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Longenecker Horticultural Gardens  
The Arboretum's Living Collection of Woody Plants

### Flowering Shrubs for All Seasons

Favorites from the  
UW-Madison Arboretum's  
Longenecker Horticultural  
Gardens



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### Cornelian Cherry Dogwood (*Cornus mas*)



- Native to central & southern Europe into western Asia
- Flowers early April (forsythia alternative)
- Four seasons of interest
  - Flowers - yellow
  - Fruit - fat! edible, red and yellow cultivars.
  - Foliage - glossy green summer, maroon fall
  - Bark - exfoliating with age
- Naturally multi-stemmed. Can be trained to a single stem early
- Height 20-25' at maturity
- Full sun or partial shade
- Adaptable to wide range of soil types and pH

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### Cornelian Cherry Dogwood (*Cornus mas*)



- Some selections have a tendency to produce suckers and water sprouts
  - Should be removed to expose the ornamental, exfoliating bark
- Wood is extremely dense, will sink in water
- Fruit contains high levels of antioxidants - Polyphenols and Vitamin C.
  - Long used in Persian cooking
    - Syrup (Sharbat)
    - Jam (Morabab)
    - Marmalade
    - Beer

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### Korean Spice Viburnum (*Viburnum carlesii*)



- Native to Korea
- Red buds open in late April to pink-changing-to-white flowers.
- **Outstandingly fragrant** flowers.
- Foundation plant
- 4-6' tall with rounded form.
- Partial shade to full sun.
- Red turning black, persistent fruit.
- Nice red fall color
- If pruning needed, best done soon after blooming as blooms on previous years wood.
- Resistant to viburnum beetle.
- Superior cultivars bred in WI – Spice Island and Sugar and Spice by Mike Yanney

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### Viburnum Leaf Beetle (*Pyrrhalta viburni*)



- First arrived in southeastern Wisconsin around 2015
- Native to Europe and Asia
- Most susceptible species:
  - Arrowwood viburnum
  - American and European cranberrybush viburnum.
  - Downy arrowwood viburnum

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### Black Chokeberry (*Aronia melanocarpa*)



- Wisconsin native
- 3-6' tall, similar spread
- Open, upright, spreading form
  - Suckers readily, will form a large colony if not kept in check.
- Very adaptable-tolerates both wet low areas and dry sandy hillsides
- Tolerates partial shade but thrives in full sun.
- Multi-season interest
  - White Spring flowers in May
  - Mid-summer blue-black persistent fruit
  - Wine-red fall color – burning bush alternative

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### Black Chokeberry (*Aronia melanocarpa*)



- Chokeberry is in reference to the tart and bitter taste of the fruits
  - Less palatable to birds
- Can produce 15-20# per plant
  - Fruit has a unique texture
- Fruit possess the **highest level of antioxidants** among temperate fruit species

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### Palibin Lilac (*Syringa pubescens subsp. pubescens* 'Palibin') Formerly *Syringa meyeri* 'Palibin'



- Native to Korea?
- 4-5' tall, compact, rounded shape
- Non-suckering, little to no pruning needed.
- Fragrant, blooms late May shortly after common lilac
- Glossy, mildew resistant leaves
- Needs full sun
- Urban tolerant
  - Salt and pollution
- Can be grown as a standard or informal hedge

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### Bloomerang Lilacs (Complex Hybrids of multiple *Syringa taxa*)



Dark Purple®  
• 4-6' tall and wide  
• Larger and darker color than original

Purpink®  
• 3-5' tall and wide  
• More prolific rebloomer than original

- Compact, heavy-blooming lilac
- Fragrant blooms in May then **re-bloom** mid-summer to frost.
- Non-suckering, little to no pruning needed.
- Needs full sun
- Mildew resistant
- Original introductions have been retired

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## Blooming Dwarf Lilacs



**Ballet®**

- 3-4' tall and wide
- Most prolific rebloomer
- New 2025



**Snowmound®**

- 1.5-3' tall, 2-3' wide
- 1" white flowered rebloomer
- New 2026

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## Pagoda Dogwood (*Cornus alternifolia*)



- Outstanding shade tolerant Wisconsin native
- 8' up to 15'
- White flowers in May
- Tiered horizontal branching
  - Little pruning needed other than occasional basal suckers.
- Bluish-black fruits on showy red stalks
  - 28 bird species eat
- Early maroon fall color
- Snow on horizontal branches in winter
- Does best in partial to full shade but can handle full sun.
- Sensitive to drought
  - Golden canker

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## Pagoda Dogwood (*Cornus alternifolia*)



- Golden Canker (*Cryptodiaporthe corni*)**
- Only affects Pagoda dogwoods
    - UMN study found that 62.5% of healthy stems had the fungus
    - Stressed trees
      - Drought #1 issue
  - Unclear how it infects branches
    - Spores spread by rain
  - Prune out during winter when temps are below freezing
    - Prune to at least 2 buds below discoloration, or 4-6" below if possible
    - Surface sterile pruners between cuts
  - Roots not affected, will resprout

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### Carolina Allspice/Sweetshrub (*Calycanthus floridus*)



- Native from Virginia to Florida, but cold hardy to zone 4
- 6-10' tall, 8-12' wide
- Outstanding **shade tolerant** flowering shrub with unique, open arching habit
- 1½" diameter flowers in June with sporadic rebloom into July
  - Can exude a strawberry scent
  - Simply Scentational®
- Glossy, green foliage turns yellow in fall
- Ground bark said to have a cinnamon like flavor

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### *Calycanthus Hybrids*



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|---|---|---|
| <p><b>'Hartlage Wine'</b></p> <ul style="list-style-type: none"> <li>• <i>C. floridus x chinensis</i></li> <li>• 6-8' tall with similar spread</li> <li>• 2½ - 3" diameter, lightly scented flowers</li> <li>• Sporadically re-blooms through July</li> </ul> | <p><b>'Aphrodite'</b></p> <ul style="list-style-type: none"> <li>• <i>C. chinensis x occidentalis</i></li> <li>• 8-12' tall with similar spread</li> <li>• 3½ - 4" diameter, lightly scented flowers</li> <li>• Sporadically re-blooms through <b>mid-August</b></li> </ul> | <p><b>'Venus'</b></p> <ul style="list-style-type: none"> <li>• <i>C. floridus x occidentalis x chinensis</i></li> <li>• 6-8' tall with similar spread</li> <li>• 3-4" diameter, <b>highly scented</b> flowers</li> <li>• Sporadically re-blooms through July</li> </ul> |
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### Bottlebrush Buckeye (*Aesculus parviflora*)



- Native to South Carolina, Georgia, Alabama and Florida
  - Cold hardy to zone 4
- Dense, mounded, **suckering**, deciduous, multi-stemmed shrub which typically grows 6-12' tall.
- Summer bloom (late June - July)
- Yellow fall color
- Can take partial shade to full sun
  - One of the best summer-flowering shrubs for shaded areas
- Adaptable to different soil conditions.
- Little to no pruning needed. Can be rejuvenated by pruning to the ground.

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## Smooth Hydrangea (*Hydrangea arborescens*)



- Cold Hardy to zone 3
- 3-5' tall
- Flowers on new wood
  - Mophead and lacecap types
- Blooms in July, can be effective for 4+ weeks
- Mix of small fertile flowers and showy sepals.
- Best in partial shade
- Can use as a mass planting, suckers readily
- Work well as a dried cut flower

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## Smooth Hydrangea (*Hydrangea arborescens*)



Wild form



'Annabelle'

- Native from New York to Florida west to Iowa, Missouri, Oklahoma and Louisiana.
- **'Annabelle'** gold standard
  - Discovered in 1910 by Harriet Kirkpatrick while horseback riding on her family's land near Anna, Illinois
  - 50 years later J.C. McDaniel, U. of I horticulture Professor, re-discovered
  - Named for the Belles of Anna, Illinois

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## Smooth Hydrangea (*Hydrangea arborescens*)



Incrediball



Invincibelle Spirit II



Incrediball Blush



Invincibelle Spirit Ruby

- **New Introductions**
  - **Incrediball** (*aka: New Wood - Spring Meadow*)
    - Huge 12" flower structure with 4 times as many sepals as Annabelle
    - Large flowers can cause plant to flop over.
  - **Incrediball Blush**
  - **Incrediball Storm Proof** (new 2025)
    - Slightly smaller blooms with stronger stems and less flower flop.
- **Invincibelle Spirit II**
  - Improved Invincibelle Spirit (2X09 first to have pink flowers)
  - 6-8" dark pink flowers fading to bright pink.
  - \$1 from each plant sold donated to The Breast Cancer Research Foundation. (1 million plus raised)
- **Invincibelle Spirit Ruby**
  - Dark burgandy red flower buds open to a two-toned combination of bright ruby red and silvery pink.

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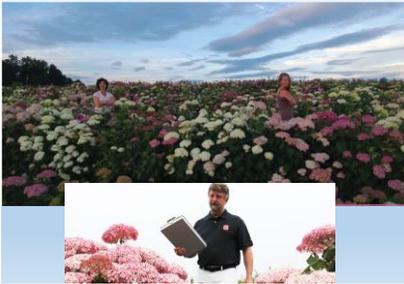
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## Smooth Hydrangea (*Hydrangea arborescens*)



- Invincibelle Series. 21<sup>st</sup> Century Annabelle
- Dr. Tom Ranney, N.C. State University Horticulture Professor
  - Mountain Crop Improvement Lab breeding program
- Began when Richard Olsen, a graduate student of Dr. Ranney, discovered a pink-flowering lace-cap *Hydrangea arborescens* while hiking in the Blue Ridge Mountains.
- Crossed it with 'Annabelle' creating over 1,500 variations.

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## Smooth Hydrangea (*Hydrangea arborescens*)



### Compact forms.

(Potential as Ground Cover Substitutes)

- **Invincibelle Limetta**
  - 2.5-3' tall
  - Green to white green blooms on strong stems
  - Produces new flowers into fall
- **Invincibelle Mini Mauvette**
  - 2.5-3' tall
  - Deep mauve-violet blooms on strong stems
- **Invincibelle Wee White**
  - 1-2.5' tall
  - White fading to green and pink blooms
  - Produces new flowers into fall
- **Invincibelle Garnetta**
  - 2.5' tall
  - Later to bloom than others
  - Pink flowers on sturdy stems, reliable

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## Smooth Hydrangea (*Hydrangea arborescens*)



### New for 2024: Unique flower forms

- **Invincibelle Sublime**
    - 3-3.5' tall
    - Cloud like green to pink blooms on super sturdy stems
    - Produces new flowers into fall
  - **Invincibelle Lace**
    - 3-3.5' tall
    - Plum purple lacecap flowers
    - Strong purple red stems
    - Graceful yet informal form.
- ### New for 2023: Strong Stems
- **FlowerPillar**
    - 3-4' tall
    - 2-3 times more florets than standard
    - Sturdy upright stems that won't flop in the wind and rain
  - **Invincibelle Storm Proof** <sup>15</sup>
    - 3-3.5' tall
    - Gigantic flowers with stout and sturdy stems that repeatedly hold flowers upright even after heavy rain.

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### Smooth Hydrangea (*Hydrangea arborescens*)



- Pruning
  - Can be done anytime during the dormant season.
- Best to cut back to ground
  - Re-invigorates plant and gives the best flower display
  - Keeps size consistent year to year
  - Can help reduce flopping over of stems when in flower

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### Panicle Hydrangea (*Hydrangea paniculata*)



- Native to China and Japan
- Very cold hardy (zone 3), prefers full sun
- Flowers on new wood
- 6+ weeks of bloom starting in July
- 2'-20' tall
- Mix of small fertile flowers and showy sepals.
- Urban tolerant but not drought tolerant
- Pollinator favorite

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### Panicle Hydrangea Pollinator Monitoring

- Over 4 years we monitored 48 different types of *Hydrangea paniculata* through the growing season
- Took weekly pictures of pollinators using flowers from July through late September
- Have documented over 45 species using the flowers

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### Chastetree (*Vitex agnus-castus*)



- Native to the Mediterranean, small tree in the South
- WI dies back to the ground in winter
  - Prune back dead canes to ground in spring.
- Blooms mid-summer till frost on new wood. Butterfly favorite
- Takes heat and drought
- Flower color ranges from lavender, pale violet, red and white
- Fruit, leaves and new shoots used medicinally
  - Shown to contain various alkaloids and flavonoids, as well as substances that are precursors of steroidal hormones.

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### Seven-son Flower (*Heptacodium miconioides*)



- Discovered in China in 1907 but not known in US till 1980.
  - Rated zone 5 but survived down to -29F once established
- Hepta = 7, Codium from codeia = Poppies
- Large, fountain-shaped, multi-stemmed, deciduous shrub
- 15-20' at maturity with a 10' spread
- **Jasmine scented** flowers in September followed by five very showy, **sepal-like rose calyces** in October
- Butterfly favorite
- Showy exfoliating bark
  - Prune excessive water sprouts and suckers to expose lower trunk

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### Seven-son Flower (*Heptacodium miconioides*)



- Cultivars**
- **Temple of Bloom**
    - 15-20' tall
    - flowers ~2 weeks earlier than species
  - **Tianshan**
    - Bred in France and named after the mountain range in China where the species is native.
    - Smaller compact size and spread
      - 8-12' tall, 5-7' wide
      - Rounded form

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### Common Witch Hazel (*Hamamelis virginiana*)



- Wisconsin native
- Fragrant yellow flowers in late fall to early winter
- 10 – 20' tall, multi trunked, can be a bit rangy.
- Shade to full sun
- Can have a wonderful yellow fall color.
- Little to no pruning needed
- Wood used by Native Americans as dowsing rods to find underground sources of water.
  - Water witching
- Aromatic extract of leaves, twigs, and bark is used in mildly astringent lotions

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### Vernal Witch Hazel (*Hamamelis vernalis*)



- Native to the Ozark Plateau extending from southern Missouri through northwestern Arkansas to eastern Oklahoma
  - Hardy to zone 4
- Fragrant yellow to red flowers in mid to late winter.
- 6–10' tall, spreading form.
- Bronze to reddish purple new spring foliage
- Yellow to red fall color
  - Can hold onto dead leaves in winter
- Full sun to shade
  - Understory plant

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'Christmas Cheer'  
December 8

'Girard's Purple'  
March 17

'Sandra'  
March 17

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### If Witch Hazel bloom in late fall through winter, how are the flowers pollinated?



Many to flower, few to fruit

- Only ~1% of flowers produce pods
- Pollination has long been a mystery
- Fragrant, showy flowers indicate insect pollination, not wind pollination

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### Flies

- Syrphid Flies
  - Known as Flower Flies, or Hover Flies
- Gnats
  - Fungus gnats



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### Shivering Winter Moths



- Discovered in 1987 by University of Vermont Biology professor Bernd Heinrich
- A group of owl moths in the family Noctuidae that over winter as adults
- Can raise their body temperatures up to 50F by shivering to warm their flight muscles

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- After pollination, actual fertilization of the seed is delayed until spring.
- Seed ripen in late autumn of following year
- Dry Squeeze Catapult
  - As seed capsules dry, the exterior wall shrinks in size, applying pressure to the seed, causing a forceful ejection
  - Seeds can be ejected up to 25 feet away

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