



Hydrangeas

General Cultural Information

Location

- generally woodland understory plants, and thrive in moist but well-drained soils amended with organic matter, e.g. humus, leaf mold, compost
- ideally morning sun with some dappled shade in the afternoon (may wilt in full sun even if the soil is moist)
- not drought tolerant until more established and may not thrive in dry, sandy soils
- sheltered from wind, with snow accumulation in winter or mulch to protect flower buds
- avoid plantings against light-coloured south or west-facing wall

Watering

- water well but less often to encourage deeper roots
- drip irrigation or soaker hoses may help keep the soil moist and foliage dry, reducing the potential for leaf spots
- mulch in summer to keep soil moist and cool



Feeding

- prefer a moderate nutrient level in the soil
- too much nitrogen will result in vigorous vegetative growth (stems, leaves) but little or no flowering
- apply 2" to 3" of good quality organic mulch (e.g. compost, well-aged manure) keeping the mulch spread over the roots but off the crown of the plant
- stop fertilizing by the end of July at the latest
- *H. macrophylla* and *H. serrata* cultivars flower colour determined by the soil pH of the soil;
 - pH below 6 (more acidic) will usually produce blue flowers
 - pH above 6 (more alkaline) will produce more pink flowers




Winter Protection (for mopheads and lacecaps)

- protect buds from cold and late spring freezes by covering with 15 cm of mulch (e.g. leaves, straw) after plants have gone dormant in late fall
- be aware that mopheads and lacecaps may not be hardy enough for buds to winter over and therefore may not flower ('Endless Summer' is a hardier mophead).
- Regardless of protective measures taken, most bigleaf hydrangeas simply will not bloom (or will bloom poorly) in some years because of a variety of winter occurrences beyond the control of the gardener (e.g. low temperatures, sudden wide temperature fluctuations, icy conditions, late frosts).
- remove winter mulch after all threat of late spring frosts has passed

Hydrangeas

Hydrangea type <i>Botanical name</i>	Characteristics	Pruning	Blooming & hardiness
<ul style="list-style-type: none"> • Mophead • <i>Hydrangea macrophylla</i> <ul style="list-style-type: none"> • <u>Common varieties</u> • 'Endless Summer' • 'Nikko Blue' 	<ul style="list-style-type: none"> • <u>Blooms</u> • pink, purple, or blue in July • <u>Leaves</u> • relatively thick and crisp, somewhat shiny • edges are coarsely toothed • leaf stems (petiole) are short & leaves close to the main stems in most cases • cuneate leaf base- leaf stalk attaches to the leaf, shaped like the bottom of a "V" • often bought in bloom from florist or grocery store (not very hardy) 	<ul style="list-style-type: none"> • Prune soon after flowers are finished to allow formation of new buds • To keep the plant vigorous, selectively prune out the dead and weaker stems, both old and new • 'Endless Summer' will bloom on new wood, but it may take longer for flower buds to develop on the new growth of a young plant 	<ul style="list-style-type: none"> • Bloom on second-year wood • Buds often die back over winter or the emerging tip growth is killed in spring frosts • Buds and wood are hardy to Zone 6, roots are hardier, to Zone 5 • 'Endless Summer' is a bit hardier Zone 4- but not reliable <p>NOTE: Hydrangea macrophylla flowers are sterile and do not support pollinators. Consider growing other varieties to support pollinators</p>
<ul style="list-style-type: none"> • Lacecap • <i>Hydrangea serrata</i> 	<ul style="list-style-type: none"> • <u>Blooms</u> • blue or pink blooms in July • may stray into mauves and near white • flat clusters with large blooms around the outer edge and lacy, tiny flowers in the center • <u>Leaves</u> • same as mophead • often bought in bloom from florist or grocery store (not very hardy) 	<ul style="list-style-type: none"> • Prune soon after flowers are finished to allow formation of new buds • To keep the plant vigorous, selectively prune out the dead and weaker stems, both old and new 	<ul style="list-style-type: none"> • Bloom on second-year wood • Buds often die back over winter or the emerging tip growth is killed in spring frosts • Zone 6
<ul style="list-style-type: none"> • Oakleaf hydrangea • <i>Hydrangea quercifolia</i> <ul style="list-style-type: none"> • <u>Common varieties</u> • 'Snowflake' 'Sykes Dwarf' <p><i>(Cont'd next page)</i></p>	<ul style="list-style-type: none"> • <u>Blooms</u> • white blooms in June-July • many turn pink as they age • cone-shaped clusters • <u>Leaves</u> • lobed like oak leaves. • twigs and tip bud are coated in light brown felt 	<ul style="list-style-type: none"> • Prune soon after flowers are finished to allow formation of new buds • To keep the plant vigorous, selectively prune out the dead and 	<ul style="list-style-type: none"> • Bloom on second-year wood • Buds must survive a winter to complete flower bud formation • Reliable bloom in warmer parts of Zone 5

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Hydrangea type <i>Botanical name</i>	Characteristics	Pruning	Blooming & hardiness
<p><i>Hydrangea quercifolia cont'd</i></p> 	<ul style="list-style-type: none"> • colourful fall foliage 	<p>weaker stems, both old and new</p>	<ul style="list-style-type: none"> • Tolerates drier soil than paniculata or Annabelle
<ul style="list-style-type: none"> • Panicle/PG/ PeeGee • <i>Hydrangea paniculata</i> <p><u>Common varieties</u></p> <ul style="list-style-type: none"> • 'Limelight' 	<ul style="list-style-type: none"> • <u>Blooms</u> • white flowers that may age to pink, August to fall • can be round or cone-shaped • <u>Leaves</u> • smaller, thinner, and rougher than other hydrangeas 	<ul style="list-style-type: none"> • Fall, winter, or spring • Not necessary to prune them every year • Trim out crossing branches, dead wood • Maintain it as a 5' shrub by pruning it to the ground each spring or allow it to grow into a single- or multi-stemmed, tree-like 12' specimen 	<ul style="list-style-type: none"> • Blooms on new wood • Flowers each year even if cut to the ground that spring • More tolerant of dry spells and full sun and is the hardiest of the species • Hardy to zone 3
<ul style="list-style-type: none"> • Snowball • <i>Hydrangea arborescens</i> <p><u>Common varieties</u></p> <ul style="list-style-type: none"> • 'Annabelle' • 'Invincible Spirit' • 'Bounty' • 'Incrediball' 	<ul style="list-style-type: none"> • <u>Blooms</u> • large white globes in July • <u>Leaves</u> • leaf stems (petiole) are long and hold the leaf away from the main stem 	<ul style="list-style-type: none"> • Flowers each year in summer even if cut to the ground • Prune in late winter or early spring by removing some older branches to the ground and cutting others back to shape the plant 	<ul style="list-style-type: none"> • Blooms on new wood • Native to the Eastern United States, as an understory shrub in woodlands • Prefers part shade and ample moisture • Hardy to Zone 3, but may die back to ground in cold winter



Hydrangeas

Why isn't my hydrangea blooming?

There can be several reasons for a lack of blooms on hydrangeas. It's important to note that Hydrangeas that bloom on NEW WOOD (new growth since spring) such as 'Annabelle' and 'Incrediball', belong to the Hydrangea arborescence family. There is rarely a problem with this Hydrangea group unless one has heavily compacted the soil with heavy equipment/constant foot traffic over the roots or disturbed/cut off the emerging buds in spring.

Care must be taken with the other Hydrangea groups. Lack of blooms can be a result of:

- **Pruning late in the season** – Do not prune back macrophylla, lacecaps or oakleaf hydrangeas late in the season. It is not even necessary to deadhead or prune them annually. Many gardeners leave the faded blooms on the shrubs over the winter for seasonal interest. Pruning should be done only to:
 - remove weak, dead, diseased or damaged branches
 - reduce size
 - improve shape
- **Pruning in Spring** – because they produce flowers mainly, or in some cases ONLY, on stems from the previous year (OLD WOOD). If the branches that grew last year are pruned back in spring, you are removing the buds for this season's flowers.
- **Late Spring Frost** – can damage the buds on hydrangeas
- **Colder than normal winter weather** – Hydrangea macrophylla will respond by dying back, sometimes right to the ground which results in no flowers as there is only new growth. Choose a protected area of your garden with other shrubs nearby; mulch; create a cage out of chicken wire and fill with dry oak leaves or pine needles.
- **Too much nitrogen in the soil:** Sometimes while fertilizing other plants or the grass, there is a build-up of nitrogen resulting in mostly vegetative (leafy) plant growth rather than flowers. Consider testing your soil with a home-test kit.
- **Your hydrangea was greenhouse grown** (came wrapped in foil, in a small pot). This may mean the hydrangea is not hardy in your zone or does not have a well-developed root system.

How do I change the colour of my hydrangeas? When I bought them, they were blue and now they are only pink.

- In order for the hydrangea to produce blue flowers, there must be aluminum in the soil. Aluminum sulfate can be added to the soil around the plant according to the manufacturer's instructions. It should be applied to the plant through the growing season.
- Before adding the aluminum sulfate, water your plant well. Improperly applied, aluminum sulfate can cause root burn and damage to your hydrangea.

Hydrangeas

- Another method for lowering the pH is to add organic matter to the soil such as coffee grounds, fruit and vegetable peels, grass clippings etc. The ideal pH is between 5.2 and 5.5.

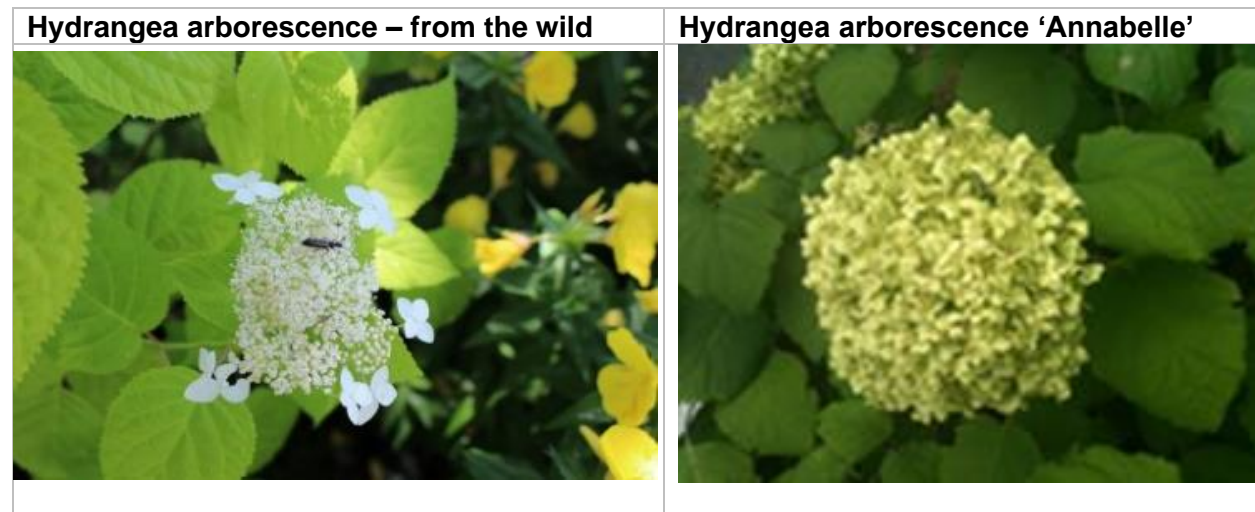
Am I supporting native pollinators by including hydrangeas in my garden?

You would think with their enormous blooms that Hydrangeas would be a magnet for pollinators. However, this is not the case. Let's look more closely at the Hydrangea's flowers.

For example, on *Hydrangea macrophylla* (Big Leaf Hydrangea), what appears to be flowers are actually an inflorescence that is made up of sepals (modified leaves). These do not have reproductive structures or pollen. The actual flower, if it's still there, is located in the very centre of the bloom. In their natural setting Hydrangeas used to contain more true flowers, however the horticulture/nursery industry has intervened to such a large degree that many hydrangeas are of little benefit to pollinators. See photos below comparing a *Hydrangea arborescence* with that of the cultivar, *Hydrangea arborescence* 'Annabelle'.

There are some types of Hydrangeas that do benefit pollinators. They include:

- Climbing Hydrangea
- Lacecap Hydrangea
- Oakleaf Hydrangea – (true species)
- (Native) *Hydrangea arborescence*



Photos courtesy of: <https://wildseedproject.net/2016/07/flowers-pollinators-and-the-sex-lives-of-plants/>



Hydrangeas

More Reading/Viewing:

General Info:

- Video: <https://www.provenwinners.com/Hydrangeas-Demystified>

Pruning:

- Video: <https://www.finegardening.com/article/how-to-prune-hydrangeas>

Winter Protection:

- Video: <https://www.youtube.com/watch?v=h2dKuR3sBYs>

Pollinators & Hydrangeas:

- <http://www.indefenseofplants.com/blog/2017/6/20/the-sterile-flowers-of-hydrangea>
- <http://www.greengardenbuzz.com/do-hydrangeas-feed-bees/>

Changing Colour:

- https://www.ndsu.edu/pubweb/chiwonlee/plsc211/student%20papers/articles09/haylee%20a%20wax/pH%20affects%20on%20hydrangea%20-hw.html?fbclid=IwAR2WKcD8dvYYd2HaQKpSQvuObBMPL5ZbWbfVE-uYut_1oIH39Xao1fuB3WA
- <https://s3.wp.wsu.edu/uploads/sites/403/2015/03/HydrangeaLCSProof.pdf?fbclid=IwAR3TQwQyHcKbSDM0fzk-7OXqIZ-DPxjtBGA1xPzMNvrVrDwcRGX0Kj3Av1c>