

What is a shrub?

- According to Michael Dirr, a shrub is a “woody plant with several stems branched from the ground.”



Purpose of shrubbery

- Provide aesthetics
- Screening
- Food or flowers
- To attract bees and birds
- Provide borders or shading



Put the Right Plant in the Right Place

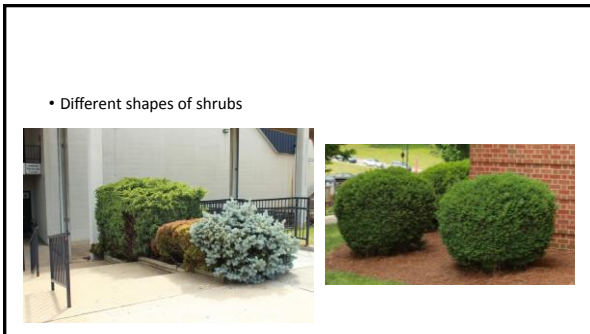
- Evaluate the landscape conditions and whether your plant selections will perform well



Plant Selection Principles

- Items to consider
 - Hardiness
 - Mature size
 - Fruiting and flowering qualities
 - Habit and form, shape
 - Light requirements
 - Soil and water requirements
 - Disease and insect susceptibility





Plant Selection Suggestions

Common Shrubs of Tennessee

- Rhododendron, native
- Azalea – can be natives, some not
- *Taxus* - Yew
- Spirea
- Shrub-type dogwoods
- Ninebark
- Hydrangea
- Abelia

Rhododendron

- Native to the Appalachian region of the United States
- Many hybrids exists
- Excellent cold hardiness – proper selection for heat tolerance is needed
 - 'English Roseum' (rosy pink)
 - 'Roseum Elegans' (Lavender-pink)
 - 'Janet Blair' (light pink)
 - 'Chionoides' (white)
 - 'Lee's Dark Purple' (dark lavender)
- Full sun and part shade
- Needs excellent drainage and low pH (5.5), high in organic matter



Deciduous Azalea

- *Rhododendron* genus
- Native to the southeastern U.S.
- Also need well drained, acidic, organic-rich soil
- Come in many colors and types
- Some have good fall color in the foliage
 - Pinkshell
 - Sweet/Smooth
 - Swamp
 - Cumberland
 - Flames
- Upright vs. spreading, dwarfing
- Fragrant and provide excellent color
- Attract birds and pollinators



Photo: Hugh Conlon

Taxus - Yew

- Evergreen conifers that perform well in heat and humidity
- Need excellent drainage
- Poisonous foliage
- Plum Yew – native to China, Korea, Japan
 - Performs well here
 - Tolerates sun and shade
 - 'Fastigiata' columnar
 - 'Prostrata' and 'Drupacea'
- 'Emerald Spreader' – Japanese Yew
 - Prostrate



Shrub-Type Dogwoods

- Pagoda dogwood (*Cornus alternifolia*)
 - 15-25' tall, spreading
 - Creamy white flowers, 3-4 weeks after *Cornus florida*
 - Acidic and highly organic soil
 - Very cold tolerant
 - Requires afternoon shade
 - 'Argentea' and 'Golden Shadows'
- Chinese dogwood (*C. kousa*) 'Wolf Eyes'
 - Compact 8-10' and spreading
 - Variegated leaves
 - White flowers
 - Well drained acidic soil



Wolf Eyes



Photo: Hugh Conlon

Ninebark

- *Physocarpus opulifolius*
- Very cold tolerant, performs in poorly drained soil
- Full sun
- White or pink flowers resembling Spirea
- Grayish brown peeling bark with dark cherry layer underneath
- Native to southeastern U.S. with many new cultivars
 - 'Summer Wine' (burgundy) 6'
 - 'Coppertina' (Copper) 7'
 - 'Center Glow' (Red/yellow) 9'
 - 'Diabolo' (Reddish purple) 9'
 - 'Little Devil' (deep burgundy) 5'

Darts Gold



Photo: Hugh Conlon

Diabolo



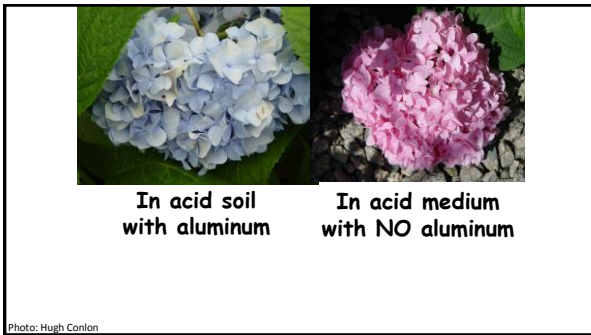
Photo: Hugh Conlon

Hydrangeas

- Bigleaf (*H. macrophylla*)
 - "Mopheads" large round bloom heads
 - More susceptible to winter damage
- Oakleaf (*H. quercifolia*)
 - Native
 - Full sun or partial shade
 - Good fall color
- Panicked (*H. paniculata*)
 - Tall and vigorous
- Smooth (*H. arborescens*)
 - Native, 3-5' and vigorous
 - Suckers heavily

Bigleaf Hydrangeas

- Blue vs. Pink – acidity and high Al in the soil favors blue; high alkalinity and low Al favors pink. Whites are unaffected
- Flower on old wood
- 'All Summer Beauty'
- 'David Ramsey'
- 'Glowing Embers'
- Endless Summer
- 'Mini Penny'
- 'Penny Mac'
- 'Pia'
- 'Preziosa'



Oakleaf Hydrangea

- Have distinctly lobed leaves, hence the name
- 'Snowflake'
- Snow Queen™
- 'Sikes Dwarf' (compact)
- 'Ruby Slippers' (compact)
- 'Munchkin' (compact)
- Flower on old wood



Photo: Hugh Conlon

Hydrangea quercifolia 'Ruby Slippers'



Photo: Hugh Conlon

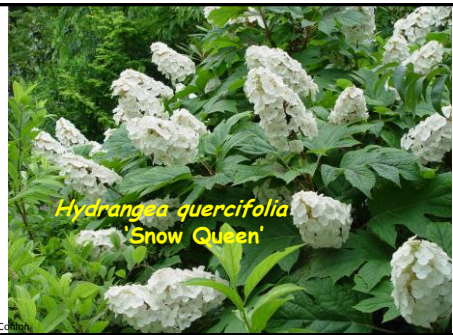


Photo: Hugh Conlon

Hydrangea quercifolia
'Snow Queen'



Photo: Hugh Conlon



Photo: Hugh Conlon

Queen of Hearts



Paniced Hydrangeas

- 'Grandiflora' (large)
- Limelight – very popular
- 'Pink Diamond'
- 'Tardiva'
- Flower on new wood



H. paniculata
'Limelight'

Photo: Hugh Carlton

Dwarf Limelight – Little Lime



Photo: deborahsilver.com



Hydrangea paniculata 'Grandiflora'
Pee Gee

Photo: Hugh Carlton



Hydrangea paniculata 'Tardiva'

Photo: Hugh Carlton

Smooth Hydrangea

- 'Annabelle'
- Invincibelle Spirit®
- 'Grandiflora'
- Flower on new wood



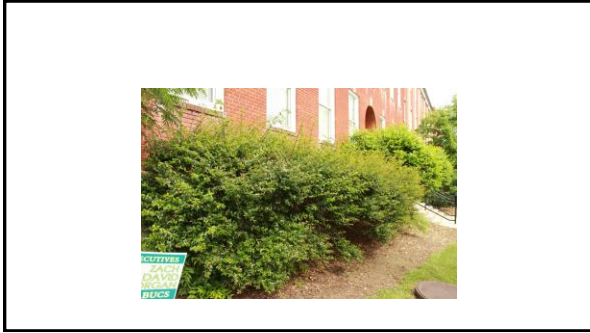
Invincibelle Spirit®

Hydrangea
arborescens
'White Dome'



Abelia (Abelia x grandiflora)

- Native to the Southeast
- Good for hedging/screening
- Evergreen
- Full sun, well drained soil
- Bronze Anniversary (compact) and 'Canyon Creek'
- 'Kaleidoscope' (compact) multicolored
- 'Lavender Mist'
- 'Little Richard' (dwarf)
- 'Rose Creek'
- Silver Anniversary™



Underused Tennessee Shrubs
Callicarpa (Beautyberry)

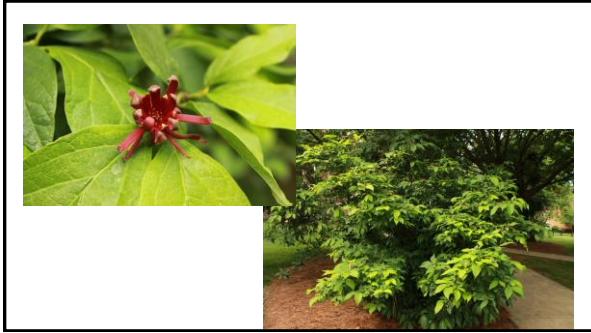
- Native, Japanese forms also popular
- 6-8' shrub with opposite leaves, stems bearing purple or white fruit at the nodes
- Blooms mid-summer on new growth
- Full sun to partial shade
- Moist well drained soil
- 'Early Amethyst'
- 'Albifructus' (white)
- 'Duet' (white and variegated)
- 'Russell Montgomery' (white)
- 'Profusion'



'Albifructus'

Underused Tennessee Shrubs
Calycanthus

- Native (Carolina Allspice, Bubbybush, Sweetshrub)
- Burgundy blooms in late spring, very fragrant
- Very tolerant to eastern TN conditions
- Flowers best in full sun
- 'Athens' yellow blooms
- 'Hartledge Wine'
- 'Venus' white flowers




Underused Tennessee Shrubs
Paperbush (*Edgeworthia chrysantha*)

- Native to China
- Early spring bloomer, fragrant pale yellow flowers
- 5' tall
- Needs partial shade and high organic matter, acidic soil
- 'Red Dragon'
- 'Snow Cream'





Underused Tennessee Shrubs Fringe flower (Chinese)

- Same family as the witchhazels (Hamamelidaceae)
- Blooms April-May with white or pink flowers
- Reddish purple and green foliage varieties
- Compact and large varieties
- Look for cold hardiness
 - 'Burgundy Blast'
 - 'ZhuZhou'
 - 'Cherry Blast'
 - 'Garnet Fire'
 - 'Purple Diamond'
 - 'Brevipetala' and 'Pipa's Red' are well established at ETSU





Blueberries

- Provide fruit and beautiful fall color
- Not self-pollinating (require two cultivars)
- For eastern TN – highbush and rabbiteye
 - 'Duke'
 - 'Blue Crop'
 - 'Blueray'
 - 'Tiffblue'
 - 'Premier'


Fothergilla

Witchhazel family
Can grow in sun or shade
Likes moist, well drain acidic soil
Has good fall color





Plants to Avoid

- *Nandina domestica*
 - Invasive in southern forests, has escaped from ornamental plantings
 - Introduced from eastern Asia and India in early 1800s



Plants to Avoid

- *Euonymus alata* (Winged burning bush)
 - Invasive to southern forests
 - Desired for its hardiness and intense red fall color
 - Introduced from northeast Asia in 1860s, initially used for highway beautification
 - Threatens native plant habitats with its dense and rapid growth habit and prolific seeding.

Photos: nps.gov

Plants to Avoid

- Leyland Cypress
 - Used extensively for screens and for areas where rapid growth is needed
 - Very disease-prone
 - Can be damaged by cold
 - Overused



Arborvitae

- Perform well in poorly drained areas
- Consider Arborvitae as an alternative to Leyland Cypress
 - Carol Reese – "Arborvitae *Thuja occidentalis* or *plicata* *Platyclusus orientalis*: various cultivars, some are large, others may be used as shrubs. A large, fast form is 'Green Giant' which is a form of *Thuja plicata* and is also more tolerant of poorly drained soils."



Photo: Hugh Conlon

Emerald™ Eastern arborvitae



Western arborvitae (*Thuja plicata*)

Photo: Hugh Conlon

Thuja occidentalis 'Ericoides'



Other Conifers to Consider

- Conifers provide beautiful evergreen foliage during winter months
- Variety of shapes, habits, colors
- Require little pruning and maintenance
- **Tennessee**
 - East TN State University Arboretum, Johnson City
 - Pseudolarix kaempferi*
 - Sciadopitys verticillata*
 - Thujaopsis dolabrata*
 - University of TN Gardens, Jackson
 - Cryptomeria japonica* 'Globosa Nana'
 - Platyclusus orientalis* 'Franky Boy'
 - Thuja orientalis* 'Morgan'
 - University of TN Gardens, Knoxville
 - Chamaecyparis nootkatensis* 'Glauca Pendula'
 - Chamaecyparis obtusa* 'Spirited'
 - Juniperus depeena* 'McFetter's Blue'
 - Pinus densiflora* 'Aurea'
 - Platyclusus orientalis* 'Franky Boy'



Thuja occidentalis 'Moltenup'

Thuja occidentalis 'Europe Gold'

Thuja plicata

Thuja plicata 'Whigcord'

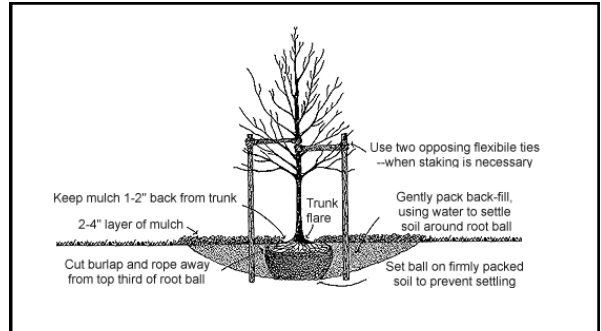


Landscape Preparation

- Best time to plant is the fall. This allows root system to establish itself for better growth the following spring and summer.
- Be sure site has good drainage and is not compacted
 - Till upper 6 inches and work in organic matter – reduces pH and repairs structure
 - Alternatively, build raised beds
- Soil test
 - At this time you can add preplant fertilizer as recommended by the soil test
 - Aim for pH 5.5 – 6.5, depending on the desired plants.
 - Dolomitic limestone raises pH
 - Sulfur, Al-sulfate, and organic matter are used to lower pH

Proper Planting

- Dig the hold as deep as the root ball is tall.
- The hole should be 2-5x wider than the root ball, and should have sloping sides.
- If soil is heavily compacted, set the root ball higher and build soil up around it, but not on top. Make sure this structure is maintained and adequately watered.
 - The top of the mound should still be flush with the top of the root ball



- For pot bound plants: rather than cutting the roots, roughen sides of hole and shave outer 2 inches from root ball.



Photo: blog.northerngardener.org



Photo: Jeff Gilman, UMN Extension

Planting

- Backfill with the native soil mixed with compost or other organic matter
 - Make sure no clods or large hard clumps are present
- Mulch with bark, needles, or other aged organic material
 - Be sure to leave space around the trunk
 - No mulch volcanoes – harbors disease
 - Only need 2-4"



First Year

- Water well after planting
- Maintain appropriate watering
 - Know your soil – does it drain easily or hold water?
 - Constant moisture, but not saturation. Depletes needed oxygen from root zone
- Don't prune too heavily (<15%)
 - Removing too much top growth reduces root growth
- Apply nitrogen fertilizers in spring before growth, but not in the fall.

Remember

- Know your site before you select your plants
- Consider the plant's cold hardiness, mature size, aesthetic qualities, light and soil requirements, water requirements, and disease and insect susceptibility
- Consider varieties native to the Southeast
- Avoid overused or exotic varieties
- Properly prepare soil with organic matter
- Use the right planting depth and amount of mulch
- Keep adequate moisture

Recommended Reading

- What Grows There – Blog by Hugh Conlon, retired Extension Specialist. Whatgrowsthere.com
- *Best Garden Plants for Tennessee*, by Susan Hamilton, director of UT Gardens



Questions or Comments?

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Thank You!

References Used

- Conlon, Hugh. *What Grows There*. Online Blog. Whatgrowsthere.com
- Conlon, Hugh. *Hydrangea – The Queen of the Summer Garden*.
- Polomski, B., Fernandez, T., Shaughnessy, D. *Planting Shrubs Correctly*. Clemson University Extension Publication HGIC 1052.
- Also many thanks to Travis Watson, Arborist at East Tennessee State University, for his suggestions and advice on ideal shrubs for Tennessee.