hair beneath the leaves and *H. arborescens* subsp. *radiata* which has snow white coloration on the leaf underside more graceful and delicate than 'Annabelle'. We are searching for improved clones of *H. arborescens* and hope to find one worthy of introduction.

Hydrangea aspera (Asia, Zone 7) is a large 10 to 12 ft woody plant with rough and bristly leaves. The flowers are attractive lace-caps ranging in color from a light mauve to violet with white- to lilac-colored outer florets. The flowers appear in mid to late summer. *Hydrangea aspera* subsp. *sargentiana* is a large plant, 6 to 12 ft tall, with thick wood and very large, densely pubescent leaves and long internodes. It was

discovered by Ernest Wilson in 1908. The plant attracts much attention when it is covered with pale purple and white lace-cap blooms in mid summer. If you have a large, well protected, shady space in your garden this plant is a treasure to grow.

Hydrangea heteromalla (China, Himalayas, Zone 4) is a little known, variable species that may have great unrealized potential as a hardy landscape shrub or as a small tree. Listed in some books as hardy to Zone 7, the hardiness of the species is most likely based on an individual plant's provenance. I have found the plant growing happily in Minnesota, so I know this plant can be very hardy. While it is reported to grow 30 ft tall, the tallest plants I've seen have been closer to 15 ft. In many ways it looks like a *H. paniculata* but with flat lacy corymbs. It also blooms on the current seasons wood which is a great asset. The white flowers appear in midsummer before *H. paniculata* and fade a brick pink to an orange brown. The bark exfoliates with age and can be quite attractive. The cultivar 'Nepal Beauty' (perhaps the same plant as 'Yelung Ridge') has striking blood-red leaf petioles and red young leaves. There are several cultivars being sold, but we are still evaluating the possibilities of this plant.

Hydrangea involucrata (Japan, Taiwan, Zone 7) is a worthwhile ornamental just for its flower buds alone. The terminal flower buds look like large round white marbles. The buds are unique for *Hydrangea* in that they are protected by four large bracts, hence its name. This is a fine plant, roughly 2 to 3 ft tall, with a mounded shrubby habit. Its small, lace-cap blooms are a light blue which fade to mauve with age. The cultivar 'Hortensis' has double white flowers which change to pink. This plant is worth consideration for milder climates.

Hydrangea macrophylla (Japan, Korea, Zone 5, syn. *H. macrophylla*) is a maritime climate plant that prefers ample moisture and filtered shade. Flowers may be either mopheads or lace-caps depending on the cultivar. A few plants have intermediate flowers. The flower color is variable depending upon the cultivar and the availability of aluminum ions in the soil. Acid pH frees up available aluminum ions and results in blue flowers, while alkaline pH and/or phosphorous binds aluminum and yields pink flowers. Some cultivars have more or less stable coloration. Container growers often have a difficult time getting blue flowers. This happens even at low pH levels because of a lack of aluminum in most potting mixes and the presence of phosphorous. In container production aluminum must be supplied and phosphorous must be limited to produce blue flowers

Hydrangea macrophylla forms its flower buds in the autumn and overwinters them to produce the next year's flowers for this reason, flowering is often diminished if the plant is hit by a early autumn frost, a late spring freeze or untimely pruning. The cultivars 'All Summer Beauty' and 'Vindool', DOOLEYTM hydrangea have gained popularity because growers have reported reliable blooming. These plants may have either the ability to produce spring flower buds, or they may be producing an adequate number of buds lower on the stems or near the soil line where they are more protected. Either way, growers are reporting reliable flowering.

There are several dwarf or compact cultivars. 'Pia' (syn. 'Winning Edge', 'Pink Elf') is a very popular dwarf selection with deep pink flowers. It matures under 3 ft, but can occasionally revert into a taller plant. Another good compact selection is 'Masja'; it grows 3 to 4 ft tall, and has attractive dark shiny leaves and red flowers. One of the smallest cultivars is 'Hornli'. It has orange-red flowers and grows only 1 to 2 ft tall.

Four of the most unique cultivars are 'Nigra', 'Ayesha', 'Domotoi', and 'Hanabi'. 'Nigra' has dusty pink flowers and dramatic black stems. 'Ayesha' often called the silver slipper hydrangea, has silvery blue to silvery pink flowers that are uniquely cupped. 'Ayesha' has very large, glossy leaves that give it added appeal. 'Domotoi' and 'Hanabi' are both double-flowered, Japanese selections. 'Domotoi' is an irregular mophead with highly doubled blue or pink sepals. 'Hanabi' is a long-blooming, white lace-cap with doubled, elongated sepals.

While the most popular cultivars are big mopheads (hortensias), lace-cap plants (normalis) are becoming more popular. They are more delicate and interesting than the gaudy mopheads. 'Blue Wave' is a strong growing plant with large, lacy blue flowers. Some of the most beautiful of the lace-caps are the so called Teller Series with their extremely large blooms and wonderfully bright colors. Although often sold as Teller Rot (syn. Teller Red), 'Libelle' (syn. 'Teller White'), Teller Rosa (syn. Teller Pink) and so on, this group actually represents over thirty cultivars hybridized in Switzerland for the floral industry. Caution should be used with these plants to be certain you are getting the correct cultivar. Many of these cultivars are tender and do not make good garden plants unless you live in a mild climate. Others have been reported to be perfectly hardy.

One of the most exciting groups of *H. macrophylla* are the variegated types. These beautiful plants are not reliable bloomers, but who cares. 'Maculata' (syn. 'Variegata') has blue green leaves with a creamy white margin. 'Lemon Wave', which is similar if not identical to 'Quadricolor', is a wild mixture of green, yellow, cream, and white. These plants are every bit as nice as a variegated *Hosta*. As more and more forms are selected, I expect these plants will be as popular as *Hosta* some day.

As noted earlier, *H. macrophylla* will not bloom if the buds are damaged. We have several customers as far north as Maine that gets blooms every year. This is accomplished by protecting the plants just as many people protect hybrid roses. Plants are covered with mulch or leaves in early winter and carefully removed after any chance of frost. It may be extra work but to many people this is well worth the effort.

There are literally hundreds of different cultivars of *H. macrophylla*. Many are difficult to distinguish at first glance. The plants I have shown you represent some of the best diversity of the group.

***Hydrangea serrata* (syn. *H. macrophylla* subsp. *serrata*).** (Japan, Korea, Zone 5) is native to mountainous regions and for this may be hardier plants in some respects. *Hydrangea serrata* tends to be a more diminutive plant with finer branching, lace-cap flowers and pronounced serrated leaf margins. They often show wonderful hues of red autumn color, while *H. macrophylla* has none at all. 'Bluebird' is the most common selection available. It looks similar to 'Blue Wave' but its light blue sepals rarely overlap. 'Blue Billow' is a low, broad mounded selection introduced by the Mt. Cuba Center. It has good hardiness and nice red fall color. 'Coerulea Lace' is one of our most reliable bloomers. It is an early bloomer with blue and white lacy flowers. It has exceptional fall color!

Hydrangea paniculata (Asia, Zone 3) is a wonderful, hardy species that blooms on its current seasons wood in late summer to early fall. 'Grandiflora' is the most commonly grown cultivar. It has large floppy white panicles. Superior cultivars are now making their way to market. Most of these plants were developed by Robert and

Jelena DeBelder of Belgium. One of the best is 'Unique', a superior plant with extremely large sepals. 'Kyushu' is an early blooming selection with pure white, lacy blooms. It is very similar to 'Tardiva' but because it blooms earlier you can enjoy the blooms for a longer time. The cultivar 'Pink Diamond' is one of the best new plants with large upright panicles and very large sepals. The blooms open white and then transform to a rich pink. The extent and quality of pink may vary depending upon climate. Regardless 'Pink Diamond' is a beautiful plant. The cultivar 'Peewee' (perhaps the same plant as 'Diminutive Form') is a nice lacy-flowered plant, but not as small as the name would indicate. I suspect that it is small only in relationship to the larger cultivars. The cultivar 'Burgundy Lace' is a lacy flowered plant with very few sterile florets. It turns a rich burgundy-pink in autumn. 'White Moth' is unique in that it has large globular flower heads comprised of large florets. Unfortunately it is a wild-growing plant with long, snake-like branches. Another nice lace-flowered form is 'Brussels Lace'. The flower panicles are long and narrow and contain numerous green fertile flowers. The sparse sterile florets often nod down to create a distinct effect. I have seen numerous other cultivars, both named and unnamed. We are currently evaluating these plants but want to make certain that they are distinct and worthy of introduction. The USDA has been attempting to cross *H. paniculata* and *H. macrophylla* in order to create a hardy, reliably blooming plant with interesting colors. Time will tell if this effort is successful.

Hydrangea quercifolia (south eastern U.S, Zone 5) known as the oakleaf hydrangea is a coarse-textured plant with oak-like leaves. It has beautiful white panicles in midsummer and excellent red fall color. 'Snow Queen' is perhaps the standard in which to judge all cultivars. It has large, upright panicles with large sepals and deep red fall color. *Hydrangea quercifolia* 'Flore Pleno' Snow FlakeTM hydrangea is a beautiful, double-flowered selection with large, pendulous panicles. The sepals age to purple even as new white sepals emerge to create a beautiful contrast. 'Harmony' has curious globular blooms. 'Alice' is a Mike Dirr selection with large panicles, good red fall color, and extremely vigorous growth. Here too, we are evaluating other new selections that may warrant introduction.

As you can see, the genus *Hydrangea* is wonderfully diverse. I have only touched on a few of the species, and have shown you just a handful of cultivars. If you wish to learn more I highly recommend the following books: *Hydrangeas, Species and Cultivars* a two volume set by Corinne Mallet; *Hydrangeas, A Gardeners Guide*, by Toni Lawson-Hall and Brian Rothera; and *The Hydrangea* by Michael Haworth-Booth. I also recommend joining the American Hydrangea Society, P.O. Box 11645 Atlanta, Georgia 30355. The very best way to learn more about hydrangea is to grow them. They are fun plants that offer the best in color, form, texture, and diversity.