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
Fruits and flowers

Different shapes of shrubs

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 exist.
- Excellent cold hardiness – proper selection for heat tolerance is needed
  - ‘English Roseum’ (rose 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
    - Fin triple
    - Sweet/Smooth
    - Swamp
    - Cumberland
    - Flames
  - Upright vs. spreading, dwarfing
  - Fragrant and provide excellent color
  - Attract birds and pollinators

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 *C. 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

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'

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
- Panicled (*H. paniculata*)
  - Tall and vigorous
- Smooth (*H. arborescens*)
  - Native, 5-15' 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'
In acid soil with aluminum

In acid medium with NO aluminum

Hydrangea macrophylla ‘Nikko Blue’

Photo: Hugh Congdon

Hydrangea macrophylla ‘Wave Hill’

Photo: Hugh Congdon

Hydrangea macrophylla ‘David Ramsey’

Photo: Hugh Congdon

Hydrangea macrophylla ‘Penny Mac’

Photo: Hugh Congdon

Endless Summer™

Photo: Hugh Congdon
Oakleaf Hydrangea

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

Panicled Hydrangeas

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

Dwarf Limelight – Little Lime

Hydrangea paniculata 'Grandiflora'

Pee Gee

Hydrangea paniculata 'Tardiva'
Smooth Hydrangea

- ‘Annabelle’
- Invincibelle Spirit®
- ‘Grandiflora’
- Flower on new wood

Hydrangea arborescens 'Annabelle'

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’

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
Chinese Sweetshrub

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’
- ‘Garnet Fire’
- ‘Purple Diamond’
- ‘Brevipedals’ 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’
  - ‘Tifblue’
  - ‘Premier’

Fothergilla
- Witchhazel family
- Can grow in sun or shade
- Likes moist, well-drained 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.
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 Platycladus 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."

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

Conifers
- Pseudolarix kaempferi
- Sciadopitys verticillata
- Thuja plicata
- Thuja occidentalis
- Thuja plicata ‘Whipcord’
- Thuja orientalis ‘Europe Gold’
- Thuja orientalis ‘Morgan’
- Thujopsis dolobrata
- University of TN Gardens, Knoxville
  - Chamaecyparis obtusa ‘Spirited’
  - Juniperus depressa ‘Mr. Gold’
  - Pinus densiflora ‘Aurea’
  - Platycladus orientalis ‘Franky Boy’
- University of TN Gardens, Jackson
  - Cryptomeria japonica ‘Globosa Nana’
- Pseudolarix kaempferi
- Sciadopitys verticillata
- Thujopsis dolobrata
- Tennessee
  - East TN State University Arboretum, Johnson City
    - Pseudolarix kaempferi
    - Sciadopitys verticillata
    - Thuja plicata
    - Thuja occidentalis
    - Thuja plicata ‘Whipcord’
    - Thuja orientalis ‘Europe Gold’
    - Thuja orientalis ‘Morgan’
    - Thujopsis dolobrata
  - University of TN Gardens, Knoxville
    - Chamaecyparis obtusa ‘Spirited’
    - Juniperus depressa ‘Mr. Gold’
    - Pinus densiflora ‘Aurea’
    - Platycladus orientalis ‘Franky Boy’
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 hole 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.

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 hardness, 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

References Used

• Conlon, Hugh. What Grows There. Online Blog. Whatgrowsthere.com
• Conlon, Hugh. Hydrangea – The Queen of the Summer Garden.
• Also many thanks to Travis Watson, Arborist at East Tennessee State University, for his suggestions and advice on ideal shrubs for Tennessee.