Happy, Healthy Hydrangeas

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Purpose

Promoting good hydrangea health through proper placement, pruning, and feeding.

Uses

Questions
Uses in the landscape

Specimen plant, focal point
Container plant
Hedge
Screen
Accent tree
Specimen  
*H. macrophylla*
Container

*H. macrophylla* ‘Endless Summer’
Hedge

*H. arborescens ‘Incrediball’*
Standard, or tree form

*H. paniculata*
Introduction

Most plants are hardy in this area

Wayne, NJ is USDA zone 6b (-5⁰ to 0⁰F)

Easy to grow – low maintenance

Mostly disease and insect-free plants

Beautiful summer and early fall blooms

Great cut flowers, bouquets

Great dried flowers

(can be dyed or spray painted)
Insects and diseases

Aphids, leafminer, mites, twig borer, Japanese beetle
  soapy water
  insecticidal soap
  neem oil
Leaf spot, powdery mildew, rust
  no crowding
  good sanitation – rake up leaves
USDA plant hardiness zones (cold)
NJ hardiness zones (4)
AHS plant heat zones
NJ heat zones (4)

4 heat zones
Temperature over 86°F

4 = 14-30 days
5 = 30-45 days
6 = 45-60 days
7 = 60-90 days

Plant tag = cold, heat
Tulip 3-8, 8-1
Hydrangea species - 23

_Hydrangea anomala petiolaris_ = climbing
_H. aborescens_ = smooth
_H. paniculata_ = panicle/peegee
_H. quercifolia_ = oakleaf
_H. serrata_ = mountain
_H. macrophylla_ = big leaf
    mophead
    lacecap
**Hydrangea anomala petiolaris** - climbing

Zone 4-9
Moist, well-drained soil
Full sun to part shade
A vigorous vine that can reach 60’
White flat-topped (lacecap) flowers in July and August
Flowers on new wood
Prune to control height, which can reach 60 feet
Exfoliating, cinnamon-colored bark
H. anomalala petiolaris – climbing hydrangea
Hydrangea arborescens – smooth

Zone 3-9
Moist, well-drained soil
Part shade to full sun with irrigation
3-5’ tall and wide
Leaves heart-shaped with 1-3” petiole
White mophead flowers July to August, age to green then brown
Flowers on new wood
Prune to 12 inches in late winter or early spring
Native to the U.S.
*H. arborescens* cultivars

‘Annabelle’

‘Grandiflora’

‘Incrediball’

‘Haas Halo’ (lacecap)

‘Eco Pink Puff’ (pink)

‘Invincibelle Ruby’
Annabelle

Invincibelle Ruby

Annabelle

Incrediball
Lacecap vs. mophead/hortensia flowers

Lacecap
Central disc of small fertile flowers surrounded by showy sterile flowers arranged in a corymb (flat head)

Mophead
Mostly sterile flowers covering small fertile flowers arranged in a panicle (round or cone)
Hydrangea paniculata – panicle/peegee

Zone 3-9
Moist, well drained soil
Full sun to part shade
8-15’ tall and wide
Leaves narrow, joined x 3 at stem with ½-1” petiole
White cone-shaped flowers July to September, age to pink
Slight fragrance
Flowers on new growth
Prune to 12 inches in late winter or early spring
H. paniculata cultivars (50+)

‘Grandiflora’ (PG, shrub or tree) – 18”
‘Pee Wee’ – 8” on 5x5’ shrub
‘Limelight’ – 12”
‘Tardiva’ – late flowers (September)
‘Vanilla Strawberry’
**Hydrangea quercifolia** – oakleaf

Zone 5-9
Well-drained soil
Full sun to part shade
5-8’ tall and wide
White cone-shaped flowers in July to September, age to pink
Flowers on old wood (last year’s)
Prune minimally after blooming and prune out dead wood in spring
Native to the southern U.S.
Exfoliating bark
Beautiful fall leaf color
H. quercifolia cultivars

‘Alice’ – 10” flowers on 12’x12’ shrub
‘Gatsby Gal’
‘Gatsby Moon’
‘Ruby Slippers’ – 9” flowers on 4’x4’ shrub
‘Pee Wee’ - 4” flowers on 3’x3’ shrub
‘Snowflake’ – 12” double flowers on 7’ shrub
Laurelwood oakleaf hydrangea
Hydrangea serrata – mountain

Zone 5-9
Moist, well drained soil
Full sun to part shade
3-5’ tall and wide
Blue or pink lacecap flowers in July to September
Flowers on old wood (last year’s)
Pruning not necessary
Prune out dead wood in spring
H. serrata ‘Tuff Stuff’ – mountain hydrangea
H. serrata cultivars (75+)

‘Blue Billow’
‘Blue Deckle’ - R
‘Tuff Stuff’ – R
‘Geisha Girl’ - white
Hydrangea macrophylla – big leaf, French or florists hydrangea

Zone 6-9
Moist, well-drained soil
Full sun to part shade
4-8’ tall and wide
Mophead and lacecap-type flowers
Flowers July to September
Flowers on old wood (last year’s)
Flower color can be influenced by soil pH
Prune minimally after blooming
Prune out dead wood in spring
*H. macrophylla* - big leaf hydrangeas
*H. macrophylla*

Susceptible to cold winters and spring frosts
Coarse-looking in winter
Keep moist or plant will wilt
Needs 6 hours of sunlight (east)
Does NOT need pruning
Aluminum availability influences flower color
  - Aluminum more available at lower soil pH
    - blue flowers at low soil pH
  - pink flowers at higher soil pH
H. macrophylla cultivars (500+)

‘Nikko Blue’ - mophead
‘Blue Wave’ – lacecap (cold hardy)
‘White Wave’ – lacecap (cold hardy)

Variegated leaf cultivars –
‘Variegata’ - lacecap
‘Lemon Wave’ - lacecap
Remontant

Reblooming

‘Endless Summer’ (1998)
‘Blushing Bride’
‘Wedding Gown’ (double lacecap)
‘Double Delights Star Gazer’ (double lacecap)
‘Everlasting Revolution’
‘Mini Penny’
‘Pistachio’
‘Twist-n-Shout’ (lacecap)
Endless Summer
Blushing Bride
Wedding Gown
Twist-n-Shout
Pruning basics

Flowers on new wood (current season’s growth)

*H. a. petiolaris, H. arborescens, H. paniculata*

Cut stems down to 12 inches in spring, when dormant
Prune out thin stems (no more than 1/3 of total growth)

Flowers on old wood (last season’s growth)

*H. macrophylla, H. quercifolia, H. serrata*

Pruning best avoided
Deadhead in autumn
Remove dead branches in spring
New wood
Old wood

Pruning Tips

- Prune off old flower to just above the first pair of new buds.
- If frost damaged, prune to the first pair of healthy buds.
- Prune out old, non-producing stems to the plant base.
Planting and transplanting

Plant at the same depth
Rim of soil
Water well
Cover with 2 inches of mulch
Soil
No soil – no plants on earth
Half the plant is underground!

“The upper layer of the earth produced by the weathering of rock and influenced by climate and relief” – Soil Science Society of America
Soil layers/horizons

- Organic Layer
- Top Soil
- Sub Soil
- Parent Material
- Bedrock
Soil – 5 components

Inorganic
   rocks and minerals
Organic
   humus (material that is dead or decaying)
Water
Air
Creatures
Soil – inorganic/mineral
Soil texture based on sand, silt and clay
Soil – organic/humus

ORGANIC MATTER

The living, the dead and the very dead

Roots, micorrhizae and bacteria
Crop residues, dead roots, microbial biomass
Humus stabilized OM
Soil – pH chart

Examples of pH Conditions:

- pH 2: gastric juices
- pH 4: tomato juice
- pH 5: human urine
- pH 7: pure water
- pH 7.4: human blood
- pH 10: hand soap
- pH 12: household bleach
Soil pH – effect on plant nutrients
Influence of soil pH on flower color

<table>
<thead>
<tr>
<th>DEEP BLUE</th>
<th>4.5</th>
<th>5</th>
<th>5.5</th>
<th>6</th>
<th>6.5</th>
<th>6.8</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>PURPLE - PINK</td>
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<tr>
<td>DEEP PINK</td>
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Changing soil pH

To increase pH 5.5 to 6.5 loam soil (PINK)
  limestone (dolomitic or calcitic)
  4 lbs/50 sq.ft.
To decrease pH 6.5 to 5.5 loam soil (BLUE)
  sulfur - 1 lb/50 sq.ft.
  *aluminum sulfate – 1T/gal water on plants 2 years+
  peat moss
  organic matter/compost/coffee grounds
  mulch with pine bark
  avoid concrete
Fertilizing hydrangeas

NEVER at planting or transplanting time
NEVER after August 15
Springtime (2 years old +)

Hydrangea food
  Hollytone
  10-10-10 or 5-10-5

slow release
Propagation

4-6 inch softwood cutting taken in June
Strip bottom leaves and cut large leaves in half
Nodes dipped in Rootone
Pot in sterile medium (vermiculite), water, let drain, cover with plastic bag (leaves should not touch bag)
Overwinter pot outside, sunk in the ground
POP QUIZ!
<table>
<thead>
<tr>
<th>Hydrangea species</th>
<th>USDA Zone</th>
<th>Light</th>
<th>Height and width</th>
<th>Flower color</th>
<th>Old or new wood</th>
<th>Flower type</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. anomala</td>
<td>4-9</td>
<td>Full/Partial</td>
<td>60' H</td>
<td>White</td>
<td>New</td>
<td>Flat-topped (lacecap)</td>
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<tr>
<td>petiolaris</td>
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<tr>
<td>H. arborescens</td>
<td>3-9</td>
<td>Partial/Full</td>
<td>3-5'</td>
<td>White, fades to green</td>
<td>New</td>
<td>Cone-shaped</td>
</tr>
<tr>
<td>H. macrophylla</td>
<td>6-9</td>
<td>Full/Partial</td>
<td>4-8'</td>
<td>Pink, blue, purple</td>
<td>Old</td>
<td>Lacecap or cone (hortensia)</td>
</tr>
<tr>
<td>H. paniculata</td>
<td>3-9</td>
<td>Full/Partial</td>
<td>8-15'</td>
<td>White, fades to pink</td>
<td>New</td>
<td>Cone</td>
</tr>
<tr>
<td>H. quercifolia</td>
<td>5-9</td>
<td>Full/Partial</td>
<td>5-8'</td>
<td>White, fades to pink</td>
<td>Old</td>
<td>Cone</td>
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<tr>
<td>H. serrata</td>
<td>5-9</td>
<td>Full/Partial</td>
<td>3-6'</td>
<td>Pink, blue, purple</td>
<td>Old</td>
<td>Flat-topped</td>
</tr>
</tbody>
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September 2017
Drying flowers

1. Allow to dry naturally on the plant
2. Cut stems, strip leaves, stand upright in vase, w/ or w/o water
3. Flower heads covered with silica gel or 60:40 mix of white cornmeal:borax in a large plastic container. Cover and keep dark. Pour out the mixture after 4 days (silica gel) or 2 weeks (cornmeal:borax)

For wreath-making: submerge flowerheads in warm water 10-15 minutes to soften. Allow to dry again.
Dyeing flowers

To dye: flowers should be dry and off the plant for two weeks
Dye should be boiling
Lower bloom into bath and hold for a few seconds
Hang to dry

Color dried flowerheads with spray paint
Christmas with hydrangeas
References

Hydrangeas for American Gardens, Michael Dirr, Timber Press, Portland, OR, 2004


Hydrangeas, a Gardener’s Guide, Toni Lawson-Hall and Brian Rothera, Timber Press, Portland, OR, 2005
More references

Hydrangeashydrangeas.com
Fine Gardening
Horticulture
Garden Design
Plant sources

Canete, Black Oak Ridge Rd., Wayne, NJ
Glenwild, Bloomingdale, NJ
Ploch’s, Broad St., Clifton
Richfield Farms, Van Houten Ave., Clifton
Riverside, Ramapo Valley Rd., Oakland
Morris County Farms, Smith Rd., Denville
Big box stores
Mail sources

White Flower Farm
Monrovia
Wayside Gardens
Jackson and Perkins
Proven Winners
American Hydrangea Society
Hydrangeas Plus
Nantucket Hydrangea