Extension Gardener Class 6: Selecting Ornamental Plants
Next Week: Landscape Care

- Planting Technique
- Watering
- Fertilization
- Mulching
- Pruning
- Dealing with pests, weeds and deer
Today’s Class

• Choosing plants for success and sustainability
  – Right plant, right place!

• Recommended varieties
  – Trees
  – Evergreens
  – Shrubs
  – Herbaceous Plants
Choosing Plants

Success
• Plants survive and thrive
• Fulfill purpose in landscape

Sustainability
• Do not consume excessive resources
• Fulfill ecosystem purpose

Butterflyweed,
Asclepias tuberosa
Success and Sustainability

Success
• Plants survive and thrive

Sustainability
• Do not consume excessive resources
  – Water, nutrients, pesticides, gardener’s energy

Choose the Right Plant for the Site!
Right Plant for the Site

- Local climate – temperature and rainfall patterns
- Exposure to sun/shade
- Soil drainage and pH
- Space – room to grow

Always check the mature size before planting!
CLIMATE:
Select plants hardy to at least Zone 7
Tolerant of summer heat and humidity

Above 86°
Tolerant of Wet AND Dry
NC is rainy, but droughts do occur!

Source: http://www.rssweather.com/climate/North%20Carolina/Raleigh/
Right Plant for the Site: Exposure

Sun versus Shade

• **Full sun**: at least 8 hours direct sunlight each day

• **Part sun/shade**: at least 4 hours direct sunlight each day
  – **Morning sun**: gentler, shade plants are usually okay with morning sun
  – **Afternoon sun**: hotter, harsher – choose sun tolerant plants for sites that get direct afternoon sun
North Facing
Shady, cold

West Facing
Hot PM sun

South Facing
Sun all day

East Facing
Gentle AM sun
Shade

- **Light Shade** - a bright shade such as that cast by pine trees – less than 30% sunlight blocked
  - Sun, part sun and shade plants will work
- **Heavy Shade** cast by buildings or hardwood trees – plant only full shade plants
- **Dappled Shade**: Some sunlight comes through – choose shade or part shade plants
Right Plant for the Site

Drainage and Soil Type

- **Poorly Drained/Wet**: water stands for days after rainfall, high clay content
- **Moist**: Moist most of the time, water drains within 24 hours of rainfall ending
- **Well Drained**: water drains away within a few hours of rainfall ending, sandy loams
- **Xeric**: Extremely sandy, water never stands; also steep slopes where water runs off

- In shade, competition from tree roots causes soils to be drier
Soil pH

Some plants need acidic soils (pH 5.0-5.5)
- Azaleas
- Dogwood
- Magnolia
- Gardenia
- American Holly
- Blueberries
- Loropetalum
- Virginia Sweetspire
- Centipedegrass

Yellowing between the veins on new growth is a common symptom of high pH (iron deficiency)
Right Plant for the Site: Space!

- **Plants grow!** – often larger and faster than you anticipate
- In many new landscapes, plants are placed too close together, too close to the house, and will eventually get too large!
Space: Look Up!

Know how tall and wide a tree will grow before planting!
WRONG! Topping is extremely detrimental to tree health!
Space: Septic Drainfields

- Tree and shrub roots clog drain lines
- For best function, keep large trees 30’+ away and shrubs 10’+
- Best option over drainfield = unirrigated turf
Landscape Purpose

- Shade home
- Screening/Privacy
- Enhance home appearance – “foundation plantings”
- Define/divide areas
- Direct attention, add interest
Shade

- Plant deciduous trees on west to shade hot afternoon sun in summer
- Deciduous = lose leaves in winter
Screening and Privacy

- Plant evergreen screen on north and northwest side to shield winter winds
- Dense, branched to ground
Midday

Shade from afternoon sun

PM

Screen north wind

Ideal areas for fruits and vegetables

Full sun all day

House

Morning Sun

AM
Enhance Home’s Appearance
“Foundation Plantings”
Direct Attention: Color

• A mass of one color is more effective than many colors together
Add Interest

- Seasonal change
- Foliage color
- Blossoms
- Bark
- Form
- Fruits

Oakleaf Hydrangea, Hydrangea quercifolia
Ecosystem Purpose

- Foundation of food web
- Convert sun’s energy into form consumable by animals
- Provide food and shelter for birds, beneficial insects, pollinators, and other wildlife
Include Piedmont Native Plants

Research shows native plants better support native wildlife; Natives are essential for many insects to complete their life cycle.

Birds rear young on insects, particularly caterpillars.
What do natives provide wildlife?

Food, shelter, nesting
Planting for Wildlife

• Include trees and shrubs that form **berries**; leave **seed heads** on flowers and grasses
• Include **larval host plants** for butterflies

Spicebush swallowtail caterpillars feed on spicebush and sassafrass
Diversity!

• Many species
• Evergreen and deciduous
• Flowers spring – fall
• **LAYERS:**
  – Groundcover
  – Understory
  – Canopy
Plant in Groups

- Mass plantings are easier to find and increase forage efficiency
- 3+ of any one plant type

Rudbeckia ‘Goldstrum’ – Pollinators love it but so do deer!
Connect existing natural areas to:

- Create larger area for habitat
- Bridges two or more existing areas to create a corridor
- Work with neighbors to connect natural areas
Going Native: Urban Landscaping for Wildlife

http://www.ncsu.edu/goingnative/

Going Native: Urban Landscaping for Wildlife with Native Plants

You can go native!...with native plants in your landscape.

- See why landscaping with native plants is better for wildlife and for the environment.
- Find out about the problems caused by invasive, exotic plants. Odds are you have invasive exotics in your own backyard!
- Discover the native plants you can use as alternatives to exotic plants. We even tell you where you can buy natives!
- Create your own native plant landscape that’s attractive to wildlife and people with our step-by-step guide that helps you choose the right plants for your landscape.
Avoid Invasives

- Link on top bar, “Invasive Exotic Plants of the SE”
- Examples: Bradford Pear, Japanese barberry, Eleagnus, Ligustrum (Privet), Mahonia
Recommended Plants

1000’s of possibilities – we will look at varieties that:

- Adaptable, likely to thrive in the average landscape; not finicky
- Require low inputs once established (water, nutrients)
- Have no major pest problems but provide resources for wildlife
- Available locally
- Focus on natives and deer resistant plants
Plant Names Are Important!

- **Common Names**
  - “Heavenly Bamboo”
  - Common names can be misleading!
- **Scientific Names**
  - *Genus species*
  - *Nandina domestica*
- **Cultivar Names**
  - ‘Cultivar’
  - *Nandina domestica* ‘Firepower’
  - ‘Firepower’ Nandina

‘Firepower’ Nandina – NOT invasive, no berries

Heavenly Bamboo, *Nandina domestica* – invasive, bird hazard
Shade Trees

• Many native species are available from local nurseries & garden centers
• Shade trees typically mature over 30’ tall
• All need sun!
• Essential for wildlife habitat

Red maple is widely planted, though best reserved for moist sites
Oaks

- The best shade trees for wildlife
- Many species native to NC
- Considered slow growing
- Very long lived
- Plant for the future!
Fastest Growing Oaks

- **Willow Oak**
  - *Quercus phellos*
  - 100’ x 50’

- **Pin Oak**
  - *Quercus palustris*
  - 60’ x 40’
  - Needs acid soil

- Both native
- Wet – well drained soil
Red Maple

Acer rubrum

- 40’-60’ x 40’-60’
- Native
- Wet – well drained soil
- Excellent fall color
- Varieties:
  - ‘October Glory’
  - ‘Brandywine’
- Spring blooms are early nectar source for bees

Blooms (right)
Seeds (left)
River Birch
*Betula nigra*

- Native
- 40’ x 30’
- Single or multi-trunks
- Papery bark
- ‘Heritage’ older variety, ‘Duraheat’ newer with better leaf spot resistance
- Grows fast, tolerates wet to well drained soil
River Birch

Spiny witch-hazel gall aphid – attract ladybug larvae
• Screening
• Foundation Plantings

Few evergreen natives are available for landscaping

Rhododendron and Mountain Laurel grow in the Piedmont but require specific conditions (shade, well drained, acidic soil) to do well
Upright Hollies

Ilex hybrids

- Best choice for hedges/screens
- Full sun–part shade, well drained soil
- Most are hybrids between native and Asian species
- Prickly leaves, lots of red berries
- ‘Needlepoint’, 15’ x 10’
- ‘Nellie Stevens’, 20’ x 15’
- Red Hollies – 15’-20’ x 10’
  - ‘Oakleaf’ - ‘Cardinal’
  - ‘Festive’ - ‘Robin’
- American holly – Ilex opaca, is slower growing and loses lower limbs with age
Southern Wax Myrtle

*Morella cerifera*

- Full sun – lt. shade
- Moist to xeric soil
- 10’-15’ x 10’-15’
- Native
- Evergreen but may lose some leaves in cold winter
- Exceptionally tough, drought tolerant
- Prone to ice and wind damage
- Deer resistant
Cleyera

*Ternstroemia gymnanthera*

- Not native
- Full sun to full shade
- Well drained soil
- 8’+ tall x 6’+ wide, to 15’ tall
- Very deer resistant
- Tolerates pruning
Small Evergreen Shrubs

Resist the temptation to turn them into little green meatballs!
Low Growing Evergreens

- **Dwarf Yaupon**
  - Very small leaves
- **‘Carissa’ Holly**
  - Larger leaves, single spine on tip
- Both 3’-4’ tall, 4’-5’ wide, full sun – part shade, moist – well drained soil
- Drought tolerant
- Deer resistant
Inkberry
*Ilex glabra*

- Native
- 4’-5’ x 3’-4’
- Evergreen
- Tolerates moist soil
- Sun-part shade
- Bees attracted to blossoms
- ‘Shamrock’ – 3’-4’ tall and wide
‘Duke Gardens’
Japanese Plum Yew
*Cephalotaxus harringtonia*

- Not native
- Shade or sun
- Well drained soil
- 3’-4’ x 4’-5’
- Very deer resistant
- Very similar to yew but better adapted to our climate
‘Firepower’ Nandina

- Not native
- Sun to part shade
- Well drained soil
- One of the smallest shrubs – 2’ x 2’
- Never blooms or produces berries – not invasive
- DEER may be a problem
Shrub Palms

• Palms are very deer resistant. Hardy shrub palms:
  – Needle palm
    • Native to SC
  – Dwarf palmetto
    • Native to coastal plain

• Both grow 4’-5’ tall and wide; prefer part shade and moist soil