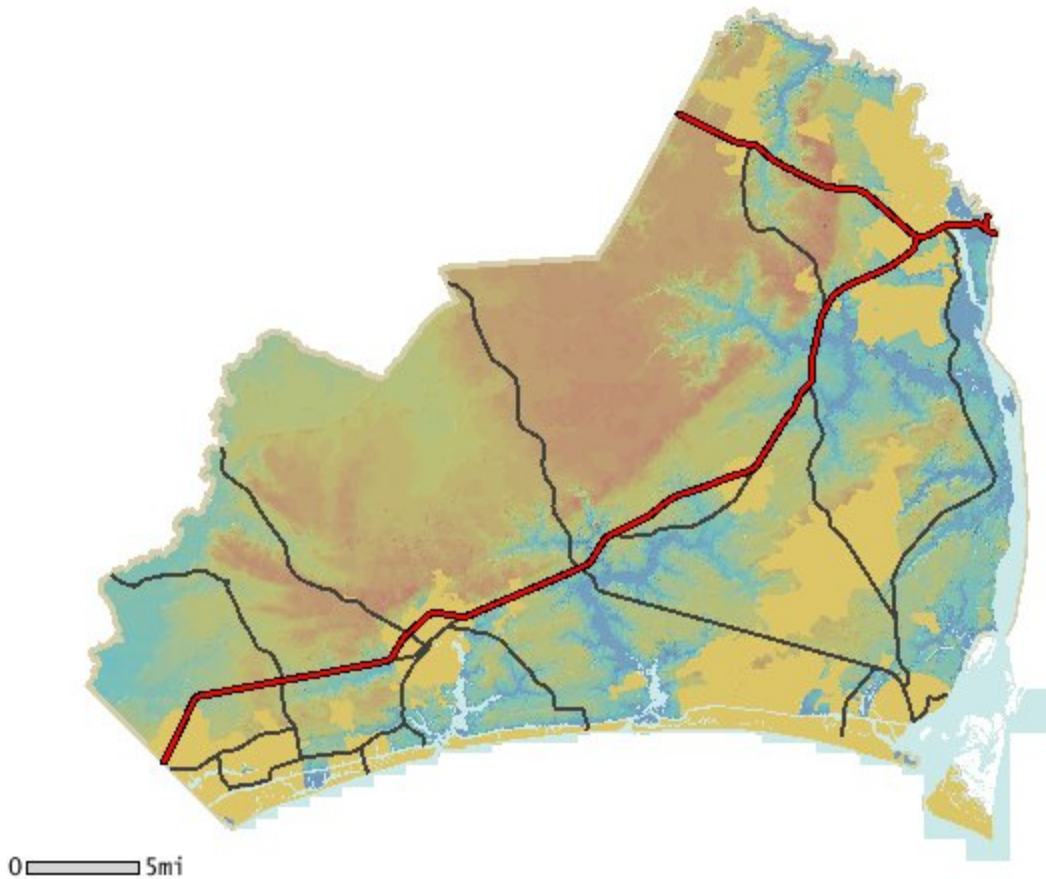


# Brunswick County

## 'Newcomers' Packet



# SMALL SHRUBS – 2' to 4' Tall

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #3

Underlined plants are extremely drought-tolerant once established      \*Indicates a plant native to SE USA

### EVERGREEN SHRUBS

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
<u>'Rose Creek'</u> <u>Abelia</u>	<i>Abelia x 'Rose Creek'</i>	1,2,3		2-3 x 2-3	Clusters of small white bell-shaped flowers summer and fall	Well Drained	Sun
<u>Glossy Abelia</u>	<i>Abelia x grandiflora</i>	1,2,3	'Little Richard' 'Sherwoodii' 'Sunrise' 'Kaleidoscope'	2-4 x 2-4	Cluster of white, bell-shaped flowers summer through fall, variegated forms available	Well Drained	Sun
Dwarf Aucuba	<i>Aucuba japonica</i>	1,2,3	'Nana'	3-4 x 2-3	Large, evergreen leaves	Well Drained	Part to Full Shade
Poet's Laurel	<i>Danae racemosa</i>	1,2,3		2-4 x 3-5	Graceful habit and handsome foliage. Slow growing	Well Drained	Part to Full Shade
Trailing Gardenia	<i>Gardenia radicans</i>	1,2		2-3 x 3-4	Fragrant white flowers in summer	Well Drained	Sun to Part Shade
<u>Chinese Holly</u>	<i>Ilex cornuta</i>	1,2,3	'Carissa' 'Rotunda'	3-4 x 4-5	Very tough. Glossy dark green foliage	Well Drained	Sun to Light Shade
<u>Dwarf Yaupon Holly*</u>	<i>Ilex vomitoria</i>	1,2,3	'Bordeaux' 'Schillings' 'Nana'	3-4 x 4-5	Extremely tough. Small leaves, fine texture	Well Drained to Xeric	Sun to Part Shade
<u>Winter Jasmine</u>	<i>Jasminum nudiflorum</i>	1,2,3		3-4 x 3-4	Yellow flowers in early spring	Well Drained	Sun to Part Shade
<u>Chinese Juniper</u>	<i>Juniperus chinensis</i>	2,3	'Old Gold' 'Pfitzeriana Compacta'	2-4 x 5-6	Many varieties have golden foliage, others have bluish needles	Well Drained to Xeric	Sun
<u>Dahurian Juniper</u>	<i>Juniperus davurica</i>	2,3	'Expansa' ( 'Parsoni' )	2-3/ x 6-8	Excellent heat and drought tolerance	Well Drained to Xeric	Sun
<u>Dwarf Nandina</u>	<i>Nandina domestica</i>	1,2,3	'Firepower' 'Moon Bay' 'Gulf Stream' 'Harbor Dwarf'	2-3 x 2-3	All but 'Firepower' eventually produce red berries. Attractive foliage, red in winter	Well Drained	Sun to Part Shade

Evergreen Shrubs— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
<u>Dwarf Pittosporum</u>	<i>Pittosporum tobira</i>	1,2,3	‘Wheeler’s Dwarf’ ‘Cream de Mint’ ‘Mojo’	3-4 x 4-5	Attractive foliage, ‘Cream de Mint’ is variegated	Well Drained to Xeric	Sun to Part Shade
<u>Indian Hawthorne</u>	<i>Raphiolepis umbellata</i>	1,2,3	‘Olivia’ ‘Eleanor Taber’ ‘Baybreeze’ ‘Gulf Green’	2-4 x 4-5	White or Pink flowers in May. These varieties have good resistance to leaf spot disease	Well Drained	Sun
Azaleas	<i>Rhododendron</i> hybrids	1,2	Satsuki Varieties ‘Gumpo’ Varieties	2-3 x 3-4	Later flowering than most Azaleas	Well Drained	Light to Part Shade
‘Conoy’ Viburnum	<i>Viburnum</i> x <i>utile</i> ‘Conoy’	1,2		3-5 x 5-8	Fragrant white flowers in spring	Well Drained	Sun to Part Shade
<u>Adam’s Needle Yucca*</u>	<i>Yucca filamentosa</i>	1,2,3	‘Color Guard’ ‘Garland Gold’ ‘Bright Edge’	2-4 x 2-4	Interesting texture, all of these varieties have gold variegation	Well Drained to Xeric	Sun

DECIDUOUS SHRUBS

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
<u>Japanese Barberry</u>	<i>Berberis thunbergii</i>	1,2,3	‘Crimson Pygmy’	2-3 x 3-4	Crimson foliage throughout growing season	Well Drained	Sun to Light Shade
Clethra, Sweet Pepperbush*	<i>Clethra alnifolia</i>	1,2	‘Hummingbird’ ‘Sixteen Candles’ ‘White Doves’	2-3 x 4-6	Fragrant white flowers in mid-summer, yellow fall color	Moist to Well Drained	Sun to Part Shade
‘Pia’ Hydrangea	<i>Hydrangea macrophylla</i> ‘Pia’	1,2		2-3 x 2-3	Pink or blue mophead flowers in summer	Well Drained	Sun to Part Shade
Virginia Sweetspire*	<i>Itea virginica</i>	1,2,3	‘Little Henry’ ‘Merlot’	3-4 x 3-5	White flowers in spring, good autumn color	Moist to Well Drained	Sun/Shade
<u>Japanese Spirea</u>	<i>Spirea japonica</i> <i>Spirea x bumalda</i>	1,2,3	‘Anthony Waterer’ ‘Goldflame’ ‘Shirobana’ ‘Gold Mound’	2-4 x 2-4	Pink flowers in summer. Some varieties have golden foliage	Well Drained	Sun to Light Shade
<u>‘Snowmound’ Spirea</u>	<i>Spirea nipponica</i> ‘Snowmound’	1,2,3		3-5 x 4-5	White flowers in spring, bluish foliage	Well Drained	Sun to Light Shade

Recommended Varieties

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## ***Native Plants\****

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## **Water Use Zones**

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

- *Water Wise Use in Landscaping*  
[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)
- *How to Plan and Design a Water Wise Use Landscape*  
[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

## **Drought Tolerant Plants**

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

## **Exposure**

Exposure refers to the amount of sunlight a site receives as follows:

- **Full sun** indicates a site that receives at least 8hrs of direct sun each day.
- **Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.
- **Part Shade** indicates a site that is shaded for half the day by a dense shade such as that cast by buildings or shade trees.
- **Full Shade** indicates a site that is in shade all day.

## **Soil**

Soil refers to soil condition at the site as follows:

- **Wet** indicates a site that stays moist most of the time and receives periodic flooding.
- **Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.
- **Well Drained** indicates a site where water drains from the surface and rarely stands.
- **Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

Prepared by:

*Charlotte Glen, Horticulture Agent*

*North Carolina Cooperative Extension – Pender County Center*



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# SMALL TREES – 10' to 30' Tall

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #2

Underlined plants are extremely drought-tolerant once established

\*Indicates a plant native to SE USA

### DECIDUOUS TREES

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Flowers/Fruit/Fall Color	Height/Spread (ft)	Growth Rate	Soil	Exposure
Southern Sugar Maple*	<i>Acer barbatum</i>	1,2,3		Yellow and Orange Fall Color	20-25/ 15-20	Medium	Moist to Well Drained	Sun to Light Shade
<u>Trident Maple</u>	<i>Acer buergerianum</i>	1,2,3		Yellow, Orange and Red Fall Color	20-25/ 10-15	Medium	Well Drained	Sun
Japanese Maple	<i>Acer palmatum</i>	1,2	Many Available	Red Fall Color	15-25/ 10-20	Slow	Well Drained	Sun to Part Shade
Red Buckeye*	<i>Aesculus pavia</i>	1,2		Red flowers in Spring	10-20/ 10-15	Slow	Moist to Well Drained	Sun to Part Shade
Serviceberry*	<i>Amelanchier arborea</i>	1,2	'Autumn Brilliance'	White flowers in Spring, Orange Fall Color	20-25/ 10-15	Medium	Moist to Well Drained	Sun to Part Shade
Pawpaw*	<i>Asimina triloba</i>	1,2		Edible Fruit in Fall	15-20/ 10-15	Medium	Moist to Well Drained	Sun to Part Shade
Ironwood*	<i>Carpinus caroliniana</i>	1,2		Interesting Bark	20-30/ 15-25	Slow	Wet to Well Drained	Sun to Part Shade
<u>Redbud*</u>	<i>Cercis canadensis</i>	1,2,3	'Forest Pansy' 'Texas White' 'Oklahoma'	Purple or White Flowers in Spring	20-30/ 20-25	Medium	Moist to Well Drained	Sun to Part Shade
<u>Chinese Fringetree</u>	<i>Chionanthus retusus</i>	1,2,3		White Flowers in Spring	15-25/ 15-25	Slow	Well Drained	Sun to Part Shade
Fringe Tree*	<i>Chionanthus virginicus</i>	1,2		White Flowers in Spring	10-20/ 15-20	Slow to Medium	Moist to Well Drained	Sun to Part Shade
Flowering Dogwood*	<i>Cornus florida</i>	1,2	'Cloud 9' 'Cherokee Chief' 'Cherokee Princess'	White or Pink Flowers in Spring, Burgundy Fall Color	15-25/ 10-20	Slow to Medium	Moist to Well Drained	Sun to Part Shade

## Deciduous Trees— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Flowers/Fruit/ Fall Color	Height/ Spread (ft)	Growth Rate	Soil	Exposure
Kousa Dogwood	<i>Cornus kousa</i>	1,2		White Flowers in Spring	20-30/ 20-30	Slow to Medium	Well Drained	Sun to Light Shade
Washington Hawthorn*	<i>Crataegus phaenopyrum</i>	1,2,3		White Flowers in Spring, Red Fruit in Fall, Thorny	25-30/ 20-25	Medium	Moist to Well Drained	Sun to Light Shade
Carolina Silverbell*	<i>Halesia tetraptera</i>	1,2,3		White Flowers in Spring	20-30/ 15-20	Medium	Moist to Well Drained	Sun to Part Shade
Possumhaw*	<i>Ilex decidua</i>	1,2,3	‘Warren’s Red’ ‘Council Fire’	Red berries in Fall and Winter	15-20/ 10-15	Medium	Moist to Well Drained	Sun to Light Shade
Crape Myrtle	<i>Lagerstroemia</i> hybrids	1,2,3	Many Available— Hybrid varieties are preferable	Flowers in summer, color depending on variety.	15-30/ 10-25 Depending on Variety	Fast	Well Drained	Sun
Star Magnolia	<i>Magnolia stellata</i>	1,2,3		White or Pink Flowers in Spring	15-20/ 10-15	Slow	Well Drained	Sun to Light Shade
Saucer Magnolia	<i>Magnolia x soulangiana</i>	1,2,3		Pink Flowers in Spring	20-30/ 15-25	Medium	Well Drained	Sun to Light Shade
Sourwood*	<i>Oxydendrum arboreum</i>	1,2,3		White Flowers in Summer, Red Fall Color	25-30/ 15-20	Slow	Well Drained	Sun to Part Shade
‘Okame’ Cherry ‘Dreamcatcher’ Cherry	<i>Prunus campanulata</i> hybrids	1,2,3		Pink Flowers in Spring	20-30/ 15-20	Medium	Well Drained	Sun to Light Shade
Japanese Flowering Apricot	<i>Prunus mume</i>	1,2	‘Kobai’ ‘Peggy Clarke’	Pink, Red, or White Flowers in Winter	15-25/ 15-25	Medium	Well Drained	Sun to Light Shade
Japanese Flowering Cherry	<i>Prunus serrulata</i>	1,2	‘Kwanzan’	Pink Flowers in Spring	20-30/ 20-30	Medium	Well Drained	Sun to Light Shade
Higan Cherry	<i>Prunus subhirtella</i>	1,2	‘Autumnalis’	Pink Flowers in Spring and Fall	20-30/ 15-25	Medium	Well Drained	Sun to Light Shade
Yoshino Cherry	<i>Prunus x yedoensis</i>	1,2		Light Pink Flowers in Spring	15-25/ 15-25	Medium	Well Drained	Sun to Light Shade
Japanese Snowbell	<i>Styrax japonicus</i>	1,2	‘Emerald Pagoda’ ‘Pink Chimes’	W or P Flowers in Spring	20-30/ 20-30	Medium	Well Drained	Sun to Part Shade
Blackhaw Viburnum*	<i>Viburnum prunifolium</i>	1,2		White Flowers in Spring, Edible Black Fruit in Fall	10-20/ 10-15	Medium	Moist to Well Drained	Sun to Part Shade
Chastetree	<i>Vitex agnus-castus</i>	1,2,3	‘Shoal Creek’	Pink, or Lavender-Blue Flowers in	15-20/ 10-15	Medium	Well Drained	Sun

				Summer				
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## EVERGREEN TREES

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Flowers/Fruit/ Fall Color	Height/ Spread (ft)	Growth Rate	Soil	Exposure
Loquat	<i>Eriobotrya japonica</i>	1,2,3		Fragrant White Flowers in Fall. Edible Fruit in Spring	15-20/ 15-20	Medium	Well Drained	Sun to Light Shade
Lusterleaf Holly	<i>Ilex latifolia</i>	1,2,3		Red Berries in Fall/Winter	20-25/ 15-20	Medium	Well Drained	Sun to Part Shade
American Holly*	<i>Ilex opaca</i>	1,2,3		Red Berries in Fall/Winter	20-30/ 15-20	Slow	Moist to Well Drained	Sun to Part Shade
<u>Yaupon*</u>	<i>Ilex vomitoria</i>	1,2,3	'Hoskin's Shadow' 'Kathy Ann' 'Katherine'	Red, Orange, or Yellow Berries in Fall/Winter	15-20/ 10-15	Medium to Fast	Moist to Xeric	Sun to Light Shade
Topel Holly*	<i>Ilex x attenuata</i>	1,2,3	'Savannah' 'Fosters #2' 'East Palatka' 'Greenleaf'	Red Berries in Fall/Winter	20-30/ 10-15	Medium	Moist to Well Drained	Sun to Part Shade
<u>'Nellie Stevens' Holly</u>	<i>Ilex x 'Nellie R. Stevens'</i>	1,2,3		Red Berries in Fall/Winter	15-25/ 10-15	Medium	Moist to Well Drained	Sun to Part Shade
Red Holly	<i>Ilex sp.</i>	1,2,3	'Oakleaf' 'Cardinal' 'Robin' 'Liberty' 'Patriot'	Maroon new growth	10-15/ 8-10	Medium	Moist to Well Drained	Sun to Part Shade
'Little Gem' Magnolia*	<i>Magnolia grandiflora</i> 'Little Gem'	1,2,3		Fragrant White Flowers in Summer	20-25/ 10-15	Slow to Medium	Moist to Well Drained	Sun to Part Shade
Sweet Bay*	<i>Magnolia virginiana</i>	1,2		Fragrant White Flowers in Spring	20-30/ 10-20	Medium to Fast	Moist to Well Drained	Sun to Part Shade
<u>Waxmyrtle*</u>	<i>Myrica cerifera</i>	1,2,3		Blue-Black Berries on Female Plants in Winter	10-20/ 10-20	Fast	Moist to Xeric	Sun to Light Shade
<u>Carolina Cherrylaurel*</u>	<i>Prunus caroliniana</i>	1,2,3		White Flowers in Spring	20-30/ 15-20	Fast	Well Drained to Xeric	Sun to Light Shade
Florida Anise Tree	<i>Illicium floridanum</i>	1,2,3	'Aztec Fire' 'Halley's Comet' 'Shady Lady' (variegated)	Maroon or light pink flowers	10-15/ 10-15	Medium to Fast	Moist to Well-Drained	Shade

Anise Tree*	<i>Illicium parviflorum</i>	1,2,3		Insignificant Flowers in Spring	10-15/ 10-15	Fast	Moist to Well Drained	Sun to Part Shade
Palmetto Palm*	<i>Sabal palmetto</i>	1,2,3		White Flowers in Summer	10-30/ 10-15	Slow	Moist to Well Drained	Sun to Part Shade

## Recommended Varieties

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## Native Plants\*

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## Water Use Zones

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

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- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

*How to Plan and Design a Water Wise Use Landscape*

- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

## Drought Tolerant Plants

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

## Exposure

Exposure refers to the amount of sunlight a site receives as follows:

- **Full sun** indicates a site that receives at least 8hrs of direct sun each day.
- **Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.
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## Soil

Soil refers to soil condition at the site as follows:

- **Wet** indicates a site that stays moist most of the time and receives periodic flooding.
- **Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.
- **Well Drained** indicates a site where water drains from the surface and rarely stands.
- **Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

Prepared by:

*Charlotte Glen, Horticulture Agent*

*North Carolina Cooperative Extension – Pender County Center*





# MEDIUM SHRUBS – 4' to 8' Tall

## *Recommended for Coastal Southeast Landscapes*

Brunswick County Cooperative Extension

Ornamental Fact Sheet #6

Underlined plants are extremely drought-tolerant once established      \*Indicates a plant native to SE USA

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
<u>Abelia</u>	<i>Abelia x grandiflora</i>	1,2,3		4-8 x 4-6	Small white flowers in summer and fall, attracts butterflies	Well Drained	Sun to Part Shade
Japanese Aucuba	<i>Aucuba japonica</i>	1,2		5-8 x 4-6	Large, thick leaves. Some varieties spotted in gold	Well Drained	Part to Full Shade
<u>Wintergreen Barberry</u>	<i>Berberis julianae</i>	1,2,3		6-8 x 6-8	Yellow flowers in spring, leaves turn bronze to burgundy in winter	Well Drained	Sun
<u>Bottlebrush</u>	<i>Callistemon rigidus</i>	1,2,3	'Woodlander's Hardy'	5-6 x 5-6	Unusual red flowers in spring	Well Drained	Sun
Japanese Camellia	<i>Camellia japonica</i>	1,2	Many Available	6-12 x 4-8	Red, Pink, White or Rose flowers in winter and early spring	Well Drained	Light to Part Shade
Sasanqua Camellia	<i>Camellia sasanqua</i>	1,2	Many Available	6-10 x 4-8	Red, White, Pink or Rose flowers in fall and winter	Well Drained	Light to Part Shade
Dwarf Hinoki Cypress	<i>Chamaecyparis obtusa</i> 'Nana Gracilis'	1,2		4-6 x 3-4	Unusual foliage texture, often seen in Japanese Gardens	Well Drained	Sun to Part Shade
<u>Mediterranean Fan Palm</u>	<i>Chamaerops humilis</i>	1,2,3		5-6 x 5-6	Beautiful texture, very slow growing	Well Drained	Sun to Light Shade
King Sago Emperor Sago	<i>Cycas revoluta</i> <i>Cycas taitungensis</i>	1,2		4-8 x 6 4-6 x 10	Unique textural effect, both are slow growing palm like plants	Well Drained	Sun to Part Shade
Fatsia	<i>Fatsia japonica</i>	1,2		6-8 x 6-8	Large, glossy lobed leaves give a tropical effect	Well Drained	Part to Full Shade
<u>Pineapple Guava</u>	<i>Feijoa sellowiana</i>	1,2,3		6-10 x 5-8	Pink and crimson flowers in spring, gray foliage	Well Drained	Sun

Evergreen Shrubs— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
Gardenia	<i>Gardenia jasminoides</i>	1,2	'August Beauty' 'Frostproof'	4-8 x 4-8	Extremely fragrant white flowers in summer, glossy green leaves	Well Drained	Sun to Light Shade
Chinese Holly	<i>Ilex cornuta</i>	1,2,3	'Dwarf Burford'	5-7 x 6-8	Glossy green leaves, red berries in fall and winter	Well Drained	Sun to Light Shade
Inkerry Holly*	<i>Ilex glabra</i>	1,2,3	'Shamrock'	5-8 x 5-8	Small, dark green leaves, similar to boxwood	Moist to Well Drained	Sun to Light Shade
Chinese Juniper	<i>Juniperus chinensis</i>	2,3	'Sea Green'	4-6 x 6-8	Fountain like, arching branches, mint green foliage	Well Drained to Xeric	Sun
Japanese Privet	<i>Ligustrum japonicum</i>	1,2,3	'Recurvifolium' 'East Bay' 'Lake Tresca'	5-6 x 4-6	Tough evergreen shrub, dark green glossy foliage	Well Drained	Sun to Light Shade
Loropetalum	<i>Loropetalum chinense</i>	1,2	'Ruby' 'Burgundy'	4-6 x 4-6 6-8 x 6-8	Hot pink fringy flowers in spring, burgundy foliage throughout the season	Well Drained	Sun to Light Shade
Leatherleaf Mahonia	<i>Mahonia bealei</i>	1,2,3		6-8 x 3-4	Upright shrub with coarse spiny leaves. Very shade tolerant	Well Drained	Part to Full Shade
Banana Shrub	<i>Magnolia figo</i>	1,2,3		6-8 x 6-8	Glossy dark green leaves. Small cream colored, banana scented flowers in spring	Well Drained	Sun to Part Shade
Nandina, Heavenly Bamboo	<i>Nandina domestica</i>	1,2,3		5-8 x 3-4	Graceful foliage, large clusters of red berries in fall	Well Drained	Sun to Part Shade
Oleander	<i>Nerium oleander</i>	1,2,3	Several Available	6-10 x 4-8	Red, white, pink or salmon flowers in summer. All parts of this plant are poisonous	Well Drained to Xeric	Sun
Pittosporum	<i>Pittosporum tobira</i>	1,2,3	'Louisiana Compact' 'Variegata'	6-8 x 6-8	Small white fragrant flowers in spring	Well Drained to Xeric	Sun to Part Shade
Firethorn, Pyracantha	<i>Pyracantha coccinea</i> <i>Pyracantha koidzumii</i>	1,2,3	Many Available	6-10 x 4-8	Clusters of red or orange berries in fall and winter	Well Drained	Sun to Light Shade
Needle Palm	<i>Rhapidophyllum hystrix</i>	1,2,3		5-10 x 5-10	Slow growing, hardy palm	Well Drained	Sun to Part Shade
Azaleas - Southern Indica Varieties	<i>Rhododendron</i>	1,2	'Formosa' 'G.G.Gerbing' 'George Tabor'	6-8 x 6-8	Large growing, tough azaleas with white, magenta or pink flowers	Well Drained	Light to Part Shade
Rosemary	<i>Rosmarinus officinalis</i>	2,3		3-6 x 3-6	Blue flowers in spring, culinary herb	Well Drained to Xeric	Sun

Evergreen Shrubs— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
Dwarf Palmetto*	<i>Sabal minor</i>	1,2,3		4-6 x 4-6	Hardy, shrub like palm	Moist to Well Drained	Sun to Part Shade
<u>Sandwanka Viburnum</u>	<i>Viburnum suspensum</i>	1,2,3		4-8 x 4-8	Leathery, dark green foliage. White flowers in spring	Well Drained to Xeric	Sun
Tinus Viburnum, Laurustinus	<i>Viburnum tinus</i>	1,2	‘Eve Price’ ‘Compactum’ ‘Spring Bouquet’	5-7 x 5-7	Dark green foliage, pink flower buds open to white in spring	Well Drained	Sun to Part Shade

DECIDUOUS SHRUBS

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
<u>‘Brilliant’ Chokeberry*</u>	<i>Aronia arbutifolia</i> ‘Brilliantissima’	1,2,3		6-8 x 6-8	White flowers in early spring, red berries persist all winter, excellent fall color	Moist to Well Drained	Sun to Light Shade
Butterfly Bush	<i>Buddleia davidii</i>	1,2,3	Many Available	4-8 x 4-6	White, Purple, Lavender, Rose, or yellow flowers in summer. Extremely fragrant, attracts lots of butterflies	Well Drained	Sun to Light Shade
American Beautyberry*	<i>Callicarpa americana</i>	1,2,3		4-6 x 4-6	Vibrant purple berries in fall, attracts songbirds	Moist to Well Drained	Sun to Part Shade
Sweetshrub, Carolina Allspice*	<i>Calycanthus floridus</i>	1,2,3	‘Michael Lindsey’	6-8 x 6-8	Very fragrant maroon flowers in late spring	Moist to Well Drained	Sun to Part Shade
Clethra, Sweet Pepperbush*	<i>Clethra alnifolia</i>	1,2,3	‘Ruby Spice’ ‘Chattanooga’	4-8 x 3-6	Extremely fragrant white or pink in summer. Yellow fall color	Moist to Well Drained	Sun to Part Shade
Dwarf Burning Bush	<i>Euonymous alatus</i> ‘Compactus’	1,2,3		6-8 x 6-8	Excellent red fall color	Well Drained	Sun
Bigleaf Hydrangea	<i>Hydrangea macrophylla</i>	1,2	Many Varieties Available	4-6 x 4-8	Large clusters of pink or blue flowers in summer. Flower color will vary depending on soil pH	Well Drained	Light to Part Shade
Oakleaf Hydrangea*	<i>Hydrangea quercifolia</i>	1,2	‘Alice’	6-8 x 6-8	Large panicles of white flowers in summer, excellent fall color	Moist to Well Drained	Sun to Part Shade
Virginia Sweetspire, Itea*	<i>Itea virginiana</i>	1,2,3	‘Henry’s Garnet’	4-6 x 4-8	White flower s in spring. Excellent fall color	Moist to Well Drained	Sun to Part Shade

## Deciduous Shrubs—continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft.)	Ornamental Characteristics	Soil	Exposure
Japanese Kerria	<i>Kerria japonica</i>	1,2		4-6 x 4-6	Bright yellow flowers in springs, green stems in winter	Well Drained	Light to Full Shade
<u>Double Reeves Spirea</u>	<i>Spirea cantoniensis</i> 'Lanceata'	1,2,3		4-6 x 4-6	Abundant white flowers in early spring	Well Drained	Sun
<u>Vanhoutte Spirea</u>	<i>Spirea x vanhouttei</i>	1,2,3		6-8 x 8-10	Abundant white flowers in early spring	Well Drained	Sun
Possumhaw Viburnum*	<i>Viburnum nudum</i>	1,2	'Winterthur'	6-8 x 6-8	White flowers in spring followed by pink and blue berries in fall. Good fall color	Moist to Well Drained	Sun to Part Shade
'Mohawk' Viburnum	<i>Viburnum x burkwoodii</i> 'Mohawk'	1,2		6-8 x 6-8	Red buds open to pink blossoms, very fragrant	Well Drained	Sun to Part Shade
Weigela	<i>Weigela florida</i>	1,2	'Wine and Roses'	4-6 x 4-6	Cherry pink flowers in spring, purple foliage all season	Well Drained	Sun to Light Shade

## Exposure

Exposure refers to the amount of sunlight a site receives as follows:

- **Full sun** indicates a site that receives at least 8hrs of direct sun each day.
- **Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.
- **Part Shade** indicates a site that is shaded for half the day by a dense shade such as that cast by buildings or shade trees.
- **Full Shade** indicates a site that is in shade all day.

## Soil

Soil refers to soil condition at the site as follows:

- **Wet** indicates a site that stays moist most of the time and receives periodic flooding.
- **Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.
- **Well Drained** indicates a site where water drains from the surface and rarely stands.
- **Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

## Water Use Zones

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

*Water Wise Use in Landscaping*

- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

*How to Plan and Design a Water Wise Use Landscape*

- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

## ***Native Plants\****

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## **Drought Tolerant Plants**

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

## **Recommended Varieties**

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## **Mature Size**

Mature sizes of all plants are given as height x width, though many may take several years to reach these dimensions. Mature size can vary depending on growing conditions.

Prerepared by:

*Charlotte Glen, Horticulture Agent*

*North Carolina Cooperative Extension – Pender County Center*

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# LARGE SHRUBS – Over 8' Tall

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #4

Underlined plants are extremely drought-tolerant once established

\*Indicates a plant native to SE USA

### EVERGREEN SHRUBS

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft)	Ornamental Characteristics	Soil	Exposure
Hedge Bamboo	<i>Bambusa multiplex</i>	1,2,3		15-20 x 6-10	Clump forming bamboo, interesting textural and vertical effect	Well Drained	Light to Part Shade
Pindo Palm, Jelly Palm	<i>Butia capitata</i>	1,2,3		10-15 x 10-15	Bluish palm with long arching leaves	Well Drained	Sun
Elaeagnus	<i>Elaeagnus pungens</i> <i>Elaeagnus x ebbingii</i>	2,3		10-15 x 10-15	Very tough, rapidly growing shrubs, tolerant of salt spray	Well Drained to Xeric	Sun to Part Shade
Chinese Holly	<i>Ilex cornuta</i>	1,2,3	'Burford' 'Fineline' 'Needlepoint'	8-15 x 6-12	Dark green glossy leaves, red berries in fall and winter	Well Drained	Sun to Light Shade
Yaupon Holly*	<i>Ilex vomitoria</i>	1,2,3		8-15 x 6-10	Translucent red or orange berries in fall and winter	Moist to Xeric	Sun to Part Shade
'Nellie Stevens' Holly	<i>Ilex</i> x 'Nellie R. Stevens'	1,2,3		15-25 x 10-15	Red Berries in Fall/Winter	Moist to Well Drained	Sun to Part Shade
Anise Tree*	<i>Illicium parviflorum</i>	1,2,3		8-12 x 6-10	Large, olive green leaves. Vigorous, evergreen shrub	Moist to Well Drained	Sun to Part Shade
Chinese Juniper	<i>Juniperus chinensis</i>	2,3	'Spartan' 'Hetzii Columnaris'	12-20 x 3-6	Upright, columnar shrubs with bright green needles	Well Drained to Xeric	Sun
Hollywood Juniper	<i>Juniperus chinensis</i> 'Kaizuka' also known as 'Torulosa'	2,3		15-25 x 8-15	Branches grow in upright twisting pattern, resulting in architectural, Japanese effect	Well Drained to Xeric	Sun
Loropetalum	<i>Loropetalum chinensis</i>	1,2	'Zhuzhou Fuchsia'	10-15 x 8-12	Hot pink fringy flower in early spring, maroon-purple foliage	Well Drained	Sun to Light Shade

Evergreen Shrubs— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft)	Ornamental Characteristics	Soil	Exposure
Southern Waxmyrtle*	<i>Myrica cerifera</i>	1,2,3		8-15 x 8-15	Tough, fast growing shrub with olive green foliage	Moist to Xeric	Sun to Part Shade
Tea Olive, Osmanthus	<i>Osmanthus fragrans</i> <i>Osmanthus x fortunei</i>	1,2,3		10-15 x 10-15	Dark green foliage, exceptionally sweetly scented white flowers in fall	Well Drained	Sun to Part Shade
Chinese Podocarpus	<i>Podocarpus macrophyllus</i> var. <i>maki</i>	1,2		10-15 x 4-6	Dark green, narrow foliage, upright habit	Well Drained	Sun to Part Shade
‘Majestic Beauty’ Indian Hawthorn	<i>Rhaphiolepis umbellata</i> ‘Majestic Beauty’	1,2,3		8-10 x 8-10	Clusters of pink flowers in early summer	Well Drained	Sun
Cleyera	<i>Ternstroemia gymnanthera</i>	1,2		8-12 x 5-6	Very dark green, shiny leaves, upright shrub	Well Drained	Sun to Full Shade
‘Emerald’ Arborvitae*	<i>Thuja occidentalis</i> ‘Emerald’	1,2,3		10-15 x 3-4	Bright emerald green foliage held in vertical sprays, holds color in winter	Moist to Well Drained	Sun
‘Chindo’ Viburnum	<i>Viburnum awabuki</i> ‘Chindo’	1,2,3		10-15 x 6-8	Dark green, glossy leaves, upright habit	Well Drained	Sun to Part Shade

DECIDUOUS SHRUBS

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height x Spread (ft)	Ornamental Characteristics	Soil	Exposure
Flowering Quince	<i>Chaenomeles speciosa</i>	1,2,3		6-10 x 6-10	Early spring flowers in shades of red, pink, orange and white. Dwarf varieties are available	Well Drained	Sun to Light Shade
Forsythia	<i>Forsythia x intermedia</i>	1,2,3	‘Lynwood Gold’	8-12 x 8-12	Bright yellow flowers in early spring	Well Drained	Sun to Light Shade
Rose of Sharon	<i>Hibiscus syriacus</i>	1,2,3	‘Aphrodite’, ‘Diana’, ‘Helene’, ‘Minerva’	8-12 x 6-10	White, purple, or pink flowers in summer	Well Drained	Sun
Winterberry*	<i>Ilex decidua</i>	1,2	‘Winter Red’	6-10 x 6-10	Branches covered in red berries in fall	Moist to Well Drained	Sun to Light Shade
Chinese Snowball Bush	<i>Viburnum macrocephalum</i>	1,2,3		12-15 x 10-15	Large, globe shaped clusters of white flowers in spring	Well Drained	Sun to Light Shade
Doublefile Viburnum	<i>Viburnum plicatum</i> var. <i>tomentosum</i>	1,2,3	‘Shasta’ ‘Mariesii’	8-10 x 8-10	Horizontal branches covered with white flowers in spring	Well Drained	Sun to Part Shade

## Native Plants\*

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## Water Use Zones

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

*Water Wise Use in Landscaping*

[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

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## Drought Tolerant Plants

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

## Recommended Varieties

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## Exposure

Exposure refers to the amount of sunlight a site receives as follows:

**Full sun** indicates a site that receives at least 8hrs of direct sun each day.

**Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.

**Part Shade** indicates a site that is shaded for half the day by a dense shade such as that cast by buildings or shade trees.

**Full Shade** indicates a site that is in shade all day.

## Soil

Soil refers to soil condition at the site as follows:

**Wet** indicates a site that stays moist most of the time and receives periodic flooding.

**Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.

**Well Drained** indicates a site where water drains from the surface and rarely stands.

**Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.



Prepared by:  
*Charlotte Glen, Horticulture Agent*  
*North Carolina Cooperative Extension – Pender County Center*



# LARGE TREES – Over 30' Tall

## *Recommended for Coastal Southeast Landscapes*

Underlined plants are extremely drought-tolerant once established      \*Indicates a plant native to SE USA

### DECIDUOUS TREES

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Ornamental Features	Height x Spread (ft)	Growth Rate	Soil	Exposure
Red Maple*	<i>Acer rubrum</i>	1,2	'October Glory' 'Red Sunset' 'Brandywine' 'Sun Valley'	O to R Fall Color	40-50 x 25-35	Medium	Moist to Well Drained	Sun to Light Shade
River Birch*	<i>Betula nigra</i>	1,2,3	'Heritage' 'Dura-heat'	White Bark	40-70 x 40-60	Fast	Moist to Well Drained	Sun
<u>Sugarberry*</u>	<i>Celtis laevigata</i>	1,2,3		Smooth Gray Bark	60-80 x 50-70	Medium to Fast	Moist to Well Drained	Sun
American Beech*	<i>Fagus grandifolia</i>	1,2,3		Smooth Gray Bark, Tan Leaves in Winter	50-70 x 40-60	Slow	Well Drained	Sun
<u>Ginkgo, Maidenhair Tree</u>	<i>Ginkgo biloba</i>	1,2,3	'Autumn Gold' 'Princeton Sentry'	Y Fall Color	50-70 x 30-40	Slow	Well Drained	Sun
<u>Japanese Crape Myrtle</u>	<i>Lagerstroemia fauriei</i>	1,2,3	'Fantasy' 'Townhouse'	Dramatic Cinnamon Bark, Small W Flowers in Summer	30-40 x 25-35	Medium	Well Drained	Sun
Dawn Redwood	<i>Metasequoia glyptostroboides</i>	1,2		Ferny Foliage, Rusty Fall Color	60-100 x 20-25	Fast	Moist to Well Drained	Sun
Black Gum*	<i>Nyssa sylvatica</i>	1,2,3		R Fall Color	30-50 x 20-30	Slow to Medium	Moist to Well Drained	Sun
Overcup Oak	<i>Quercus lyrata</i>	1,2,3		Withstands flooding	40-60 x 30-50	Medium	Moist to Well Drained	Sun
<u>Water Oak*</u>	<i>Quercus nigra</i>	1,2,3		Very Tough	50-80 x 30-60	Medium to Fast	Moist to Well Drained	Sun

## Deciduous Trees— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Ornamental Features	Height x Spread (ft)	Growth Rate	Soil	Exposure
<u>Water Oak*</u>	<i>Quercus nigra</i>	1,2,3		Very Tough	50-80 x 30-60	Medium to Fast	Moist to Well Drained	Sun
Nuttall Oak*	<i>Quercus nutallii</i>	1,2,3		R Fall Color	40-60 x 30-50	Medium	Moist to Well Drained	Sun
<u>Willow Oak*</u>	<i>Quercus phellos</i>	1,2,3		Dark Green Foliage, Fine Texture	80-100 x 40-50	Medium	Moist to Well Drained	Sun
Pondcypress*	<i>Taxodium ascendens</i>	1,2,3		Unusual Texture	60-80 x 15-20	Medium	Moist to Well Drained	Sun
Baldcypress*	<i>Taxodium distichum</i>	1,2,3		Lacey Foliage	50-70 x 20-30	Medium	Wet to Well Drained	Sun
<u>Lacebark Elm</u>	<i>Ulmus parvifolia</i>	1,2,3	'Bosque', 'Allee', 'Athena'	Bark Flakes in Patterns Exposing White, Brown, Green	40-50 x 30-40	Fast	Well Drained	Sun

## EVERGREEN TREES

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Ornamental Features	Height x Spread (ft)	Growth Rate	Soil	Exposure
Deodar Cedar	<i>Cedrus deodora</i>	1,2,3		Grayish to Bluish Needles, Interesting Texture and Form	50-70 x 50-70	Medium	Well Drained	Sun
Atlantic White Cedar*	<i>Chamaecyparis thyoides</i>	1,2,3		Evergreen Needles	40-60 x 10-20	Medium	Moist to Well Drained	Sun
Japanese Cedar	<i>Cryptomeria japonica</i>	1,2,3	'Yoshino', 'Radicans'	Interesting Texture	40-60 x 20-30	Medium	Moist to Well Drained	Sun
<u>Eastern Red Cedar*</u>	<i>Juniperus virginiana</i>	2,3		Extremely Tough	30-50 x 10-20	Medium	Well Drained to Xeric	Sun
<u>Southern Magnolia*</u>	<i>Magnolia grandiflora</i>	1,2	'Alta', 'Hasse', 'D.D. Blanchard', 'Claudia Wannamaker'	Large, Fragrant W Flowers in Summer	60-80 x 30-50	Slow to Medium	Well Drained	Sun to Part Shade
<u>Longleaf Pine*</u>	<i>Pinus palustris</i>	1,2,3		Long Needles, Large Pinecones	50-60 x 15-20	Medium	Well Drained	Sun

## Evergreen Trees— continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Ornamental Features	Height x Spread (ft)	Growth Rate	Soil	Exposure
Loblolly Pine*	<i>Pinus taeda</i>	1,2,3		Fast Growth	60-90 x 20-30	Fast	Moist to Well Drained	Sun
Laurel Oak*	<i>Quercus hemisphaerica</i>	1,2,3	‘Darlington’	Small Leaves, Fine Texture	40-60 x 30-40	Medium	Well Drained	Sun
<u>Live Oak*</u>	<i>Quercus virginiana</i>	1,2,3		Wide Spreading, Drooping Branches	60-80 x 60-80	Medium	Well Drained to Xeric	Sun

### **Native Plants\***

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### **Water Use Zones**

- Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:
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### **Drought Tolerant Plants**

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### **Mature Size**

Mature sizes of all plants are given as height x width, though many may take several years to reach these dimensions. Mature size can vary depending on growing conditions.

### **Recommended Varieties**

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Exposure refers to the amount of sunlight a site receives as follows:

- **Ful sun** indicates a site that receives at least 8hrs of direct sun each day.
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### **Soil**

Soil refers to soil condition at the site as follows:

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- **Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water

## FOR MORE INFORMATION

### WEBSITE

For more detailed information about each plant and to see images, visit the **Plant Fact Sheets** on the **NC Cooperative Extension Consumer Horticulture website**:

<http://www.ces.ncsu.edu/depts/hort/consumer/index.html>

### VISIT US

Any of these plants growing in a landscape setting, visit the Brunswick Botanical Garden at the Brunswick Government Complex in Bolivia, N.C. The garden is open seven days a week during daylight hours and is free to visit. To find out more, visit <http://brunswick.ces.ncsu.edu/> or call 910.253.2610.

### PLANT INFORMATION CLINIC

If you have questions about plant selection and maintenance, lawn care, vegetable gardening or plant pest problems, call the **Brunswick County Master Gardener Hotline**. The hotline is staffed by trained Master Gardener volunteers and Extension Horticulture Agents. Call direct at 253-2602 or stop by during normal office hours. The **Brunswick Cooperative Extension Center** is open 8:30 am to 5pm, Monday – Friday and is located at 25 Referendum Drive, Building N, Bolivia, N.C. 28422. Our mailing address is P.O. Box 109, Bolivia, N.C. 28422.

Prepared by:

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# GROUNDCOVERS

## *Recommended for Coastal Southeast Landscapes*

Brunswick County Cooperative Extension

Ornamental Fact Sheet #5

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Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height (in)	Type of Plant	Growth Rate	Exposure	Soil Conditions
<u>Beach Wormwood*</u>	<i>Artemisia stelleriana</i>	2,3	'Silver Brocade'	6 – 12	Evergreen Perennial	Moderate	Full Sun	Well Drained to Xeric
<u>Hardy Ice Plant</u>	<i>Delosperma cooperi</i> <i>Delosperma nubigenum</i>	2,3		4 – 6	Semi-Evergreen Perennial	Moderate	Full Sun	Well Drained to Xeric
<u>Cheddar Pinks,</u> <u>Dianthus</u>	<i>Dianthus gratianopolitanus</i> and hybrids of this species	2,3	'Bath's Pink' 'Firewitch' 'Greystone'	4 – 8	Evergreen Perennial	Moderate	Full Sun	Well Drained
<u>Weeping Love Grass</u>	<i>Eragrostis curvula</i>	2,3		24 – 36	Clumping Grass	Moderate	Full Sun	Well Drained to Xeric
<u>Daylily</u>	<i>Hemerocallis</i> hybrids	1,2,3	Many Available	18 – 48	Herbaceous Perennial	Moderate	Full Sun to Part Shade	Moist to Well Drained
Atlantic St. John's Wort*	<i>Hypericum reductum</i>	2,3		8 – 12	Semi-Evergreen Shrub	Moderate	Full Sun	Well Drained to Xeric
<u>Candytuft</u>	<i>Iberis sempervirens</i>	1,2,3		6 – 8	Evergreen Perennial	Moderate	Full Sun to Light Shade	Well Drained
<u>Shore Juniper</u>	<i>Juniperus conferta</i>	2,3	'Blue Pacific'	12-18	Evergreen Conifer	Fast	Full Sun	Well Drained to Xeric
<u>Creeping Juniper*</u>	<i>Juniperus horizontalis</i>	2,3	'Bar Harbor' 'Blue Rug'	10 – 12	Evergreen Conifer	Moderate	Full Sun	Well Drained to Xeric
<u>Andorra Juniper</u>	<i>Juniperus horizontalis</i> 'Plumosa'	2,3		24	Evergreen Conifer	Moderate	Full Sun	Well Drained to Xeric

Groundcovers for Sun—continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height (in)	Type of Plant	Growth Rate	Exposure	Soil Conditions
<u>Blue Rug Juniper</u>	<i>Juniperus horizontalis</i> 'Wiltonii'	2,3		4-6	Evergreen Conifer	Moderate	Full Sun	Well Drained to Xeric
<u>Dwarf Nandina</u>	<i>Nandina domestica</i>	1,2,3	'Harbor Belle' 'Harbor Dwarf' 'San Gabriel'	24 – 36	Evergreen Shrub	Moderate	Full Sun	Well Drained
<u>Moss Phlox or Thrift*</u>	<i>Phlox subulata</i>	1,2,3	Many	4 - 6	Evergreen Perennial	Moderate	Full Sun to Light Shade	Well Drained
<u>Orange Coneflower*</u>	<i>Rudbeckia fulgida</i>	1,2,3	'Goldsturm'	24 – 30	Semi-Evergreen Perennial	Moderate	Full Sun to Part Shade	Moist to Well Drained
<u>Stonecrops</u>	<i>Sedum reflexum</i> <i>Sedum album</i> <i>Sedum tetractinum</i>	1,2,3	'Blue Spruce' 'Murale'	4 – 6	Evergreen Perennial	Moderate	Full Sun to Light Shade	Well Drained
<u>Wooly Stemodia*</u>	<i>Stemodia tomentosa</i>	1,2,3		4 – 6	Evergreen Perennial	Moderate	Full Sun	Well Drained
Prostrate Germander	<i>Teucrium chamaedrys</i>	1,2,3	'Prostratum' 'Nanum'	6 – 8	Evergreen Perennial	Moderate	Full Sun	Well Drained

GROUNDCOVERS FOR SHADE

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height (in)	Type of Plant	Growth Rate	Exposure	Soil Conditions
Carpet Bugle	<i>Ajuga reptans</i>	1,2		4 - 8	Evergreen Perennial	Moderate	Part to Full Shade	Moist to Well Drained
<u>Pussytoes*</u>	<i>Antennaria plantaginifolia</i>	1,2,3		4 - 8	Evergreen Perennial	Moderate	Light to Full Shade	Well Drained
Japanese Ardisia	<i>Ardisia japonica</i>	1,2	'Chirimen'	4 - 8	Evergreen Perennial	Moderate	Part to Full Shade	Well Drained
Japanese Painted Fern	<i>Athyrium nipponicum</i>	1,2		12 - 18	Herbaceous Fern	Moderate	Light to Full Shade	Moist to Well Drained
Green and Gold*	<i>Chrysogonum virginianum</i>	1,2		6 - 8	Semi-Evergreen Perennial	Moderate	Light to Part Shade	Moist to Well Drained
Holly Fern	<i>Cyrtomium falcatum</i>	1,2,3		24 - 30	Evergreen Fern	Moderate	Part to Full Shade	Well Drained
Autumn Fern	<i>Dryopteris erythrosa</i>	1,2		18 - 24	Evergreen Fern	Moderate	Part to Full Shade	Moist to Well Drained

Groundcovers for Shade, continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height (in)	Type of Plant	Growth Rate	Exposure	Soil Conditions
Dwarf Gardenia	<i>Gardenia jasminoides</i> 'Radicans'	1,2		12 - 24	Evergreen Shrub	Moderate	Light to Part Shade	Well Drained
<u>Algerian Ivy</u>	<i>Hedera canariensis</i>	1,2,3		12	Evergreen Vine	Moderate to Fast	Light to Full Shade	Well Drained
<u>English Ivy</u>	<i>Hedera helix</i>	1,2,3		6-12	Evergreen Vine	Slow to Moderate	Part to Full Shade	Well Drained
American Alumroot*	<i>Heuchera americana</i>	1,2,3	Many Available	6 - 12	Semi-Evergreen Perennial	Moderate	Light to Part Shade	Well Drained
<u>Hosta</u>	<i>Hosta</i> species and hybrids	1,2,3	Many Available	12 - 24	Herbaceous Perennial	Moderate	Part to Full Shade	Well Drained
<u>Liriope</u>	<i>Liriope muscarii</i>	1,2,3	Many Available	12 - 18	Evergreen Perennial	Moderate	Light to Full Shade	Moist to Well Drained
<u>Spreading Liriope</u>	<i>Liriope spicata</i>	1,2,3		8-15	Evergreen Perennial	Moderate	Light to Full Shade	Moist to Well Drained
Creeping Jenny	<i>Lysimachia nummularia</i>	1,2	'Aurea'	2	Semi-Evergreen Perennial	Fast	Light to Full Shade	Moist to Well Drained
<u>Mondograss</u>	<i>Ophiopogon japonicus</i>	1,2		6 - 10	Evergreen Perennial	Slow to Moderate	Part to Full Shade	Well Drained
Christmas Fern*	<i>Polystichum acrostichoides</i>	1,2		12 - 18	Evergreen Fern	Moderate	Part to Full Shade	Moist to Well Drained
Creeping Raspberry	<i>Rubus calycinoides</i>	1,2		6 - 12	Evergreen Shrub	Moderate	Light to Part Shade	Well Drained
Sweetbox	<i>Sarcococca hookeriana</i> var. <i>humilis</i>	1,2		36	Evergreen Shrub	Moderate	Light to Full Shade	Well Drained
Strawberry Begonia	<i>Saxifraga stolonifera</i>	1,2		12	Evergreen Perennial	Fast	Light to Full Shade	Moist to Well Drained
<u>Asiatic or Star Jasmine</u>	<i>Trachelospermum asiaticum</i>	1,2,3		6 - 8	Evergreen Vine	Fast to Moderate	Light to Part Shade	Well Drained
<u>Common Periwinkle</u>	<i>Vinca minor</i>	1,2,3		5-6	Evergreen Vine	Fast	Light to Full Shade	Well Drained

**Many ornamental grasses, perennials and low growing shrubs will make good groundcovers when planted in mass. View those lists for more possibilities.**

## ***Native Plants\****

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## **Water Use Zones**

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

*Water Wise Use in Landscaping*

[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

*How to Plan and Design a Water Wise Use Landscape*

[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

## **Drought Tolerant Plants**

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

## **Recommended Varieties**

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## **Type of Plant**

Evergreen plants retain enough foliage to remain dense and full during winter.

Semi-evergreen plants retain at least half of their foliage through winter, but are not as dense as evergreens.

Herbaceous plants go dormant during winter, losing all of their foliage.

## **Soil**

Soil refers to soil condition at the site as follows:

**Wet** indicates a site that stays moist most of the time and receives periodic flooding.

**Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.

**Well Drained** indicates a site where water drains from the surface and rarely stands.

**Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

## **Exposure**

Exposure refers to the amount of sunlight a site receives as follows:

**Full sun** indicates a site that receives at least 8hrs of direct sun each day.

**Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.

**Part Shade** indicates a site that is shaded for half the day by a dense shade such as that cast by buildings or shade trees.

**Full Shade** indicates a site that is in shade all day.

Prepared by: Charlotte Glen, Horticulture Agent  
NC Cooperative Extension - Pender County Center





# PERENNIALS

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #9

Underlined plants are extremely drought-tolerant once established

\*Indicates a plant native to SE USA

### PERENNIALS FOR SHADE

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
Bear's Breeches	<i>Acanthus</i> species and hybrids	1,2	'Summer Beauty'	3 – 4 ft	Pu	Summer	Light to Part Shade	Moist to Well Drained
Carpet Bugle	<i>Ajuga reptans</i>	1,2		4 – 8 in	B,W,Pu	Spring	Light to Full Shade	Moist to Well Drained
Eastern Columbine*	<i>Aquilegia canadensis</i>	1,2,3		2-3 ft	R/Y	Spring	Light to Part Shade	Well Drained
Italian Arum	<i>Arum italicum</i>	1,2	'Pictum'	1 – 2 ft	Foliage	Winter	Light to Full Shade	Moist to Well Drained
<u>Cast Iron Plant</u>	<i>Aspidistra elatior</i>	1,2,3		2 – 3 ft	Foliage	Evergreen	Part to Full Shade	Well Drained
Japanese Painted Fern	<i>Athyrium nipponicum</i>	1,2		18 in	Foliage		Light to Full Shade	Moist to Well Drained
Hardy Begonia	<i>Begonia grandis</i>	1,2		15 in	P	Summer	Light to Full Shade	Well Drained
Hardy Orchid	<i>Bletilla striata</i>	1,2		8 - 12 in	P,W	Spring	Light to Part Shade	Well Drained
Green and Gold*	<i>Chrysogonum virginianum</i>	1,2		8 – 12 in	Y	Spring	Light to Full Shade	Moist to Well Drained
Holly Fern	<i>Cyrtomium falcatum</i>	1,2,3		18 – 24 in	Foliage	Evergreen	Part to Full Shade	Well Drained
Autumn Fern	<i>Dryopteris erythrosa</i>	1,2		18 – 24 in	Foliage	Evergreen	Part to Full Shade	Well Drained

Perennials for Shade - Continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
Southern Shield Fern*	<i>Dryopteris ludoviciana</i>	1,2		3 ft	Foliage		Part to Full Shade	Moist to Well Drained
Fairy Wings	<i>Epimedium x versicolor</i>	1,2		12 in	Y	Spring	Light to Full Shade	Well Drained
<u>Robb's Spurge</u>	<i>Euphorbia robbiae</i>	1,2,3		12 – 24 in	Y	Spring	Light to Part Shade	Well Drained
Lenten Rose	<i>Helleborus x hybridus</i>	1,2		12-15 in	W,P,L	Winter/Spring	Part to Full Shade	Well Drained
American Alumroot*	<i>Heuchera americana</i>	1,2,3	Many Available	8 – 12 in	W,P,R	Spring	Light to Full Shade	Well Drained
<u>Hosta</u>	<i>Hosta</i> species and hybrids	1,2,3		1-3 ft	Foliage	Spring/ Summer	Part to Full Shade	Well Drained
Leopard Plant	<i>Ligularia tussilaginea</i>	1,2		18 – 24 in	Y	Fall	Part to Full Shade	Moist to Well Drained
Creeping Jenny	<i>Lysimachia nummularia</i>	1,2	‘Aurea’	2 in	Foliage	Evergreen	Light to Full Shade	Moist to Well Drained
Woodland Phlox*	<i>Phlox divaricata</i>	1,2		8 – 12 in	B,W,L	Spring	Light to Part Shade	Moist to Well Drained
Variegated Solomon's Seal	<i>Polygonatum odoratum</i> ‘Variegatum’	1,2,3		18 – 24 in	W	Spring	Light to Full Shade	Moist to Well Drained
Christmas Fern*	<i>Polystichum acrostichiodes</i>	1,2		12 – 18 in	Foliage	Evergreen	Part to Full Shade	Moist to Well Drained
Tassel Fern	<i>Polystichum polyblepharum</i>	1,2		18 in	Foliage	Evergreen	Part to Full Shade	Moist to Well Drained
<u>Sacred Lily</u>	<i>Rhodea japonica</i>	1,2,3		12 – 24 in	Foliage	Evergreen	Light to Full Shade	Well Drained
Strawberry Begonia	<i>Saxifraga stolonifera</i>	1,2		12 in	W	Spring	Light to Full Shade	Moist to Well Drained
Arborvitae Fern	<i>Selaginella braunii</i>	1,2		12 in	Foliage	Evergreen	Part to Full Shade	Moist to Well Drained
Indian Pink*	<i>Spigelia marilandica</i>	1,2		12 – 18 in	R/Y	Spring	Light to Part Shade	Well Drained
Foam Flower*	<i>Tiarella</i> hybrids	1,2		12 in	W	Spring	Light to Part Shade	Well Drained
Toad Lily	<i>Tricyrtis formosana</i>	1,2		12 – 24 in	W/Pu/L	Fall	Light to Part Shade	Moist to Well Drained

## PERENNIALS FOR SUN

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
<u>Yarrow</u>	<i>Achillea millefolium</i>	1,2,3		2 - 3 ft	W,P,Y,O	Summer	Sun	Well Drained to Xeric
<u>Anise Hyssop</u>	<i>Agastache foeniculum</i>	1,2,3	'Blue Fortune'	2 – 3 ft	B	Summer	Sun	Well Drained
<u>Arkansas Blue Star*</u>	<i>Amsonia hubrichtii</i>	1,2,3		3 – 4 ft	B	Spring	Sun	Well Drained
Blue Star*	<i>Amsonia tabernaemontana</i>	1,2,3		3 – 4 ft	B	Spring	Sun to Part Shade	Moist to Well Drained
<u>Texas Firecracker*</u>	<i>Anisacanthus wrightii</i>	2,3		3 – 4 ft	R	Summer, Fall	Sun	Well Drained
<u>'Powis Castle' Artemisia</u>	<i>Artemisia</i> x 'Powis Castle'	2,3		2 – 3 ft	Foliage	Evergreen	Sun	Well Drained to Xeric
<u>Butterfly Weed*</u>	<i>Asclepias tuberosa</i>	1,2,3		1-2 ft	O,Y	Summer	Sun	Well Drained to Xeric
Swamp Milkweed*	<i>Asclepias incarnata</i>	1,2	'Cinderella' 'Ice Ballet'	3 ft	W,P	Summer	Sun to Part Shade	Moist to Well Drained
<u>Heath Aster*</u>	<i>Aster ericoides</i>	1,2,3	'Monte Cassino' 'Pink Star'	2 – 4 ft	W,P	Fall	Sun	Well Drained to Xeric
Smooth Aster*	<i>Aster laevis</i>	1,2	'Bluebird'	3 ft	B	Summer	Sun to Light Shade	Moist to Well Drained
New England Aster*	<i>Aster novae-angliae</i>	1,2	'Purple Dome'	18 in	P	Fall	Sun	Well Drained
<u>Aromatic Aster*</u>	<i>Aster oblongifolius</i>	1,2,3	'Fanny' 'October Skies'	2 – 4 ft	B,P	Fall	Sun	Well Drained
Tartarian Aster	<i>Aster tartaricus</i>	1,2	'Jin Dai'	3 – 4 ft	L	Fall	Sun	Moist to Well Drained
<u>False Wild Indigo*</u>	<i>Baptisia australis</i> <i>Baptisia alba</i> <i>Baptisia sphaerocarpa</i> <i>Baptisia</i> hybrids	1,2,3	'Carolina Moonlight' 'Purple Smoke'	2 - 3ft	B,W,Y,L	Spring	Sun/Partial Shade	Moist to Well Drained
White Boltonia*	<i>Boltonia asteroides</i>	1,2	'Snowbank'	4 ft	W	Fall	Sun	Moist to Well Drained
<u>Wine Cups,</u> <u>Poppy Mallow*</u>	<i>Callirhoe involucrata</i>	2,3		1 ft	P	Spring	Sun	Well Drained to Xeric
Canna Lily	<i>Canna</i> hybrids	1,2	Many Available	2 – 6 ft	P,R,O,Y	Summer	Sun to Part Shade	Moist to Well Drained

Perennials for Sun—continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
<u>Leadwort</u>	<i>Ceratostigma plumbaginoides</i>	1,2,3		12 in	B	Fall	Sun to Part Shade	Moist to Well Drained
Turtlehead*	<i>Chelone glabra</i> <i>Chelone obliqua</i>	1,2		2 – 3 ft	W,P	Fall	Sun to Part Shade	Moist to Well Drained
Shasta Daisy	<i>Chrysanthemum x superbum</i>	1,2	‘May Queen’ ‘Becky’	2 – 3 ft	W	Summer	Sun to Part Shade	Moist to Well Drained
Mouse Ear Coreopsis*	<i>Coreopsis auriculata</i>	1,2	‘Nana’	1 – 2 ft	Y	Spring	Sun to Part Shade	Moist to Well Drained
Tickseed, Coreopsis*	<i>Coreopsis grandiflora</i> <i>Coreopsis lanceolata</i>	1,2		1-3 ft	Y	Spring, Summer	Sun to Part Shade	Moist to Well Drained
<u>Threadleaf Coreopsis*</u>	<i>Coreopsis verticillata</i>	1,2,3	‘Golden Showers’ ‘Zagreb’	1 - 2 ft	Y	Summer	Sun	Well Drained
<u>Crinum Lily</u>	<i>Crinum</i> species and hybrids	1,2,3		2 – 4 ft	W,P	Summer	Sun to Part Shade	Moist to Well Drained
<u>Hardy Ice Plant</u>	<i>Delosperma cooperi</i> <i>Delosperma nubigenum</i>	2,3		6 in	P,Y	Spring	Sun	Well Drained to Xeric
<u>Cheddar Pinks, Dianthus</u>	<i>Dianthus gratianopolitanus</i>	1,2,3	‘Bath’s Pink’ ‘Firewitch’ ‘Greystone’	8 – 12 in	W,P	Spring	Sun	Well Drained to Xeric
<u>Hummingbird Plant</u>	<i>Dicliptera suberecta</i>	1,2,3		12 – 18 in	O	Summer	Sun	Well Drained
<u>Purple Coneflower*</u>	<i>Echinacea purpurea</i>	1,2,3	‘Bravado’ ‘Kim’s Knee High’ ‘White Swan’ ‘Magnus’	3-5 ft	P,W	Summer	Sun/Partial Shade	Well Drained
Joe Pye Weed*	<i>Eupatorium fistulosum</i> <i>Eupatorium dubium</i> <i>Eupatorium maculatum</i>	1,2		4 – 6 ft	P	Fall	Sun to Light Shade	Moist to Well Drained
<u>Blanket Flower, Gaillardia</u>	<i>Gaillardia x grandiflora</i>	1,2,3	‘Goblin’ ‘Fanfare’	1 - 2 ft	Y,R,O	Summer/Fall	Sun	Well Drained to Xeric
<u>Gaura*</u>	<i>Gaura lindheimeri</i>	2,3	‘So White’ ‘Pink Cloud’	2 – 3 ft	W,P	Summer	Sun	Well Drained to Xeric
<u>Bloody Cranesbill</u>	<i>Geranium sanguineum</i>	2,3		12 in	P, W	Summer	Sun	Well Drained
Gerber Daisy	<i>Gerbera jamesonii</i>	1,2		1 ft	P,R,O,Y,W	Spring - Summer	Sun to Part Shade	Well Drained

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
<u>Mexican Firebush</u>	<i>Hamelia patens</i>	2,3		3 – 4 ft	R	Summer	Sun	Well Drained to Xeric
Hardy Ginger Lily	<i>Hedychium</i> species and hybrids	1,2		4 – 6 ft.	W,Y,O,	Summer - Fall	Sun to Part Shade	Moist to Well Drained
Swamp Sunflower*	<i>Helianthus angustifolius</i>	1,2		6 ft	Y	Fall	Sun to Light Shade	Moist to Well Drained
‘Lemon Queen’ Perennial Sunflower	<i>Helianthus</i> x ‘Lemon Queen’	1,2		4 – 5 ft	Y	Summer	Sun to Light Shade	Moist to Well Drained
False Sunflower*	<i>Heliopsis helianthoides</i>	1,2	‘Summer Sun’ ‘Ballerina’	2 – 4 ft	Y	Summer	Sun to Part Shade	Moist to Well Drained
<u>Daylily</u>	<i>Hemerocallis</i> species and hybrids	1,2,3	Many Available	1-4 ft	Y,O,R,W,P	Summer	Sun/Partial Shade	Moist to Well Drained
<u>Red False Aloe</u>	<i>Hesperaloe parviflora</i>	2,3		3 – 4 ft	R	Summer	Sun	Well Drained to Xeric
Hardy Hibiscus*	<i>Hibiscus moscheutos</i> <i>Hibiscus coccineus</i> <i>Hibiscus</i> hybrids	1,2	‘Anne Arundel’ ‘Blue River II’ ‘Moy Grande’	4 – 5 ft	R,P,W	Summer	Sun to Light Shade	Moist to Well Drained
Confederate Rose	<i>Hibiscus mutabilis</i>	1,2		5 – 6 ft	P	Fall	Sun to Light Shade	Moist to Well Drained
St. Joseph’s Lily, Hardy Amaryllis	<i>Hippeastrum x johnsonii</i>	1,2,3		15 in	R	Spring	Sun to Part Shade	Well Drained
<u>Evergreen Candytuft</u>	<i>Iberis sempervirens</i>	1,2,3		12 in	W	Spring	Sun to Part Shade	Well Drained
Japanese Iris	<i>Iris ensata</i>	1,2		3 ft	Pu,L,W	Spring	Sun to Part Shade	Moist
Bearded Iris	<i>Iris</i> hybrids	1,2,3		3 ft	P,O,Y,W,L,Pu,	Spring	Sun to Light Shade	Well Drained
Siberian Iris	<i>Iris sibirica</i>	1,2		2-4 ft	W,Y, B, Pu, L	Spring	Sun to Part Shade	Moist to Well Drained
Japanese Aster	<i>Kalimeris pinnatifida</i>	1,2,3		2 ft	W	Summer	Sun to Light Shade	Well Drained
<u>Red Hot Poker</u>	<i>Kniphofia</i> species and hybrids	1,2,3		2-4 ft	R,O,Y	Summer	Sun	Well Drained
Seashore Mallow*	<i>Kosteletzkya virginica</i>	1,2		4 – 5 ft	P,W	Summer	Sun to Par Shade	Moist to Well Drained

## Perennials for Sun—continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
<u>Lantana</u>	<i>Lantana camara</i> <i>Lantana montevidensis</i> <i>Lantana</i> hybrids	2,3	‘Miss Huff’ ‘Tangerine’ ‘New Gold’ ‘Radiation’	2 – 4 ft	W,L,P,Y,O,R	Summer to Fall	Sun	Well Drained to Xeric
Asiatic and Oriental Lilies	<i>Lilium</i> hybrids	1,2	Many Available	2 – 4 ft	W,R,O,P,Y	Summer	Sun to Part Shade	Well Drained
Cardinal Flower*	<i>Lobelia cardinalis</i>	1,2		3 ft	R	Fall	Sun to Part Shade	Moist to Well Drained
<u>Sleeping Hibiscus,</u> <u>Turk’s Cap</u>	<i>Malvaviscus drummondii</i>	1,2,3		3 – 4 ft	R	Summer	Sun to Light Shade	Well Drained
Patrinia	<i>Patrinia scabiosifolia</i>	1,2		4 – 5 ft	Y	Fall	Sun to Part Shade	Moist to Well Drained
<u>Russian Sage</u>	<i>Perovskia</i> species and hybrids	1,2,3		3 – 4 ft	L	Summer	Sun	Well Drained
Garden Phlox*	<i>Phlox paniculata</i>	1,2	‘Robert Poore’ ‘David’ ‘Laura’	3 – 4 ft	W,P,L	Summer	Sun to Part Shade	Moist to Well Drained
<u>Moss Pinks, Thrift*</u>	<i>Phlox subulata</i>	1,2,3	Many Available	6 – 12 in	W,P,L,B	Spring	Sun to Light Shade	Well Drained
<u>Rudbeckia,</u> <u>Orange Coneflower*</u>	<i>Rudbeckia fulgida</i>	1,2,3	‘Goldsturm’	3 ft	Y	Summer	Sun to Part Shade	Moist to Well Drained
Green Headed Coneflower*	<i>Rudbeckia laciniata</i>	1,2		3 – 4 ft	Y	Summer	Sun to Part Shade	Moist to Well Drained
<u>Dwarf Mexican Petunia</u>	<i>Ruellia brittoniana</i> ‘Katie’	1,2,3		6 in	W,P,Pu	Summer	Sun to Light Shade	Well Drained
<u>Autumn Sage</u>	<i>Salvia greggii</i> <i>Salvia microphylla</i> and hybrids	1,2,3		2 – 4 ft	R,P,W,Pu	Spring and Fall	Sun to Light Shade	Well Drained
Anise Sage	<i>Salvia guaranitica</i>	1,2	‘Black and Blue’	3 – 4 ft	B,Pu	Summer	Sun to Part Shade	Moist to Well Drained
<u>Mexican Bush Sage</u>	<i>Salvia leucantha</i>	1,2,3	‘San Carlos Festival’	3 – 5 ft	Pu	Fall	Sun	Well Drained
<u>‘Indigo Spires’ Sage</u>	<i>Salvia</i> x ‘Indigo Spires’	1,2,3		3 – 4 ft	B	Summer	Sun to Part Shade	Well Drained
Pincushion Flower	<i>Scabiosa columbaria</i>	1,2,3	‘Butterfly Blue’ ‘Pink Mist’	18 in	B,P	Spring	Sun to Light Shade	Well Drained

### Perennials for Sun—continued

Common Name	Botanical Name	Water Use Zone	Recommended Varieties	Height	Color	Time of Bloom	Exposure	Soil
<u>Sedum</u>	<i>Sedum</i> hybrids	1,2,3	‘Matrona’ ‘Autumn Fire’	2 – 3 ft	P, R	Fall	Sun to Light Shade	Well Drained
<u>Stonecrops</u>	<i>Sedum reflexum</i> <i>Sedum album</i> <i>Sedum tetractinum</i>	2,3	‘Blue Spruce’ ‘Murale’	6 – 8 in	W,Y	Spring	Sun	Well Drained to Xeric
<u>Hen and Chicks</u>	<i>Sempervivum tectorum</i>	2,3		6 – 12 in	Y	Spring	Sun	Well Drained to Xeric
Purple Heart	<i>Setcreasia pallida</i>	1,2,3		12 – 15 in	Pu	Summer	Sun to Light Shade	Well Drained
‘Fireworks’ Goldenrod*	<i>Solidago rugosa</i> ‘Fireworks’	1,2,3		1-3 ft	Y	Fall	Sun to Part Shade	Moist to Well Drained
<u>Lamb’s Ear</u>	<i>Stachys byzantina</i>	2,3	‘Helene Von Stein’	2 ft	Foliage	Evergreen	Sun to Light Shade	Well Drained
Stokes Aster*	<i>Stokesia laevis</i>	1,2	Several Available	1 – 2 ft	B, L, W, Y	Summer	Sun to Part Shade	Moist to Well Drained
Carolina Lupine*	<i>Thermopsis caroliniana</i>	1,2		3 – 4 ft	Y	Spring	Sun to Part Shade	Moist to Well Drained
<u>Verbena*</u>	<i>Verbena canadensis</i>	1,2,3	‘Homestead Purple’ ‘Snowflurry’	8 – 12 in	W,B,L,P	Spring and Summer	Sun to Light Shade	Moist to Well Drained
Creeping Veronica	<i>Veronica peduncularis</i>	1,2	‘Georgia Blue’	8 in	B	Spring	Sun to Part Shade	Well Drained
Speedwell	<i>Veronica spicata</i>	1,2	‘Sunny Border Blue’	2 ft	B,W,P	Spring	Sun to Part Shade	Well Drained
Rain Lily	<i>Zephyranthes</i> species and hybrids	1,2	Several Available	1 ft	W,Y,P	Summer and Fall	Sun to Part Shade	Moist to Well Drained

### Drought Tolerant Plants

Extremely drought tolerant plants are marked with an underline. When planted in their preferred soil type, these plants are able to withstand extended periods of drought, 4-6 weeks, without supplemental irrigation once established. Most trees and shrubs take two to three seasons to become fully established. Perennials, grasses and groundcovers usually require one to two seasons to become established.

### Recommended Varieties

For many plants, recommended varieties are given. These are selections of that plant that either perform better in our area or are more suitable to landscape use than the plain species. Plant varieties, also known as cultivars, are listed enclosed in single quotes.

## Water Use Zones

Water Use Zones indicate the water needs of various plants and correspond to the following NCCE publications:

*Water Wise Use in Landscaping*

[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

*How to Plan and Design a Water Wise Use Landscape*

[http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

## Native Plants\*

A plant native to SE USA implies a plant endemic to the Southeastern portion of the United States, from Virginia to Eastern Texas.

## Colors

W—White	P—Pink	R—Red
B—Blue	Pu—Purple	Y—Yellow
O—Orange	L—Lavender	

## Soil

Soil refers to soil condition at the site as follows:

**Wet** indicates a site that stays moist most of the time and receives periodic flooding.

**Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.

**Well Drained** indicates a site where water drains from the surface and rarely stands.

**Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

## Exposure

Exposure refers to the amount of sunlight a site receives as follows:

**Full sun** indicates a site that receives at least 8hrs of direct sun each day.

**Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pine trees.

**Part Shade** indicates a site that is shaded for half the day by a dense shade such as that cast by buildings or shade trees.

**Full Shade** indicates a site that is in shade all day.

*Prepared by: Charlotte Glen, Horticulture Agent  
NC Cooperative Extension –Pender County Center*



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# ANNUALS

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #7

All annuals grow best in a well-prepared soil with good drainage. Cool season annuals should be planted from October through mid-November. Warm season annuals are best planted from mid-April through May.

### COOL SEASON ANNUALS

Common Name	Botanical Name	Water Use Zone	Height (in)	Color	Exposure
Snapdragon	<i>Antirrhinum majus</i>	1,2	8-36	All but B	Sun
English Daisy	<i>Bellis perennis</i>	1,2	6 - 12	P, R, W	Sun to Pt. Shade
Swiss Chard	<i>Beta vulgaris</i>	1,2	24	Foliage	Sun
Ornamental Cabbage and Kale	<i>Brassica oleracea</i>	1,2	12 – 24	Foliage	Sun
‘Giant Red’ Mustard	<i>Brassica</i> species ‘Giant Red’	1,2	18	Foliage	Sun
Calendula	<i>Calendula officinalis</i>	1,2	12 – 24	Y,O	Sun
Bachelor’s Buttons	<i>Centaurea cyanus</i>	1,2	12 – 30	B, W, P	Sun
Cardoon	<i>Cynara cardunculus</i>	1,2,3	36	Foliage	Sun
Chinese Forget-me-not	<i>Cynoglossum amabile</i>	1,2	12	B	Sun to Pt. Shade
Delphinium	<i>Delphinium x elatum</i>	1,2	36 – 48	W, B, Pu, L, P	Sun to Pt. Shade
Sweet Williams	<i>Dianthus barbatus</i>	1,2	12 – 24	R, P, W	Sun to Pt. Shade
China Pinks	<i>Dianthus chinensis</i>	1,2	8 – 12	R, P, W	Sun
Foxglove	<i>Digitalis purpurea</i>	1,2	12-60	All but B	Sun to Pt. Shade
Wallflower	<i>Erysimum cheiri</i>	1,2	12	All but B	Sun to Pt. Shade
California Poppy	<i>Eschscholzia californica</i>	1,2,3	12-24	All but B	Sun
Dame’s Rocket	<i>Hesperis matronalis</i>	1,2	36	Pu, W	Sun to Pt. Shade
Annual Candytuft	<i>Iberis umbellata</i>	1,2	12	P, Pu, L, W	Sun
Sweet Alyssum	<i>Lobularia maritima</i>	1,2	6	W,P,L	Sun to Pt. Shade
Stock	<i>M. atthiola incana</i>	1,2	12 - 15	W, P, R, Pu	Sun
Forget-me-nots	<i>Myosotis sylvatica</i>	1,2	12	B	Sun to Pt. Shade
Parsley	<i>Petroselinum crispum</i>	1,2	12	Foliage	Sun
Dusty Miller	<i>Senecio cineraria</i>	1,2,3	6-12	Foliage	Sun
Pansy	<i>Viola x wittrockiana</i>	1,2	6	All	Sun to Pt. Shade

## WARM SEASON ANNUALS

Common Name	Botanical Name	Water Use Zone	Height (in)	Color	Exposure
<b>FOR SHADE</b>					
'Dragonwing' Begonia	<i>Begonia</i> x 'Dragonwing'	1,2	15	R,P	Sun to Shade
<u>Wax Begonia</u>	<i>Begonia</i> x <i>semperflorens</i>	1,2,3	6-12	W,P,R	Sun to Shade
Caladium	<i>Caladium bicolor</i>	1	12 - 36	Foliage	Pt. Shade to Shade
Coleus	<i>Solenostemon scutellarioides</i>	1,2	24 - 36	Foliage	Sun to Shade
Polka Dot Plant	<i>Hypoestes phyllostachya</i>	1,2	15 - 24	Foliage	Pt. Shade to Shade
New Guinea Impatiens	<i>Impatiens hawkeri</i>	1	12 - 36	O,R,P	Pt. Shade to Shade
Impatiens	<i>Impatiens wallerana</i>	1	12-36	All but B	Pt. Shade to Shade
Yellow Shrimp Plant	<i>Pachystachys lutea</i>	1,2	24 - 30	Y	Pt. Shade to Shade
Wishbone Flower	<i>Torenia fournieri</i>	1,2	12	W,B,Pu,P	Pt. Shade to Shade
<b>FOR SUN</b>					
Ageratum	<i>Ageratum houstonianum</i>	1,2	8 - 24	W,B,Pu	Sun to Pt. Shade
'Purple Knight' Alternanthera	<i>Alternanthera dentata</i> 'Purple Knight'	1,2	24 - 30	Foliage	Sun to Pt. Shade
Joseph's Coat	<i>Alternanthera ficoidea</i>	1,2	8 - 12	Foliage	Sun to Pt. Shade
Angelonia	<i>Angelonia angustifolia</i>	1,2	24 - 36	W,Pu,P	Sun to Pt. Shade
Tropical Milkweed	<i>Asclepias curassavica</i>	1,2	36 - 48	O,R,Y	Sun
<u>Asparagus Fern</u>	<i>Asparagus densiflorus</i>	1,2,3	18 - 24	Foliage	Sun to Pt. Shade
<u>Wax Begonia</u>	<i>Begonia semperflorens</i>	1,2,3	12	R,W,P	Sun to Shade
Dragonwing Begonia	<i>Begonia</i> x 'Dragonwing'	1,2	15	R,P	Sun to Shade
<u>Million Bells</u>	<i>Calibrachoa</i> x <i>hybrida</i>	1,2,3	6 - 12	All but B	Sun
<u>Ornamental Pepper</u>	<i>Capiscum annum</i>	1,2,3	12 - 18	Fruit	Sun
<u>Madagascar Periwinkle</u>	<i>Catharanthus roseus</i>	1,2,3	6 - 18	W,P,L,Pu	Sun
<u>Cockscomb</u>	<i>Celosia cristata</i>	1,2,3	6 - 30	All but B	Sun
<u>Spider Plant</u>	<i>Cleome hasslerana</i>	1,2,3	24 - 48	W,P,L	Sun
Cosmos	<i>Cosmos bipinnatus</i>	1,2,3	18 - 48	P, R, W	Sun to Pt. Shade
<u>Mexican Heather</u>	<i>Cuphea hyssopifolia</i>	1,2,3	12	Pu	Sun to Lt. Shade
<u>Mexican Cigar Plant</u>	<i>Cuphea ignea</i>	1,2	12	R	Sun
<u>Blue Daze</u>	<i>Evolvulus pilosus</i>	1,2,3	6 - 8	B	Sun
<u>Blanket Flower</u>	<i>Gaillardia pulchella</i>	1,2,3	12-30	Y,O,R	Sun
<u>Globe Amaranth</u>	<i>Gomphrena globosa</i>	1,2,3	8 - 24	W,P,L,Pu	Sun
Ornamental Sweet Potato	<i>Ipomoea batatas</i>	1,2	12	Foliage	Sun to Pt. Shade
<u>Lantana</u>	<i>Lantana camara</i>	1,2,3	12 - 36	Y,O,P,R	Sun
<u>Trailing Lantana</u>	<i>Lantana montevidensis</i>	1,2,3	12	L,W	Sun
<u>Melampodium</u>	<i>Melampodium paludosum</i>	1,2,3	18 - 30	Y	Sun to Pt. Shade
Cat's Whiskers	<i>Orthosiphon stamineus</i>	1,2	24	Pu,W	Sun to Lt. Shade
<u>Red Fountain Grass</u>	<i>Pennisetum setaceum</i> 'Rubrum'	1,2,3	24 - 36	Foliage	Sun

## WARM SEASON ANNUALS FOR SUN, continued

Common Name	Botanical Name	Water Use Zone	Height (in)	Color	Exposure
<u>Pentas</u>	<i>Pentas lanceolata</i>	1,2,3	12 - 24	R,P,W,L	Sun to Lt. Shade
Petunia	<i>Petunia x hybrida</i>	1,2	6-12	All	Sun to Pt. Shade
<u>Cuban Oregano</u>	<i>Plectranthus amboinicus</i>	1,2	24 - 30	Foliage	Sun
<u>Silver Plectranthus</u>	<i>Plectranthus argenteus</i>	1,2	24	Foliage	Sun
'Mona Lavender' Plectranthus	<i>Plectranthus x</i> 'Mona Lavender'	1,2	24	L	Sun to Lt. Shade
<u>Moss Rose</u>	<i>Portulaca grandiflora</i>	1,2,3	4 - 6	All but B, Pu	Sun
<u>Purslane</u>	<i>Portulaca oleracea</i>	1,2,3	6	All but B, Pu	Sun
<u>Texas Sage</u>	<i>Salvia coccinea</i>	1,2,3	18 - 24	R,P,W	Sun to Lt. Shade
<u>Mealycup Sage</u>	<i>Salvia farinacea</i>	1,2,3	12 - 24	B,W	Sun to Lt. Shade
Scarlet Sage	<i>Salvia splendens</i>	1,2,3	12 - 18	R,W,O,Pu	Sun to Pt. Shade
<u>Fan Flower</u>	<i>Scaevola aemula</i>	1,2	8	W,Pu	Sun to Lt. Shade
Sun Coleus	<i>Solenostemon scutellarioides</i>	1,2	24 - 36	Foliage	Sun to Shade
Persian Shield	<i>Strobilanthes dyerianus</i>	1,2	24	Foliage	Sun to Pt. Shade
<u>Marigold</u>	<i>Tagetes erecta</i> , <i>Tagetes patula</i>	1,2	12 – 30	Y,R,O	Sun
<u>Mexican Sunflower</u>	<i>Tithonia rotundifolia</i>	1,2,3	36 - 48	O,Y	Sun
Verbena	<i>Verbena x hybrida</i>	1,2	6-12	All but Y	Sun to Lt. Shade
<u>'Profusion' Zinnia</u>	<i>Zinnia elegans</i>	1,2	12	W,O,P,R	Sun
<u>Creeping Zinnia</u>	<i>Zinnia linearis</i>	1,2,3	12 - 18	Y, O, W	Sun

## KEY TO LIST

**WATER USE ZONES** correspond to the following NCCE publications:

***Water Wise Use in Landscaping***

- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_1.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_1.html)

***How to Plan and Design a Water Wise Use Landscape***

- [http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/bae/programs/extension/publicat/wqwm/ag508_2.html)

**EXPOSURE** refers to the amount of sunlight a site receives as follows:

- **Full sun** indicates a site that receives at least 8hrs of direct sun each day.
- **Light Shade** indicates a site that is shaded less than half of the day by a light high shade.
- **Part Shade** indicates a site that is shaded for half the day by a dense shade.
- **Full Shade** indicates a site that is in shade all day.

**UNDERLINED** plants are drought-tolerant

**COLORS:** W=white, Y=yellow, O=orange, B=blue, Pu=purple, P=pink, R=red, L=lavender

## FOR MORE INFORMATION:

### WEBSITE

For more detailed information about each plant and to see images, visit the **Plant Fact Sheets** on the **NC Cooperative Extension Urban Horticulture website: <http://www.ncstate-plants.net>**

### VISIT US

To see many of these plants growing in a landscape setting, visit the Brunswick Botanical Garden at the Brunswick County Government Complex in Bolivia, N.C. The garden is open seven days a week during daylight hours and is free to the public. To find out more, visit <http://brunswick.ces.ncsu.edu/> or call 910.253.2610.

### PLANT INFORMATION CLINIC

If you have questions about plant selection and maintenance, lawn care, vegetable gardening or plant pest problems, call the **Brunswick County Master Gardener Hotline**. The hotline is staffed by trained Master Gardener volunteers and Extension Horticulture Agents. Call 910.253.2610 or stop by during normal business hours. The **Brunswick Cooperative Extension Center** is open 8am to 5pm, Monday – Friday and is located at 25 Referendum Drive, Building N, Bolivia, N.C. 28422. Our mailing address is P.O. Box 109, Bolivia, N.C. 28422.

Prepared by:

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# SALT TOLERANT PLANTS

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #9

### Coastal Challenges



Plants growing at the beach are subjected to environmental conditions much different than those planted further inland. Factors such as blowing sand, poor soils, high temperatures, and excessive drainage all influence how well plants perform in coastal landscapes, though the most significant effect on growth is salt spray. Most plants will not tolerate salt accumulating on their foliage, making plant selection for beachfront landscapes particularly challenging.

### Salt Spray

Salt spray is created when waves break on the beach, throwing tiny droplets of salty water into the air. On-shore breezes blow this salt laden air landward where it comes in contact with plant foliage. The amount of salt spray plants receive varies depending on their proximity to the beachfront, creating different vegetation zones as one gets further away from the beachfront. The most salt-tolerant species survive in the frontal dune area. As distance away from the ocean increases, the level of salt spray decreases, allowing plants with less salt tolerance to survive.

### Natural Protection

The impact of salt spray on plants can be lessened by physically blocking salt laden winds. This occurs naturally in the maritime forest, where beachfront plants protect landward species by creating a layer of foliage that blocks salt spray. It is easy to see this effect on the ocean side of maritime forest plants, which are “sheared” by salt spray, causing them to grow at a slant away from the oceanfront. Removal of this “shear zone” during construction opens holes that allow salt spray to blow through, damaging plants that were previously protected.

### Manmade Protection

Buildings, fences and other structures that block salt laden winds also allow plants with less salt tolerance to grow landward of a structure. Homes near the ocean will have two distinct micro-environments based on salt spray. The side of the house facing the ocean will require landscape plants with high salt tolerance. The landscape area on the landward side that is protected from salt spray may be planted with species having little or no salt tolerance depending upon the degree they are protected from blowing winds. Frequent overhead irrigation rinses salt accumulations off plant foliage, reducing the impact to less salt-tolerant species.

## Landscaping at the Beach

The following plant lists have been compiled to assist homeowners and landscape professionals to choose appropriate plants for coastal landscapes. The lists are divided by plant type (trees, shrubs, vines, groundcovers, etc.) and three levels of salt tolerance (high, moderate, slight) and have been compiled from the references listed on the last page as well as personal observation.

Properties within at least one-eighth of a mile of the oceanfront should be landscaped with plants known to have some level of salt tolerance. Properties along or near brackish water estuaries should also be landscaped with plants possessing some degree of salt tolerance, though not necessarily as high as those on the oceanfront. During hurricanes and coastal storms, salt laden winds extend further inland than normal. This causes damage to plants that are not salt tolerant, though they generally recover following the storm event.

Other factors to take into consideration when choosing plants for coastal landscapes include soil pH, which can be determined by sending a soil sample to the NC Department of Agriculture (boxes, forms and instructions are available from your local Cooperative Extension office); sun and wind exposure; and soil type. Incorporating composted organic matter into the soil will greatly increase the soil's ability to hold moisture and improve plant growth. Applying two to four inches of mulch will also help plant growth by reducing soil temperature and conserving moisture. Organic mulches such as pine straw or shredded bark mulches decompose over time, adding to the organic matter content of the soil.

## Dune Preservation and Vegetation Restoration:

Preservation of the natural dune system and its native vegetation is critical to protecting both natural and manmade coastal landscapes. More information about the natural dune system and restoring its vegetation is available online as follows:

*Restoration and Management of Coastal Dune Vegetation*, from the NCSU Soil Science

Department: [http://www.soil.ncsu.edu/lockers/Broome\\_S/ram.html](http://www.soil.ncsu.edu/lockers/Broome_S/ram.html)

*The Dune Book*, by David Nash and Spencer Rogers, available from NC Sea Grant at:

[http://www.ncseagrant.org/files/dune\\_booklet.pdf](http://www.ncseagrant.org/files/dune_booklet.pdf)

## Table of Contents:

Key . . . . .	3
Small Trees . . . . .	4-5
Large Trees . . . . .	5-6
Shrubs . . . . .	6-9
Vines . . . . .	9
Palms . . . . .	9
Ornamental Grasses . . . . .	10
Perennials . . . . .	10-12
Turf Grasses . . . . .	12
Annuals . . . . .	13
Groundcovers . . . . .	14
References . . . . .	15

## **Highly Salt Tolerant**

Plants tolerant of the direct salt spray such as that received along dunes and immediately adjacent to the oceanfront.

## **Moderately Salt Tolerant**

Plants tolerant of moderate levels of salt spray, such as that received in landscapes adjacent to the beach front, but which are sheltered by other plants, structures or natural dunes.

## **Slightly Salt Tolerant**

Plants with the lowest level of tolerance to salt spray. These plants should be used only in areas receiving some protection from direct salt spray, either from a building or other vegetation. In areas that are completely sheltered, plants with no known salt tolerance can be grown.

## **Underlined Plants**

Plants that are extremely tolerant of growing in sandy, poor soils and display extreme drought tolerance once established.

## **\* Native**

Plants that are native to the coastal plains of the southeast USA, ranging from New Jersey south along the Atlantic Seaboard through Florida and along the Gulf Coast to East Texas.

## **‘Cultivar Names’**

Cultivar names are written in single quotes. Cultivars, or varieties, are plants that have been selected because they display desirable characteristics such as larger flowers, different color foliage, more compact growth, etc. Cultivars are propagated vegetatively (cuttings, division, tissue culture) so they are genetically identical to each other.

## **Evergreen/Deciduous**

E or D refers to whether a plant is evergreen (retains its foliage all year) or deciduous (sheds its foliage each fall and grows new leaves in spring).

## **Exposure**

Refers to the amount of sunlight a site receives as follows:

- **Full sun** indicates a site that receives at least 8hrs of direct sun each day.
- **Light Shade** indicates a site that is shaded less than half of the day by a light high shade such as that cast by pines.
- **Part Shade** indicates a site that is shaded for half the day by a dense shade like that cast by buildings or shade trees.
- **Full Shade** indicates a site that is in shade all day.

## **Soil**

Refers to soil condition at the site as follows:

- **Wet** indicates a site that stays moist most of the time and receives periodic flooding.
  - **Moist** indicates a site that is moist most of the time with brief (less than 12hrs) periods of standing water.
  - **Well Drained** indicates a site where water drains from the surface and rarely stands.
- Xeric** indicates a site that is extremely dry and sandy with very little ability to hold water.

# SMALL TREES, 10' – 30' Tall

4

## Small Trees—**Highly Salt Tolerant**

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Yaupon*	<i>Ilex vomitoria</i>	15-20 x 10-15	E	Moist to Xeric	Sun to Light Shade
Waxmyrtle*	<i>Myrica cerifera</i>	10-20 x 10-20	E	Moist to Xeric	Sun to Light Shade
Devilwood*	<i>Osmanthus americanus</i>	15-25 x 10-20	E	Moist to Well Drained	Sun to Light Shade
Redbay*	<i>Persea borbonia</i>	20-30 x 15-25	E	Moist to Xeric	Sun to Light Shade
Japanese Black Pine	<i>Pinus thunbergii</i>	20-40 x 15-25	E	Well Drained to Xeric	Sun
Chinese Podocarpus	<i>Podocarpus macrophyllus</i> 'Maki'	20-30 x 10-15	E	Well Drained	Sun to Part Shade
Sand Live Oak*	<i>Quercus geminata</i>	20-30 x 30-40	E	Well Drained to Xeric	Sun

## Small Trees—**Moderately Salt Tolerant**

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Trident Maple	<i>Acer buergerianum</i>	20-25 x 10-15	D	Well Drained	Sun
Arizona Cypress	<i>Cupressus arizonica</i>	10-30 x 8-20	E	Well Drained	Sun
Italian Cypress	<i>Cupressus sempervirens</i>	20-30 x 4-8	E	Well Drained	Sun
Loquat	<i>Eriobotrya japonica</i>	15-20 x 15-20	E	Well Drained	Sun to Light Shade
Eucalyptus	<i>Eucalyptus cinerea</i>	15-30 x 10-20	E	Well Drained	Sun
Dahoon Holly*	<i>Ilex cassine</i>	20-30 x 8-15	E	Moist to Well Drained	Sun
Myrtle Leaf Holly*	<i>Ilex cassine</i> variety <i>myrtifolia</i>	10-20 x 8-12	E	Well Drained	Sun
American Holly*	<i>Ilex opaca</i>	20-30 x 15-20	E	Moist to Well Drained	Sun to Part Shade
Foster's Holly*	<i>Ilex x attenuata</i> 'Fosters'	20-30 x 10-15	E	Moist to Well Drained	Sun to Part Shade
'Nellie Stevens' Holly	<i>Ilex x 'Nellie R. Stevens'</i>	15-25 x 10-15	E	Moist to Well Drained	Sun to Part Shade
Hollywood Juniper	<i>Juniperus chinensis</i> 'Kaizuka' also known as 'Torulosa'	15-25 x 8-15	E	Well Drained to Xeric	Sun
Crape Myrtle	<i>Lagerstroemia</i> hybrids – many varieties available	15-30 x 10-25 Depending on Variety	D	Well Drained	Sun
'Little Gem' Magnolia*	<i>Magnolia grandiflora</i> 'Little Gem'	20-25 x 10-15	E	Moist to Well Drained	Sun to Part Shade
Sweet Bay*	<i>Magnolia virginiana</i>	20-30 x 10-20	Semi-E	Moist to Well Drained	Sun to Part Shade



Small Trees—***Moderately Salt Tolerant***, continued

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Sourwood*	<i>Oxydendrum arboreum</i>	25-30 x 15-20	D	Well Drained	Sun to Part Shade
<u>Carolina Cherrylaurel*</u>	<i>Prunus caroliniana</i>	20-30 x 15-20	E	Well Drained to Xeric	Sun to Light Shade
Japanese Snowbell	<i>Styrax japonicus</i>	20-30 x 20-30	D	Well Drained	Sun to Part Shade
<u>Tamarix</u>	<i>Tamarix ramosissima</i>	10-20 x 8-12	D	Well Drained to Xeric	Sun
Chastetree	<i>Vitex agnus-castus</i>	15-20 x 10-15	D	Well Drained	Sun

## LARGE TREES, Over 30'

Large Trees—***Highly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Thornless Honeylocust*	<i>Gleditsia triacanthos</i>	40-60 x 20-40	D	Well Drained	Sun
<u>Eastern Red Cedar*</u>	<i>Juniperus virginiana</i>	30-50 x 10-20	E	Well Drained to Xeric	Sun
Southern Magnolia*	<i>Magnolia grandiflora</i>	60-80 x 30-50	E	Well Drained	Sun to Part Shade
Willow Oak*	<i>Quercus phellos</i>	80-100 x 40-50	D	Moist to Well Drained	Sun
Live Oak*	<i>Quercus virginiana</i>	60-80 x 60-80	E	Well Drained to Xeric	Sun

Large Trees—***Moderately Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
River Birch*	<i>Betula nigra</i>	40-70 x 40-60	D	Moist to Well Drained	Sun
Atlas Cedar	<i>Cedrus atlantica</i>	40-60 x 30-40	E	Well Drained	Sun
Deodar Cedar	<i>Cedrus deodora</i>	50-70 x 50-70	E	Well Drained	Sun
Sugarberry*	<i>Celtis laevigata</i>	60-80 x 50-70	D	Moist to Well Drained	Sun
<u>Ginkgo, Maidenhair Tree</u>	<i>Ginkgo biloba</i>	50-70 x 30-40	D	Well Drained	Sun
Black Gum*	<i>Nyssa sylvatica</i>	30-50 x 20-30	D	Moist to Well Drained	Sun
Laurel Oak*	<i>Quercus hemisphaerica</i>	40-60 x 30-40	E	Moist to Well Drained	Sun
<u>Water Oak*</u>	<i>Quercus nigra</i>	50-80 x 30-60	D	Moist to Well Drained	Sun

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Shumard Oak*	<i>Quercus shumardii</i>	40-60 x 40-60	D	Moist to Well Drained	Sun
Black Locust*	<i>Robinia pseudoacacia</i>	30-50 x 20-35	D	Moist to Xeric	Sun
Lacebark Elm	<i>Ulmus parvifolia</i>	40-50 x 30-40	D	Well Drained	Sun

Large Trees—***Slightly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Japanese Cedar	<i>Cryptomeria japonica</i>	40-60 x 20-30	E	Moist to Well Drained	Sun
American Beech*	<i>Fagus grandifolia</i>	50-70 x 40-60	D	Well Drained	Sun
Baldcypress*	<i>Taxodium distichum</i>	50-70 x 20-30	D	Wet to Well Drained	Sun

## SHRUBS

Shrubs—***Highly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft.)	Evergreen/Deciduous	Soil	Exposure
Century Plant	<i>Agave americana</i>	5-7 x 8-12	E	Well Drained to Xeric	Sun
Elaeagnus	<i>Elaeagnus pungens</i> <i>Elaeagnus x ebbingii</i>	10-15 x 10-15	E	Well Drained to Xeric	Sun to Part Shade
Dwarf Yaupon Holly*	<i>Ilex vomitoria</i> ‘Nana’, ‘Bordeaux’, ‘Schilling’s’	3-4 x 4-5	E	Well Drained to Xeric	Sun to Part Shade
Oleander	<i>Nerium oleander</i>	6-10 x 4-8	E	Well Drained to Xeric	Sun
New Zealand Flax	<i>Phormium tenax</i>	4-6 x 4-6	E	Well Drained	Sun
Pittosporum	<i>Pittosporum tobira</i>	6-8 x 6-8	E	Well Drained to Xeric	Sun to Part Shade
Dwarf Pittosporum	<i>Pittosporum tobira</i> ‘Wheeler’s Dwarf’, ‘Maio’, ‘Cream de Mint’	3-4 x 3-5	E	Well Drained to Xeric	Sun to Part Shade
‘Majestic Beauty’ Indian Hawthorn	<i>Rhaphiolepis umbellata</i> ‘Majestic Beauty’	8-10 x 8-10	E	Well Drained	Sun
Rugosa Rose	<i>Rosa rugosa</i>	3-5 x 4-6	D	Well Drained	Sun
Rosemary	<i>Rosmarinus officinalis</i>	3-6 x 3-6	E	Well Drained to Xeric	Sun
Butcher’s Broom	<i>Ruscus aculeatus</i>	2-3 x 2-3	E	Well Drained	Part Shade to Shade
Sandwanka Viburnum	<i>Viburnum suspensum</i>	4-8 x 4-8	E	Well Drained to Xeric	Sun
Yucca*	<i>Yucca gloriosa</i> <i>Yucca aloifolia</i>	6-8 x 4-8	E	Well Drained to Xeric	Sun

# Shrubs—*Moderately Salt Tolerant*

7

Common Name	Botanical Name	Height x Spread (ft.)	Evergreen/Deciduous	Soil	Exposure
Japanese Aucuba	<i>Aucuba japonica</i>	5-8 x 4-6	E	Well Drained	Part to Full Shade
Dwarf Aucuba	<i>Aucuba japonica</i> ‘Nana’	3-4 x 2-3	E	Well Drained	Part to Full Shade
Hedge Bamboo	<i>Bambusa multiplex</i>	15-20 x 6-10	E	Well Drained	Light to Part Shade
Wintergreen Barberry	<i>Berberis julianae</i>	6-8 x 6-8	E	Well Drained	Sun
<u>Bottlebrush</u>	<i>Callistemon rigidus</i>	5-6 x 5-6	E	Well Drained	Sun
Flowering Quince	<i>Chaenomeles speciosa</i>	6-10 x 6-10	D	Well Drained	Sun to Light Shade
Sweet Pepperbush, Clethra*	<i>Clethra alnifolia</i>	4-8 x 3-6	D	Moist to Well Drained	Sun to Part Shade
Dwarf Sweet Pepperbush, Clethra*	<i>Clethra alnifolia</i> ‘Hummingbird’, ‘White	2-3 x 4-6	D	Moist to Well Drained	Sun to Part Shade
Fragrant Daphne	<i>Daphne odora</i>	2-3 x 2-3	E	Well Drained	Part Shade
<u>Japanese Euonymus</u>	<i>Euonymus japonicus</i>	4-10 x 3-6	E	Well Drained	Sun to Shade
Fatsia	<i>Fatsia japonica</i>	6-8 x 6-8	E	Well Drained	Part to Full Shade
<u>Pineapple Guava</u>	<i>Feijoa sellowiana</i>	6-10 x 5-8	E	Well Drained	Sun
Forsythia	<i>Forsythia x intermedia</i>	8-12 x 8-12	D	Well Drained	Sun to Light Shade
Rose of Sharon	<i>Hibiscus syriacus</i>	8-12 x 6-10	D	Well Drained	Sun
Bigleaf Hydrangea	<i>Hydrangea macrophylla</i> Many varieties available	4-6 x 4-8	D	Well Drained	Light to Part Shade
‘Carissa’ Holly	<i>Ilex cornuta</i> ‘Carissa’	3-4 x 4-5	E	Well Drained	Sun to Part Shade
‘Rotunda’ Holly	<i>Ilex cornuta</i> ‘Rotunda’	3-4 x 4-5	E	Well Drained	Sun to Part Shade
‘Needlepoint’ Holly	<i>Ilex cornuta</i> ‘Needlepoint’	8-15 x 6-12	E	Well Drained	Sun to Light Shade
Inkerry Holly*	<i>Ilex glabra</i>	5-8 x 5-8	E	Moist to Well Drained	Sun to Light Shade
<u>Chinese Juniper</u>	<i>Juniperus chinensis</i> Many varieties available	2-12 x 4-8 depending on	E	Well Drained to Xeric	Sun
<u>Texas Sage</u>	<i>Leucophyllum frutescens</i>	4-6 x 4-6	E	Well Drained	Sun
<u>Japanese Privet</u>	<i>Ligustrum japonicum</i>	6-12 x 5-10	E	Well Drained	Sun to Light Shade
Leatherleaf Mahonia	<i>Mahonia bealei</i>	6-8 x 3-4	E	Well Drained	Part to Full Shade
Firethorn, Pyracantha	<i>Pyracantha coccinea</i>	6-10 x 4-8	E	Well Drained	Sun to Light Shade
<u>Indian Hawthorne</u>	<i>Raphiolepis indica</i>	2-4 x 3-5	E	Well Drained	Sun

Common Name	Botanical Name	Height x Spread (ft.)	Evergreen/Deciduous	Soil	Exposure
Azaleas - Southern Indica Varieties	<i>Rhododendron</i> 'Formosa', 'G.G. Gerbing', 'George Tabor'	6-8 x 6-8	E	Well Drained	Light to Part Shade
Satsuki Azaleas	<i>Rhododendron</i> Satsuki Varieties, 'Gumpo' Series	2-3 x 3-4	E	Well Drained	Light to Part Shade
Stinking Viburnum	<i>Viburnum odoratissimum</i>	8-15 x 6-12	E	Well Drained	Sun to Part Shade
Adam's Needle Yucca*	<i>Yucca filamentosa</i>	2-4 x 2-4	E	Well Drained to Xeric	Sun

Shrubs—***Slightly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/Deciduous	Soil	Exposure
Abelia	<i>Abelia x grandiflora</i>	4-8 x 4-6	E	Well Drained	Sun to Part Shade
'Brilliant' Chokeberry*	<i>Aronia arbutifolia</i> 'Brilliantissima'	6-8 x 6-8	D	Moist to Well Drained	Sun to Light Shade
Japanese Barberry	<i>Berberis thunbergii</i>	2-3 x 3-4	D	Well Drained	Sun to Light Shade
Butterfly Bush	<i>Buddleia davidii</i>	4-8 x 4-6	D	Well Drained	Sun to Light Shade
American Beautyberry*	<i>Callicarpa americana</i>	4-6 x 4-6	D	Moist to Well Drained	Sun to Part Shade
Japanese Camellia	<i>Camellia japonica</i> Many varieties available	6-12 x 4-8	E	Well Drained	Light to Part Shade
Sasanqua Camellia	<i>Camellia sasanqua</i>	6-10 x 4-8	E	Well Drained	Light to Part Shade
Gardenia	<i>Gardenia jasminoides</i>	4-8 x 4-8	E	Well Drained	Sun to Light Shade
Winterberry*	<i>Ilex verticillata</i>	6-10 x 6-10	D	Moist to Well Drained	Sun to Light Shade
Banana Shrub	<i>Michelia figo</i>	6-8 x 6-8	E	Well Drained	Sun to Part Shade
Nandina, Heavenly Bamboo	<i>Nandina domestica</i>	5-8 x 3-4	E	Well Drained	Sun to Part Shade
Dwarf Nandina	<i>Nandina domestica</i> 'Firepower', 'Moon Bay',	2-4 x 1-3	E	Well Drained	Sun to Part Shade
Tea Olive, Osmanthus	<i>Osmanthus fragrans</i> <i>Osmanthus x fortunei</i>	10-15 x 10-15	E	Well Drained	Sun to Part Shade
Double Reeves Spirea	<i>Spirea cantoniensis</i> 'Lanceata'	4-6 x 4-6	D	Well Drained	Sun
Cleyera	<i>Ternstroemia gymnanthera</i>	8-12 x 5-6	E	Well Drained	Sun to Full Shade
Walter's Viburnum*	<i>Viburnum obovatum</i>	4-12 x 4-10	E	Moist to Well Drained	Sun

Common Name	Botanical Name	Height x Spread (ft)	Evergreen/ Deciduous	Soil	Exposure
Tinus Viburnum, Laurustinus	<i>Viburnum tinus</i>	5-7 x 5-7	E	Well Drained	Sun to Part Shade
Weigela	<i>Weigela florida</i>	4-6 x 4-6	D	Well Drained	Sun to Light Shade

## VINES

### Vines—***Moderately Salt Tolerant***

Common Name	Botanical Name	Height	Evergreen/ Deciduous	Soil	Exposure
Climbing Fig	<i>Ficus pumila</i>	30'+	E	Well Drained	Sun to Shade
<u>Carolina Jessamine*</u>	<i>Gelsemium sempervirens</i>	10'-20'	E	Moist to Well Drained	Sun to Pt. Shade
English Ivy	<i>Hedera helix</i>	50'+	E	Well Drained	Sun to Shade
Coral Honeysuckle*	<i>Lonicera sempervirens</i>	10'-20'	E	Moist to Well Drained	Sun to Pt. Shade
Goldflame Honeysuckle	<i>Lonicera x heckrottii</i>	10'-20'	E	Moist to Well Drained	Sun to Lt. Shade
<u>Virginia Creeper*</u>	<i>Parthenocissus quinquefolia</i>	30'+	D	Moist to Well Drained	Sun to Shade
Lady Banks' Rose	<i>Rosa banksiase</i> 'Lutea'	20'	D	Well Drained	Sun to Lt. Shade
<u>Confederate Jasmine</u>	<i>Trachelospermum jasminoides</i>	15'	E	Well Drained	Sun
Fatshedera	X <i>Fatshedera lizei</i>	8'	E	Moist to Well Drained	Pt. Shade to Shade

## PALMS

### Palms—***Highly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft.)	Soil	Exposure
Dwarf Palmetto*	<i>Sabal minor</i>	4-6 x 4-6	Moist to Well Drained	Sun to Part Shade
<u>Cabbage Palm, Palmetto*</u>	<i>Sabal palmetto</i>	10-20 x 10-15	Well Drained	Sun
<u>Saw Palmetto*</u>	<i>Serenoa repens</i>	3-5 x 4-8	Moist to Well Drained	Sun to Part Shade

### Palms—***Moderately Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft.)	Soil	Exposure
<u>Pindo Palm, Jelly Palm</u>	<i>Butia capitata</i>	10-15 x 10-15	Well Drained	Sun
<u>Mediterranean Fan Palm</u>	<i>Chamaerops humilis</i>	5-6 x 5-6	Well Drained	Sun to Light Shade
King Sago Emperor Sago	<i>Cycas revoluta</i> <i>Cycas taitungensis</i>	4-8 x 6 4-6 x 10	Well Drained	Sun to Part Shade
Needle Palm*	<i>Rhapidophyllum hystrix</i>	5-10 x 5-10	Well Drained	Sun to Part Shade
Chinese Windmill Palm	<i>Trachycarpus fortunei</i>	10-20 x 6-12	Well Drained	Sun to Part Shade

## Ornamental Grasses—*Highly Salt Tolerant*

Common Name	Botanical Name	Height x Spread	Soil Conditions	Exposure
<u>Bamboo Grass</u>	<i>Cortaderia selloana</i>	8' x 6'	Moist to Well Drained	Full Sun
<u>Lyme Grass</u>	<i>Leymus arenarius</i>	2' x 4'	Well Drained to Xeric	Full Sun
<u>Maiden Grass</u>	<i>Miscanthus sinensis</i>	4'-8' x 3'-6'	Moist to Well Drained	Full Sun
<u>Muhly Grass*</u>	<i>Muhlenbergia capillaris</i>	3' x 3'	Well Drained to Xeric	Full Sun
<u>Bitter Panicum*</u>	<i>Panicum amarum</i>	3' x 2'	Well Drained to Xeric	Full Sun
<u>Sand Cordgrass*</u>	<i>Spartina bakeri</i>	3' x 3'	Well Drained	Full Sun

## Ornamental Grass—*Slightly Salt Tolerant*

Common Name	Botanical Name	Height x Spread	Soil Conditions	Exposure
<u>Panic Grass*</u>	<i>Panicum virgatum</i>	4'-8' x 2'-4'	Moist to Well Drained	Full Sun
<u>Fountain Grass</u>	<i>Pennisetum alopecuroides</i>	3' x 2'	Moist to Well Drained	Full Sun

# PERENNIALS

## Perennials—*Highly Salt Tolerant*

Common Name	Botanical Name	Height x Spread (ft.)	Exposure	Soil
<u>Blanket Flower, Gaillardia*</u>	<i>Gaillardia pulchella</i>	1-2 x 1-2	Sun	Well Drained to Xeric
<u>Daylily</u>	<i>Hemerocallis</i> species and hybrids	1-4 x 1-4	Sun/Partial Shade	Moist to Well Drained
<u>Lantana</u>	<i>Lantana camara</i> <i>Lantana montevidensis</i>	2-4 x 3-6	Sun	Well Drained to Xeric
<u>Prickly Pear Cactus*</u>	<i>Opuntia compressa</i>	1-2 x 2-3	Sun	Well Drained to Xeric
<u>Lavender Cotton</u>	<i>Santolina chamaecyparissus</i>	1-2 x 2	Sun	Well Drained
<u>Seaside Goldenrod*</u>	<i>Solidago sempervirens</i>	4-6 x 3-4	Sun	Well Drained to Xeric

## Perennials—*Moderately Salt Tolerant*

Common Name	Botanical Name	Height x Spread (ft.)	Exposure	Soil
<u>Fern Leaf Yarrow</u>	<i>Achillea filipendulina</i>	3-4 x 2-3	Sun	Well Drained
<u>Common Yarrow</u>	<i>Achillea millefolium</i>	2-3 x 3	Sun	Well Drained to Xeric
<u>Agapanthus</u>	<i>Agapanthus africanus</i>	2-4 x 2	Sun to Part Shade	Well Drained

Common Name	Botanical Name	Height x Spread (ft.)	Exposure	Soil
Sea Thrift	<i>Armeria maritima</i>	1 x 1	Sun to Part Shade	Well Drained
<u>Butterfly Weed*</u>	<i>Asclepias tuberosa</i>	2-3 x 2-3	Sun	Well Drained to Xeric
<u>Asparagus Fern</u>	<i>Asparagus densiflorus</i> 'Sprengeri'	2-3 x 2-3	Sun to Part Shade	Well Drained
<u>Crinum Lily</u>	<i>Crinum</i> species and hybrids	2-4 x 2-4	Sun to Part Shade	Moist to Well Drained
<u>Mexican Heather</u>	<i>Cuphea hyssopifolia</i>	1 x 2	Sun	Well Drained
<u>Hardy Ice Plant</u>	<i>Delosperma cooperi</i> <i>Delosperma nubigenum</i>	6" x 1-2	Sun	Well Drained to Xeric
<u>Cheddar Pinks, Dianthus</u>	<i>Dianthus gratianopolitanus</i>	6"-1 x 1-2	Sun	Well Drained to Xeric
<u>Hummingbird Plant</u>	<i>Dicliptera suberecta</i>	1-2 x 3-4	Sun	Well Drained
<u>Firebush*</u>	<i>Hamelia patens</i>	3-5 x 3-4	Sun	Well Drained
Hardy Ginger Lily	<i>Hedychium</i> species and hybrids	4-6 x 3-5	Sun to Part Shade	Moist to Well Drained
<u>Candytuft</u>	<i>Iberis sempervirens</i>	6"-1 x 2-3	Sun	Well Drained
<u>Red False Aloe</u>	<i>Hesperaloe parviflora</i>	3-4 x 2-4	Sun	Well Drained to Xeric
<u>Turk's Cap*</u>	<i>Malvaviscus drummondii</i>	3-4 x 3-4	Sun	Well Drained
Nippon Daisy	<i>Nipponanthemum nipponicum</i>	2-3 x 2-3	Sun	Well Drained
Seashore Mallow*	<i>Kosteletzkya virginica</i>	4-6 x 3-4	Sun to Part Shade	Moist to Well Drained
<u>Firecracker Plant</u>	<i>Russelia equisetiformis</i>	3-4 x 3-4	Sun	Well Drained
Purple Heart	<i>Setcreasea pallida</i>	1 x 2	Sun to Light Shade	Well Drained
<u>Hen and Chicks</u>	<i>Sempervivum tectorum</i>	6"-1 x 1	Sun	Well Drained to Xeric
<u>Society Garlic</u>	<i>Tulbughia violacea</i>	1 x 1	Sun	Well Drained

Perennials—***Slightly Salt Tolerant***

Common Name	Botanical Name	Height x Spread (ft.)	Exposure	Soil
Angel's Trumpets	<i>Brugmansia</i>	4-6 x 4-6	Sun to Part Shade	Well Drained
Canna Lily	<i>Canna</i> hybrids	4-8 x 2-6	Sun to Part Shade	Moist to Well Drained
Holly Fern	<i>Cyrtomium falcatum</i>	1-2 x 1-2	Part Shade to Shade	Moist to Well Drained
Golden Dewdrop	<i>Duranta erecta</i>	3-5 x 3-5	Sun to Part Shade	Well Drained
Purple Coneflower*	<i>Echinacea purpurea</i>	3-5 x 2-4	Sun to Part Shade	Well Drained
Hardy Hibiscus*	<i>Hibiscus moscheutos</i> <i>Hibiscus coccineus</i>	4-6 x 4-6	Sun to Light Shade	Moist to Well Drained

Common Name	Botanical Name	Height x Spread (ft.)	Exposure	Soil
Hosta	<i>Hosta</i> species and hybrids	1-3 x 1-3	Part to Full Shade	Well Drained
<u>Red Hot Poker</u>	<i>Kniphofia</i> species and hybrids	2-4 x 1-3	Sun	Well Drained
Daffodil	<i>Narcissus</i>	1 x 1	Sun to Part Shade	Well Drained
Leadwort, Blue jasmine	<i>Plumbago auriculata</i>	3-4 x 3-4	Sun	Well Drained
Dwarf Mexican Petunia	<i>Ruellia brittoniana</i> 'Katie'	6" x 1	Sun to Light Shade	Well Drained
<u>Autumn Sage*</u>	<i>Salvia greggii</i> <i>Salvia microphylla</i>	2-4 x 2-4	Sun to Light Shade	Well Drained
Princess Flower	<i>Tibouchina urvilleana</i>	3-5 x 3-5	Sun to Light Shade	Well Drained
<u>Common Thyme</u>	<i>Thymus vulgaris</i>	1 x 1	Sun	Well Drained
Verbena*	<i>Verbena canadensis</i>	1 x 2-3	Sun to Light Shade	Moist to Well Drained

## TURF GRASSES

Common Name	Salt Tolerance	Drought Tolerance	Shade Tolerance	Maintenance Level	Fertilizer Requirements	Wear Tolerance
Centipede	Slight – high soil pH often a problem for centipede in coastal sites	Moderate	Poor	Low	Very Low	Good
St. Augustine	Moderate	Low	Very Good	Low - Moderate	Moderate	Good
Zoysia	High	High	Good	Moderate	Moderate	Excellent
Common Bermuda	High	High	Very Poor	High	High	Excellent
Hybrid Bermuda	High	High	Very Poor	Very High	Very High	Excellent
Seashore Paspalum	Very High – tolerates irrigation w/ saline water	Moderate	Poor	Moderate	Moderate	Good

For more information about **Seashore Paspalum** see the following online factsheet:  
Seashore Paspalum for Florida Lawns— <http://edis.ifas.ufl.edu/EP059>

For complete **information** about turf grass care and selection, see the individual lawn maintenance calendars and other publications available from North Carolina Cooperative Extension at your local NC Cooperative Extension office or the **NCSU TurfFiles** website: [www.turffiles.ncsu.edu](http://www.turffiles.ncsu.edu)



## Drought Tolerant Perennials

The following drought tolerant perennials perform well in sandy, poor soils. Though they are not known to tolerate salt spray, they are recommended for coastal gardens when planted in sites sheltered from salt spray.

Common Name	Scientific Name
'Blue Fortune' Hyssop	<i>Agastache</i> x 'Blue Fortune'
Arkansas Blue Star*	<i>Amsonia hubrichtii</i>
Texas Firecracker*	<i>Anisacanthus wrightii</i>
'Powis Castle' Artemisia	<i>Artemisia</i> x 'Powis Castle'
False Wild Indigo*	<i>Baptisia</i> species and hybrids
Wine Cups*	<i>Callirhoe involucrata</i>
Threadleaf Coreopsis*	<i>Coreopsis verticillata</i>
Gaura*	<i>Gaura lindheimeri</i>
Russian Sage	<i>Perovskia</i> hybrids
Moss Pinks*	<i>Phlox subulata</i>
'Goldsturm' Rudbeckia*	<i>Rudbeckia fulgida</i> 'Goldsturm'
Mexican Bush Sage	<i>Salvia leucantha</i>
'Indigo Spires' Salvia	<i>Salvia</i> x 'Indigo Spires'
Stonecrops	<i>Sedum</i> species
Lamb's Ear	<i>Stachys byzantina</i>

## Salt Tolerant Annuals

Most annuals do not tolerate salt spray but the following have proven to tolerant moderate levels. Most are perennials in warmer climates but are usually killed by the average winter temperatures in this area and so are best grown as annuals. In addition to those listed below, Allamanda, Bouganvilla and Mandevilla vines all tolerate moderate levels of salt spray, though are not hardy in this climate (USDA Hardiness zone 8a).

Common Name	Scientific Name
Baby Sun Rose	<i>Aptenia cordifolia</i>
Blue Daze	<i>Evolvulus glomeratus</i>
Joseph's Coat	<i>Alternanthera ficoidea</i>
Vinca, Periwinkle	<i>Catharanthus roseus</i>
Pentas	<i>Pentas lanceolata</i>
Moss Rose	<i>Portulaca grandiflora</i>
Coleus	<i>Solenostemon</i> hybrids

## Drought Tolerant Annuals

The following annuals do not have any known salt spray tolerance but do grow well even in sandy, poor soils and are therefore recommended for planting in coastal gardens in sheltered sites.

Common Name	Scientific Name
Wheat Celosia	<i>Celosia spicata</i>
Globe Amaranth	<i>Gomphrena globosa</i>
Melampodium	<i>Melampodium padulosum</i>
Porterweed	<i>Stachytarpheta jamaicensis</i>
Mealycup Sage*	<i>Salvia farinacea</i>
Mexican Sunflower	<i>Tithonia rotundifolia</i>
Narrow Leaf Zinnia	<i>Zinnia angustifolia</i>

# GROUNDCOVERS

14

## Groundcovers—*Highly Salt Tolerant*

Common Name	Botanical Name	Height	Exposure	Soil Conditions
Winter Creeper	<i>Euonymus fortunei</i>	6"-2'	Full Sun to Full Shade	Well Drained
'Blue Pacific' Juniper	<i>Juniperus conferta</i> 'Blue Pacific'	12"-18"	Full Sun	Well Drained to Xeric
Spreading Liriope	<i>Liriope spicata</i>	12"	Full Sun to Full Shade	Moist to Well Drained
Mondograss	<i>Ophiopogon japonicus</i>	6"-10"	Part to Full Shade	Well Drained
Creeping Rosemary	<i>Rosmarinus officinalis</i> 'Prostratus'	12"-18"	Full Sun	Well Drained to Xeric
Golden Stonecrop	<i>Sedum acre</i>	4"- 6"	Full Sun to Light Shade	Well Drained

## Groundcovers—*Moderately Salt Tolerant*

Common Name	Botanical Name	Height	Exposure	Soil Conditions
Beach Wormwood*	<i>Artemisia stelleriana</i>	6"- 12"	Full Sun	Well Drained to Xeric
Silver and Gold	<i>Chrysanthemum pacificum</i>	12"-18"	Full Sun	Well Drained
Alaerian Ivy	<i>Hedera canariensis</i>	12"	Light to Full Shade	Well Drained
English Ivy	<i>Hedera helix</i>	6"-12"	Part to Full Shade	Well Drained
Creeping Juniper*	<i>Juniperus horizontalis</i>	10"-12"	Full Sun	Well Drained to Xeric
Liriope	<i>Liriope muscarii</i>	12"- 18"	Light to Full Shade	Moist to Well Drained
Star Jasmine	<i>Trachelospermum asiaticum</i>	6"-8"	Light to Part Shade	Well Drained

## Groundcovers—*Slightly Salt Tolerant*

Common Name	Botanical Name	Height	Exposure	Soil Conditions
Cast Iron Plant	<i>Aspidistra elatior</i>	3'	Part to Full Shade	Well Drained
Beach St. John's Wort*	<i>Hypericum reductum</i>	12"	Full Sun	Well Drained to Xeric
Periwinkle, Vinca	<i>Vinca minor</i>	6"	Light to Full Shade	Moist to Well Drained

For more information about each plant, including recommended varieties for Brunswick County landscapes, visit the **Recommended Plants Lists** on the Brunswick County Cooperative Extension website, <http://brunswick.ces.ncsu.edu/>.

Or visit the **NCSU Urban Horticulture** website, [www.ncstate-plants.net](http://www.ncstate-plants.net) and click on the **Plant Fact Sheets** link to access hundreds of fact sheets with complete details about each plant, including images.

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# Plants for Rain Gardens

## Recommended for Southeastern North Carolina

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*Charlotte Glen, Horticulture Agent,  
North Carolina Cooperative Extension – Pender County Center*

Soil conditions in rain gardens alternate between wet and dry, making them tough places for many plants to grow. The following plants are adapted to these conditions, though some plants will tolerate more moisture than others. Each plant is marked according to its flooding tolerance, with **3**'s being tolerant of longer flooding, **2**'s only tolerating brief flooding, and **1**'s indicate plants that tolerant extended drought once established.

All of these plants are native to the southeastern United States in wetland habitats and most are readily available at local nurseries. Wetland plants can generally grow well in moist or well-drained soils, whereas plants adapted to dry soils rarely survive in soggy conditions. How wet a rain garden stays will vary considerably depending on the site where it is installed. Rain gardens created on sandy soils will rarely hold water for more than a few hours. On these sites it is most important to choose plants for their drought tolerance. Rain gardens created on loamy or silty soils could pond water for 1-2 days (if your site ponds water for more than 3 days, you should consider creating a wetland). On these sites, choosing plants tolerant of extended flooding is critical to success.

Remember you are not limited to planting just within the excavated area! Extending plantings around this area will help the rain garden to blend in with the overall landscape. Any plants adapted to the site conditions can be used outside of the excavated area.

For more information on designing rain gardens and bioretention areas, refer to the following NCSU publication: Designing Rain Gardens (Bioretention Areas), available from your local NC Cooperative Extension office or online at:  
[http://legacy.ncsu.edu/classes-a/bae/cont\\_ed/bioretention/lecture/design\\_rain.pdf](http://legacy.ncsu.edu/classes-a/bae/cont_ed/bioretention/lecture/design_rain.pdf)

## **Large Trees (over 30' tall)**

### **Deciduous**

Red Maple (2) – *Acer rubrum*  
River Birch (1,3) – *Betula nigra*  
Green Ash (3) – *Fraxinus pennsylvanica*  
Black Gum (2) – *Nyssa sylvatica*  
Willow Oak (1,2) – *Quercus phellos*  
Willows (3) – *Salix* species  
Bald Cypress (1,3) – *Taxodium distichum*  
Pond Cypress (1,3) – *Taxodium ascendens*  
Nutall Oak (1,2) – *Quercus nuttallii*

### **Evergreen**

Atlantic White Cedar (1,3) – *Chamaecyparis thyoides*  
Southern Magnolia (1,2) – *Magnolia grandiflora*  
Longleaf Pine (1,2) – *Pinus palustris*  
Swamp Laurel Oak (3) – *Quercus laurifolia*

## **Small Trees (under 30' tall)**

### **Deciduous**

Red Buckeye (2) – *Aesculus pavia*  
Ironwood (1,3) – *Carpinus caroliniana*  
Redbud (1,2) – *Cercis canadensis*  
Fringe Tree (2) – *Chionanthus virginicus*  
Washington Hawthorn (3) – *Crataegus phaenopyrum*  
Possumhaw (1,3) – *Ilex decidua*

### **Evergreen**

Dahoon Holly (1,2) – *Ilex cassine*  
American Holly (1,2) – *Ilex opaca*  
Red Cedar (1,2) – *Juniperus virginiana*  
Sweet Bay (3) – *Magnolia virginiana*  
Devilwood (1,2) – *Osmanthus americanus*  
Red Bay (1,2) – *Persea borbonia*

Evergreen shrubs that can be grown as small trees include Yaupon, Wax Myrtle, and Anise Shrub.

## **Shrubs**

### **Deciduous**

Chokeberry (1,3) – *Aronia arbutifolia*  
Beautyberry (2) – *Callicarpa americana*  
Sweet Shrub (2) – *Calycanthus floridus*  
Buttonbush (3) – *Cephalanthus occidentalis*  
Pepperbush (2) – *Clethra alnifolia*  
Strawberry Bush (2) – *Euonymus americanus*  
Fothergilla (2) – *Fothergilla gardenii*  
Winterberry (3) – *Ilex verticillata*  
Virginia Willow (3) – *Itea virginica*  
Spicebush (2) – *Lindera benzoin*  
Possumhaw (3) – *Viburnum nudum*  
Dusty Zenobia (2) – *Zenobia pulverulenta*

Shrubs continued. . . .

### **Evergreen**

- Florida Leucothoe (2) – *Agarista populifolia*
- Inkberry (2) – *Ilex glabra*
- Yaupon (1,2) – *Ilex vomitoria*
- Florida Anise Shrub (3) – *Illicium floridanum*
- Anise Shrub (1,2) – *Illicium parviflorum*
- Coastal Leucothoe (2) – *Leucothoe axillaris*
- Wax Myrtle (1,2) – *Myrica cerifera*
- Dwarf Palmetto (3) – *Sabal minor*

### **Perennials**

- Blue Star (3) – *Amsonia tabernaemontana*
- Lady Fern (2) – *Athyrium filix-femina*
- Butterflyweed (1) – *Asclepias tuberosa*
- Swamp Milkweed (3) – *Asclepias incarnata*
- Climbing Aster (3) – *Aster carolinianus*
- False Indigo (1,2) – *Baptisia species*
- Boltonia (3) – *Boltonia asteriodes*
- Turtlehead (3) – *Chelone glabra*
- Green and Gold (2) – *Chrysogonum virginianum*
- Mouse Ear Coreopsis (2) – *Coreopsis auriculata*
- Tickseed (1,2) – *Coreopsis lanceolata*
- Swamp Coreopsis (2) – *Coreopsis rosea*
- Joe Pye Weed (3) – *Eupatorium dubium*
- Swamp Sunflower (3) – *Helianthus angustifolius*
- Swamp Mallow (3) – *Hibiscus moscheutos*
- Texas Star (3) – *Hibiscus coccineus*
- Blue Flag Iris (3) – *Iris virginica*
- Seashore Mallow (3) – *Kosteletskyia virginica*
- Gayfeather (2) – *Liatris spicata*
- Cardinal Flower (3) – *Lobelia cardinalis*
- Cinnamon Fern (3) – *Osmunda cinnamomea*
- Royal Fern (3) – *Osmunda regalis*
- Garden Phlox (2) – *Phlox paniculata*
- Moss Pinks (1,2) – *Phlox subulata*
- Rudbeckia (1,2) – *Rudbeckia fulgida*
- Green Headed Coneflower (3) – *Rudbeckia laciniata*
- Goldenrod (3) – *Solidago rugosa*
- Stoke's Aster (2) – *Stokesia laevis*
- Ironweed (3) – *Vernonia novaboracensis*
- Verbena (1,2) – *Verbena canadensis*

### **Ornamental Grasses**

- River Oats (1,3) – *Chasmanthium latifolium*
- Muhly Grass (1,2) – *Muhlenbergia capillaris*
- Panic Grass (1,3) – *Panicum virgatum*
- Indiangrass (1,2) – *Sorghastrum nutans*

## **Sedges and Rushes**

Lurid Sedge (3) – *Carex lurida*  
Fringed Sedge (3) – *Carex crinita*  
Southern Waxy Sedge (3) – *Carex glaucescens*  
White-topped Sedge (3) – *Rhynchospora latifolia*  
Woolgrass (3) – *Scirpus cyperinus*

Non-native perennials and ornamental grasses suitable for rain gardens include: Liriope (1,2) (*Liriope muscarii* and *L. spicata*), Siberian Iris (2) (*Iris sibirica*), Daylily (1,2) (*Hemerocallis* hybrids), Rain Lilies (3) (*Zephyranthes* species), Crinum Lilies (3) (*Crinum* species), Japanese Painted Fern (2) (*Athyrium nipponicum*) and Maiden Grass (1,2) (*Miscanthus* cultivars).

- 1 Plants that, once established\*, can withstand considerable drought ( 3-4 weeks without rainfall)**
- 2 Plants that grow best in moist to average soils and will only tolerate short periods (1-2 days) of flooding.**
- 3 Plants that will tolerate longer periods of flooding (3-5 days), but will also grow in moist to average soils.**

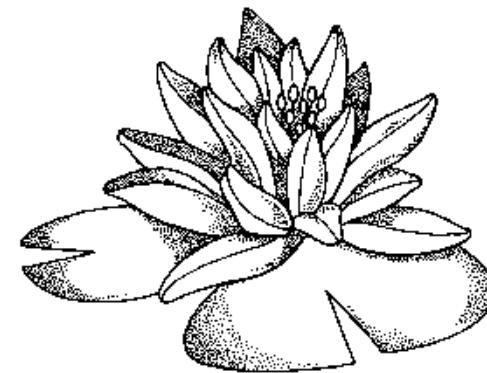
\*Establishment usually takes 1-2 years for trees and shrubs and 1 year for perennials.

*For more detailed information and images of each plant, visit the Plant Fact Sheets available on NCSU's Urban Horticulture website:*

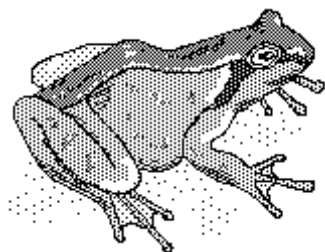
**[www.ncstate-plants.net](http://www.ncstate-plants.net)**

# Wetland Plants for Coastal NC

Hundreds of species of wetland plants occur throughout North Carolina. Many produce attractive flowers and foliage and are valuable sources of food and shelter for birds, butterflies and other wildlife. The following lists are suggested plants suitable for use in wetlands plantings. All are native to Southeastern North Carolina and many occur throughout the state. All of these plants can be



purchased at specialty native plant nurseries, though a few are commonly used as ornamentals and are widely available from local garden centers (widely available plants are marked with a star\*).



## Floating Rooted Aquatic Plants

Floating rooted aquatic plants grow with their roots in the mud while their leaves and flowers float at or stick up above the water's surface. These aggressive growers prefer to grow in 3'-6' of standing water and can quickly fill a small pond or wetland. In the wild, their spread is usually limited by varying water levels. These plants should only be planted in large wetlands with varying water depths that will limit their spread. If planted in small ponds, be aware they can quickly cover areas of water between 2' and 10' deep.

Common Name	Scientific Name	Comments
American Lotus	<i>Nelumbo lutea</i>	Bold plant with foliage and flower stems standing 4'-6' above water's surface. Large, showy yellow flowers produced throughout summer.
Spatterdock, Cow-lily	<i>Nuphar luteum</i>	Heart shaped leaves float on water's surface. 1"-2" wide, globe shaped, yellow flowers are born throughout summer.
Fragrant Water-lily	<i>Nymphaea odorata</i>	Rounded, heart shaped leaves float on water's surface. Large, white, sweetly fragrant flowers open throughout summer.
Floating Hearts	<i>Nymphoides aquatica</i>	Large heart shaped leaves float on water's surface. Dainty, 5-petaled, 1"-2" white flowers emerge among the foliage and stand up a few inches above water's surface.





## Emergent Aquatic Perennials

This group of plants prefers to grow in 3” to 6” of standing water, with their crowns and roots in the mud but their leaves and flowers emerging up above the water. They can tolerate periods of dryer conditions but in general need saturated soils to grow best. They are perfect for growing at the edges of ponds or in shallow standing water.

Common Name	Scientific Name	Exposure	Comments
Duck Potato*	<i>Sagittaria latifolia</i>	sun to light shade	Tough emergent aquatic with arrowhead shaped leaves and spikes of white flowers produced throughout summer. Reproduces rapidly.
Arrow Arum	<i>Peltandra virginica</i>	sun to part shade	Elegant arrowhead shaped leaves and interesting green flowers on a clump forming plant.
Pickernelweed*	<i>Pontederia cordata</i>	sun to part shade	Upright plant producing numerous 3' tall spikes topped with blue flowers all summer. Tough and attractive.
Lizard's Tail*	<i>Saururus cernuus</i>	sun to part shade	Spreading perennial that will grow in shallow standing water and wet soils. Pendant spikes of white flowers in late spring and summer.
Blue Flag*	<i>Iris virginica</i>	sun to part shade	Blue flowering, 3' tall iris that prefers to grow in shallow standing water or water's edge.

## Submerged and Free Floating Aquatics

Like floating rooted aquatics, these two types of aquatic plants require pools of permanently standing water to grow successfully. Though they are not necessary for the success wetland planting, their inclusion will certainly add interest and increase habitat value. Submerged plants grow completely underwater, though some do produce small flowers that float at the water's surface. They help to keep the water oxygenated and provide habitat for fish. Examples of native submerged aquatics include Eelgrass (*Vallisneria americana*), Coontail (*Ceratophyllum demersum*), and Common Water Nymph (*Najas guadalupensis*). Free floating aquatics float on top of the water with their roots hanging down into the water below. These plants tend to increase rapidly and can quickly cover the surface of a pond or wetland. Native species include Carolina Water Fern (*Azolla caroliniana*) and Bladderwort (*Utricularia inflata*).

**CAUTION: Extreme care should be taken when introducing free-floating aquatics so that only native species are used. Many invasive non-native species are available that are or could become noxious weeds.**

## Sedges and Rushes

This large family of grass like plants includes many different moisture loving species. Most will grow happily in shallow standing water or permanently moist soils, though many can tolerate periods of dryer conditions. Sedges and rushes should be used as fillers in the backyard wetland. They are excellent for stabilizing soil and can be used in large sweeps for visual interest. Some of the more attractive species are listed below.



Common Name	Scientific Name	Comments
Hop Sedge	<i>Carex lupulina</i>	2'-3' tall sedge producing dramatic clusters of pineapple shaped light green flowers in early summer.
Soft Rush	<i>Juncus effusus</i>	Common rush found throughout NC. 2'-3' tall with dark green spiky foliage. Green flowers age to brown seed pods throughout summer.
White-top Sedge	<i>Rhynchospora latifolia</i>	Showy 2' tall, spreading sedge bearing attractive white bracted flowers throughout summer.
Woolgrass	<i>Scirpus cyperinus</i>	Large, 3'-4' tall and wide clump forming bulrush producing wooly green flower heads in summer that age to an attractive rusty brown as seeds mature.



## Moisture Loving Perennials

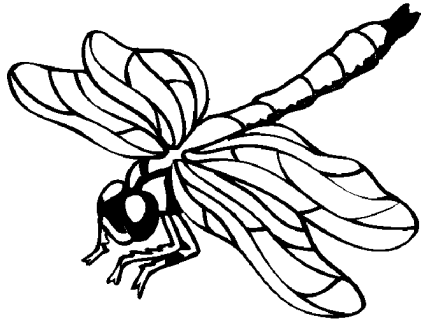
Many of our most attractive native perennials grow in moist soils or wetlands. These plants return year after year to bring color and seasonal variety to wetlands areas. The flowers of many are excellent nectar sources for butterflies and hummingbirds. Some of these plants increase rather quickly by spreading roots known as rhizomes and stolons while others tend to stay in one place forming large clumps. The growth habit of each is noted below, as well as the average mature size (height x width).

Common Name	Scientific Name	Size	Exposure	Growth	Comments
Swamp Milkweed*	<i>Asclepias incarnata</i>	3'-4' x 2'-3'	sun - part shade	clumping	Pink flowers in early summer. Larval host food of monarch butterflies.
Turtlehead	<i>Chelone glabra</i>	3' x 3'	sun - part shade	spreading	Fall bloomer with spikes of white snapdragon shaped flowers.
Swamp Tickseed	<i>Coreopsis helianthoides</i>	2'-3' x 2'-3'	sun - part shade	spreading	Fall bloomer producing masses of golden sunflower shaped blossoms.

Perennials continued . . .

Common Name	Scientific Name	Size	Exposure	Growth	Comments
Plume Grass	<i>Erianthus giganteus</i>	7'-10' x 3'-5'	sun - light shade	clumping	Dramatic tall grass with showy flower plumes in fall.
Hatpins, Pipewort	<i>Eriocaulon decangulare</i>	1'-2' x 1'-2'	sun - light shade	clumping	Small white ball shaped flowers on the end of straight stems actually do resemble hatpins. Flowers all summer.
Joe Pye Weed*	<i>Eupatorium fistulosum</i>	5'-7' x 3'-4'	sun - part shade	spreading	Masses of rosy-mauve flowers in late summer through fall, attracts hundreds of butterflies.
Swamp Sunflower*	<i>Helianthus angustifolius</i>	5'-7' x 3'-4'	sun - part shade	spreading	6' + towers topped with 3" wide golden sunflowers in fall - attracts butterflies.
Red Star Hibiscus*	<i>Hibiscus coccineus</i>	4'-6' x 3'-4'	sun - part shade	clumping	Tough, clump forming, sturdy plant with star shaped red flowers in summer.
Rose Mallow*	<i>Hibiscus moscheutos</i>	4'-6' x 3'-4'	sun - part shade	clumping	Tough, durable plants with huge white, pink or rose flowers in summer.
Seashore Mallow	<i>Kosteletskyia virginica</i>	4'-6' x 3'-4'	sun - part shade	clumping	Tall airy plants are covered with 2"-3" pink flowers all summer.
Cardinal Flower*	<i>Lobelia cardinalis</i>	2'-4' x 1'-2'	sun - part shade	clumping	Tall spikes of crimson red flowers in late summer and fall - attracts hummingbirds and butterflies .
Cinnamon Fern	<i>Osmunda cinnamomea</i>	3'-5' x 2'-3'	sun - part shade	clumping	Dramatic clump forming fern with rusty fiddleheads in spring.
Royal Fern	<i>Osmunda regalis</i>	3'-5' x 2'-3'	sun - part shade	clumping	Dramatic clump forming fern with bold textured foliage.
Switch Grass	<i>Panicum virgatum</i>	3'-4' x 2'-3'	sun - part shade	spreading	Upright fall blooming grass whose airy seedheads persist through winter.
Green Headed Coneflower	<i>Rudbeckia laciniata</i>	4'-6' x 3'-4'	sun - part shade	clumping	Yellow flowers in summer on tall plants. Good for butterflies.
Goldenrod	<i>Solidago rugosa</i>	3'-5' x 2'-3'	sun - part shade	spreading	Multiple spikes of golden yellow flowers in late summer and fall.
Ironweed	<i>Vernonia noveboracensis</i>	5'-7' x 3'-4'	sun - part shade	spreading	Royal purple flowers atop tall stems in late summer through fall - attracts butterflies.
Atamasco Lily	<i>Zephyranthes atamasco</i>	1' x 1'	sun - part shade	clumping	Spring bloomer with large white trumpet shaped flowers. Grows from bulbs.

\* = Denotes plants that are commonly available at local garden centers.



## Moisture Loving Woody Plants

Woody plants are a valuable component of a any wetland, providing shelter for nesting birds, berries for wildlife, and large root systems that hold soil in place. The various wetlands that are found across our state are inhabited by many different species of trees and shrubs. Most of these plants are tough and adaptable, tolerating periods of flooding as well as drier conditions. Many will grow just as happily in average, well-drained soil as they will in wet boggy areas. The majority are deciduous plants (D) that loose their leaves each fall but a few are evergreen (E). The mature size is listed as height (H) x width (W).

### Trees

Common Name	Scientific Name	E/D	Exposure	H x W	Comments
Red Maple*	<i>Acer rubrum</i>	D	sun to light shade	40'-60' x 20'-30'	Medium to large tree with excellent fall color. Produces showy red flowers and seedpods in early spring.
Pawpaw	<i>Asimina triloba</i>	D	sun to part shade	15'-25' x 10'-20'	Suckering multi-stemmed shrub or small tree producing sweet banana like fruit in autumn.
River Birch*	<i>Betula nigra</i>	D	sun to light shade	30'-40' x 15'-20'	Adaptable tree that produces attractive light colored flaky bark. Often grows with multiple trunks.
Redbud*	<i>Cercis canadensis</i>	D	sun to part shade	15'-25' x 10'-20'	Graceful small tree producing bright rosy purple flowers in early spring.
Atlantic White Cedar	<i>Chamaecyparis thyoides</i>	E	sun to light shade	30'-50' x 10'-20'	Tall, slender evergreen formerly used to make log cabins. Smaller growing selections are available.
Fringe Tree	<i>Chionanthus virginicus</i>	D	sun to part shade	10'-20' x 10'-15'	Large shrub or small multi-stemmed tree bearing fragrant, white flowers in early summer, followed by blue berries on female plants.
Swamp Dogwood	<i>Cornus foemina</i>	D	sun to part shade	15'-25' x 10'-20'	Large shrub or small multi-stemmed tree producing flat clusters of white flowers followed by blue berries. Excellent food source for birds.
TiTi	<i>Cyrilla racemiflora</i>	Semi E	sun to part shade	10'-20' x 10'	Large shrub or small multi-stemmed tree producing masses of tiny white flowers in drooping spikes in mid summer.

Common Name	Scientific Name	E/D	Exposure	H x W	Comments
Possumhaw	<i>Ilex decidua</i>	D	sun to light shade	15'-25' x 10'-20'	Small tree whose stems are lined with bright red berries in fall and winter.
Sweetbay*	<i>Magnolia virginiana</i>	Semi E	sun to light shade	20'-30' x 10'-15'	Small tree with large, fragrant white flowers in early summer. Often grows with multiple trunks.
Swamp Redbay	<i>Persea palustris</i>	E	sun to part shade	20'-30' x 10'-15'	Evergreen upright tree. Salt tolerant and deer resistant.
Pond Cypress	<i>Taxodium ascendens</i>	D	sun to light shade	60'-70' x 10'-20'	Columnar habit with fine textured, feathery foliage. Rusty brown fall color.
Bald Cypress*	<i>Taxodium distichum</i>	D	sun to light shade	50'-70' x 20'-30'	Majestic large tree, synonymous with Southern swamps. Amazingly adaptable and will grow in almost any soil and up to 3' of standing water.

\* = Denotes plants that are commonly available at local garden centers.

## Shrubs

Common Name	Scientific Name	E/D	Exposure	H x S	Comments
Chokeberry	<i>Aronia arbutifolia</i>	D	sun to light shade	6'-10' x 3'-5'	Upright, suckering shrub producing flat cluster of white flowers in early spring - followed by generous clusters of bright red berries in fall and winter.
Beautyberry	<i>Callicarpa americana</i>	D	sun to part shade	4'-6' x 3'-5'	Striking clusters of magenta berries line stems in late summer and fall. Best cut back to 1' in early spring.
Sweet Shrub	<i>Calycanthus floridus</i>	D	sun to part shade	5'-8' x 5'-8'	Suckering shrub bearing fragrant maroon flowers in early summer.
Buttonbush	<i>Cephalanthus occidentalis</i>	D	sun to light shade	6'-12' x 6'-12'	Interesting round clusters of small white flowers in summer attract many butterflies. Adaptable - will grow in standing water or well drained soil.
Pepperbush, Summersweet*	<i>Clethra alnifolia</i>	D	sun to light shade	4'-6' x 3'-5'	Suckering shrub with extremely fragrant spikes of white or pink flowers in summer and yellow autumn color.

<b>Common Name</b>	<b>Scientific Name</b>	<b>E/D</b>	<b>Exposure</b>	<b>H x S</b>	<b>Comments</b>
Silky Dogwood	<i>Cornus amomum</i>	D	sun to part shade	6'-10' x 6'-10'	Flat clusters of white flowers are followed in autumn by blue berries which are valuable food source for birds.
Strawberry Bush, Hearts-a-Bustin	<i>Euonymus americanus</i>	D	sun to part shade	4'-6' x 3'-5'	Common names refer the attractive red and orange seed pods that decorate this suckering shrub in autumn.
Dwarf Fothergilla	<i>Fothergilla gardenii</i>	D	sun to part shade	3'-5' x 3'-4'	Small, white, fringy, honey scented flowers in spring. Excellent yellow, orange and red fall color.
Inkberry*	<i>Ilex glabra</i>	E	Sun	5' x 5'	Evergreen shrub with small black berries in fall.
Winterberry*	<i>Ilex verticillata</i>	D	sun to light shade	6'-10' x 6'-10'	Large shrub covered with red berries all winter. Plant several to insure good pollination.
Yaupon*	<i>Ilex vomitoria</i>	E	sun to light shade	10'-20' x 5'-10'	Extremely tough and adaptable upright shrub. Stems of female plants are lined with translucent red berries in fall. Dwarf forms are available.
Virginia Sweetspire*	<i>Itea virginica</i>	D	sun to part shade	4'-6' x 3'-5'	Suckering shrub producing pendant spikes of white fragrant flowers in late spring. Exceptional autumn color.
Spicebush	<i>Lindera benzoin</i>	D	sun to part shade	6'-10' x 6'-10'	Small but attractive bright yellow flowers in early spring. Followed by red berries on female plants. Larval host plant for Spicebush Swallowtail butterflies.
Wax Myrtle*	<i>Myrica cerifera</i>	E	sun to light shade	6'-15' x 6'-12'	Tough, adaptable plant that can be grown as a shrub or small multi-stemmed tree.
Coastal Azalea	<i>Rhododendron atlanticum</i>	D	sun to part shade	3'-5' x 3'-4'	Produces clusters of white, extremely sweetly scented flowers in early spring before the leaves come out.
Swamp Honeysuckle	<i>Rhododendron viscosum</i>	D	sun to part shade	9'-15' x 6'-10'	Large native azalea producing white, fragrant flowers in early summer.
Swamp Rose	<i>Rosa palustris</i>	D	sun to light shade	5'-10' x 5'-7'	Suckering shrub bearing fragrant pink flowers in summer. Red fruits (hips) in fall.
Dwarf Palmetto	<i>Sabal minor</i>	E	sun to shade	5' x 5'	Dramatic clumping palm for outer Coastal Plains.
American Snowbell	<i>Styrax americanus</i>	D	sun to light shade	6'-10' x 5'-8'	Fine textured shrub covered in white bell shaped flowers in spring.

Common Name	Scientific Name	E/D	Exposure	H x S	Comments
Possumhaw Viburnum*	<i>Viburnum nudum</i>	D	sun to part shade	6'-10' x 6'-10'	Flat clusters of creamy white flowers are followed by cream to pink berries that mature to blue in fall. Wine and burgundy autumn color.
Honeycups	<i>Zenobia pulverulenta</i>	D	sun to light shade	3'-5' x 3'-4'	Gracefully arching shrub whose stems are laden with white bell shaped flowers in spring. Nice autumn color.

\* = Denotes plants that are commonly available at local garden centers.

## Links of Interest:

NCSU - Wetland Plant Identification: <http://ceres.cals.ncsu.edu/wetland/library/PrefaceNEW.cfm>

NCDENR - Common Wetland Plants of North Carolina: [http://www.esb.enr.state.nc.us/Wetplant/Wetland\\_Plants.htm](http://www.esb.enr.state.nc.us/Wetplant/Wetland_Plants.htm)

NCCE Consumer Horticulture Website: <http://www.ces.ncsu.edu/depts/hort/consumer/>

NCSU - Aquatic Weed Management Website: <http://www.weedscience.ncsu.edu/aquaticweeds/factsheets.html>

NCSU - Water Gardens and Weeds: <http://www.weedscience.ncsu.edu/aquaticweeds/watergarden/WATERGRD2.HTM>

NCSU - Landscaping for Wildlife with Native Plants: [http://www.ces.ncsu.edu/nreos/forest/woodland/ag-636\\_03.pdf](http://www.ces.ncsu.edu/nreos/forest/woodland/ag-636_03.pdf)

National Wildlife Federation Backyard Wildlife Habitat Program: <http://www.nwf.org/backyardwildlifehabitat/>

Natural Resources Conservation Service – Backyard Conservation: <http://www.nrcs.usda.gov/feature/backyard/>

Prepared by:  
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**North Carolina Cooperative Extension – Pender County Center**



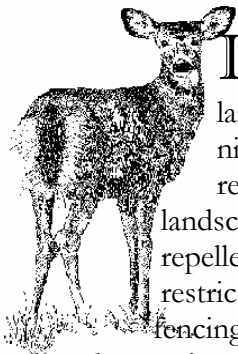
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# DEER RESISTANT PLANTS

## Recommended for Coastal Southeast Landscapes

Brunswick County Cooperative Extension

Ornamental Fact Sheet #9



Deer can wreak havoc on a landscape in a matter of just a few nights. There are many options to reduce the risk of deer damage in landscapes, such as applying repellents on a regular basis and restricting access through the use of fencing. One of the easiest ways to reduce deer damage in your yard is to landscape with plants deer prefer not to eat. This fact sheet is intended to serve as a guide for choosing landscape plants resistant to deer feeding in southeastern North Carolina. Since a starving deer will eat anything to stay alive, no plant is guaranteed!

### Deer Feeding Preferences

The plants deer prefer to eat vary from region to region and can even change seasonally. In the lists on the following pages, deer feeding preferences are classified as follows:

#### Frequently Damaged

Plants that are deer favorites. These are the first plants deer will seek out to feed on.

#### Occasionally Damaged

These are the plants deer will turn to once their favorites are depleted.

#### Seldom Damaged

Plant that deer will rarely eat unless there are no other options. Plants that are in **bold print** are extremely resistant to deer feeding.

Using a combination of a variety of methods to deter deer will give the most dependable results. To find out more about other strategies to minimize deer damage in your landscape, visit the online publications listed in the **Learn More** section at the end of this fact sheet.

### Tips on Deer and Plants

**No plant is deer proof!** When hungry, deer will eat anything to survive. During stressful times such as drought, plants that are usually avoided may be damaged.

Deer will eat almost **anything in spring**, as tender new growth emerges from plants. Deer prefer vegetation that is soft to the touch and high in water content. They especially relish **flower buds**.

**Over fertilized and over watered** plants are particularly lush and appealing to deer.

**Deer resistant does not mean deer proof!** These are plants deer prefer not to eat. Common characteristics of plants that deer prefer not to eat include:

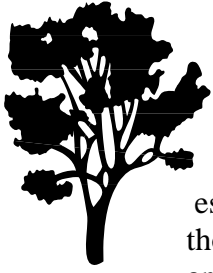
- Plants with thorny or prickly leaves or stems
- Plants with strong scents and pungent tastes, such as herbs
- Plants that are poisonous or produce thick, latex-like sap
- Plants with hairy leaves

### Table of Contents

Trees . . . . .	2
Evergreen Shrubs . . . . .	3
Palms . . . . .	3
Deciduous Shrubs . . . . .	4
Ornamental Grasses . . . . .	4
Groundcovers . . . . .	5
Ferns . . . . .	5
Vines . . . . .	5
Perennials . . . . .	6
Bulbs . . . . .	7
Annuals . . . . .	7



# LANDSCAPE TREES



**D**eer injure trees in two ways: By eating foliage and twigs, and by rubbing against the bark with their antlers, which is especially damaging to young trees or those with thin bark. Wire cylinders and other protective devices are available to protect the trunks of young trees from this type of damage.

**T**he shape and mature size of a tree will greatly determine its susceptibility to grazing damage. Damage is most common on trees that are either young and still small enough to reach, those that are low branched, or those that do not grow very large. In deer prone landscapes, trees that grow tall and hold their branches high are the best choice, though they may need to be protected until they are tall enough to be out of a deer's reach. Trees can be protected individually with wire cages, or planted in an area of the landscape that is fenced off.

\* = Plants native to the Southeastern USA

**Bold** plants are particularly resistant to deer feeding

## Frequently Damaged

Common Name	Scientific Name
Redbud*	<i>Cercis canadensis</i>
Atlantic White Cedar*	<i>Chamaecyparis thyoides</i>
Fringe Tree, Old Man's Beard*	<i>Chionanthus virginicus</i>
Crabapples	<i>Malus</i> species
Cherries and Plums	<i>Prunus</i> species
Pears	<i>Pyrus</i> species

## Occasionally Damaged

Common Name	Scientific Name
Japanese Maple	<i>Acer palmatum</i>
Red Maple*	<i>Acer rubrum</i>
Serviceberry*	<i>Amelanchier</i> species
Dogwood*	<i>Cornus florida</i>
Kousa Dogwood	<i>Cornus kousa</i>
Witch Hazel	<i>Hamamelis</i> species
'Foster's' Holly*	<i>Ilex</i> x <i>attenuata</i> hybrids
'Savannah' Holly*	
'Nellie Stevens' Holly	<i>Ilex</i> x 'Nellie Stevens'
Goldenrain Tree	<i>Koelreuteria paniculata</i>
Saucer Magnolia	<i>Magnolia soulangiana</i>
Dawn Redwood	<i>Metasequoia glyptostroboides</i>
Bradford Pear	<i>Pyrus calleryana</i>
Oaks*	<i>Quercus</i> species
Willows	<i>Salix</i> species

## Seldom Damaged

Common Name	Scientific Name
Red Buckeye*	<i>Aesculus pavia</i>
River Birch*	<i>Betula nigra</i>
Deodar Cedar	<i>Cedrus deodora</i>
Hawthorn*	<i>Crataegus</i> species
Japanese Cedar	<i>Cryptomeria japonica</i>
<b>Ginkgo</b>	<i>Ginkgo biloba</i>
<b>Honey Locust*</b>	<i>Gleditsia triacanthos</i>
<b>American Holly*</b>	<i>Ilex opaca</i>
Eastern Redcedar*	<i>Juniperus virginiana</i>
<b>Crape Myrtle</b>	<i>Lagerstroemia</i> hybrids
<b>Southern Magnolia*</b>	<i>Magnolia grandiflora</i>
<b>Sweetbay Magnolia*</b>	<i>Magnolia virginica</i>
Black Gum*	<i>Nyssa sylvatica</i>
<b>Pines*</b>	<i>Pinus</i> species
Carolina Cherrylaurel*	<i>Prunus caroliniana</i>
Japanese Flowering Cherry	<i>Prunus serrulata</i>
<b>Live Oak*</b>	<i>Quercus virginiana</i>
<b>Bald Cypress*</b>	<i>Taxodium distichum</i>
<b>Chastetree</b>	<i>Vitex agnus-castus</i>

# EVERGREEN SHRUBS

## Seldom Damaged

Common Name	Scientific Name
Abelia	<i>Abelia x grandiflora</i>
<b>Century Plant</b>	<i>Agave americana</i>
<b>Wintergreen Barberry</b>	<i>Berberis julianae</i>
Japanese Boxwood	<i>Buxus microphylla</i>
<b>Bottlebrush</b>	<i>Callistemon rigidus</i>
<b>Plum Yew</b>	<i>Cephalotaxus barringtonia</i>
<b>Eleagnus</b>	<i>Eleagnus pungens</i>
Loquat	<i>Eriobotrya japonica</i>
<b>Pineapple Guava</b>	<i>Acca sellowiana</i>
Gardenia	<i>Gardenia jasminoides</i>
Chinese Holly	<i>Ilex cornuta</i>
Inkberry	<i>Ilex glabra</i>
<b>Yaupon</b>	<i>Ilex vomitoria</i>
<b>Anise Shrub</b>	<i>Illicium</i> species
<b>Chinese Juniper</b>	<i>Juniperus chinensis</i>
Leucothoe	<i>Leucothoe</i> species
Japanese Privet	<i>Ligustrum japonicum</i>
Loropetalum	<i>Loropetalum chinensis</i>
Banana Shrub	<i>Michelia fuscata</i>
<b>Wax Myrtle</b>	<i>Myrica cerifera</i>
Nandina	<i>Nandina domestica</i>
<b>Oleander</b>	<i>Nerium oleander</i>
Tea Olive	<i>Osmanthus fragrans</i> <i>Osmanthus heterophyllus</i>
<b>Southern Yew</b>	<i>Podocarpus macrophyllus</i>
Pyracantha	<i>Pyracantha</i> species and varieties
<b>Rosemary</b>	<i>Rosmarinus officinalis</i>
Sweet Box	<i>Sarcococca</i> species
<b>Yucca</b>	<i>Yucca</i> species

## Occasionally Damaged

Common Name	Scientific Name
Camellias	<i>Camellia</i> species and varieties
Rose of Sharon	<i>Hibiscus syriacus</i>
Japanese Holly	<i>Ilex crenata</i>
Mahonia	<i>Mahonia bealei</i>
Viburnum	<i>Viburnum</i> species and varieties

## Frequently Damaged

Common Name	Scientific Name
Japanese Euonymous	<i>Euonymous japonicus</i>
Wintercreeper	<i>Euonymous fortunei</i>
Fatsia	<i>Fatsia japonica</i>
Aucuba	<i>Aucuba japonica</i>
Indian Hawthorn	<i>Raphiolepis</i> species and varieties
Pittosporum	<i>Pittosporum tobira</i>
Azaleas	<i>Rhododendron</i> species and varieties
Arborvitae	<i>Thuja occidentalis</i>

As a group, palms are **very resistant** to deer feeding. The following palms are hardy in Brunswick County and make interesting landscape additions.

### TRUNK FORMING PALMS

**Windmill Palm**, *Trachycarpus fortunei*  
**Jelly or Pindo Palm**, *Butia capitata*  
**Palmetto or Cabbage Palm\***, *Sabal palmetto*

### SHRUB FORMING PALMS

**Dwarf Palmetto\***, *Sabal minor*  
**Needle Palm\***, *Rhapidophyllum hystrix*  
**Saw Palmetto\***, *Serenoa repens*  
**Mediterranean Fan Palm**, *Chamaerops humilis*



For more information about growing hardy palms, consult the **Palm Reader**, the website of the Southeastern Palm and Exotic Plant Society:

<http://www.ces.uga.edu/agriculture/culture/palmeader.html>

\* = Plants native to the Southeastern USA

**Bold** plants are particularly resistant to deer feeding

# DECIDUOUS SHRUBS

## Frequently Damaged

Common Name	Scientific Name
Burning Bush	<i>Euonymus alata</i>
Roses	<i>Rosa</i> species and hybrids
Blueberries*	<i>Vaccinium</i> species

## Occasionally Damaged

Common Name	Scientific Name
Flowering Quince	<i>Chaenomeles speciosa</i>
Smokebush	<i>Cotinus coggyria</i>
Forsythia, Yellowbells	<i>Forsythia</i> x <i>intermedia</i>
Hydrangea	<i>Hydrangea macrophyllus</i> <i>Hydrangea paniculata</i>
Virginia Sweetspire*	<i>Itea virginica</i>
Japanese Spirea	<i>Spiraea</i> x <i>bumalda</i> , <i>Spiraea japonica</i>
Thunberg Spirea	<i>Spiraea thunbergia</i>
Viburnum	<i>Viburnum</i> species
Weigela	<i>Weigela florida</i>

## Seldom Damaged

Common Name	Scientific Name
Japanese Barberry	<i>Berberis thunbergii</i>
Butterflybush	<i>Buddleia davidii</i>
Sweetshrub*	<i>Calycanthus floridus</i>
American Beautyberry*	<i>Callicarpa americana</i>
Blue Mist Shrub	<i>Caryopteris</i> x <i>clandonensis</i>
Clethra, Pepperbush*	<i>Clethra alnifolia</i>
Deutzia	<i>Deutzia gracilis</i>
Fothergilla*	<i>Fothergilla gardenii</i>
Winter Jasmine	<i>Jasminum nudiflorum</i>
Kerria	<i>Kerria japonica</i>
Spring Flowering Spireas	<i>Spiraea cantoniensis</i> , <i>S. nipponica</i> , <i>Spiraea</i> x <i>vanhouttei</i>

\*=Plants native to the Southeastern USA

**Bold** plants are particularly resistant to deer feeding.

## ORNAMENTAL GRASSES

In general, ornamental grasses are avoided by deer and should be considered **highly resistant** to deer grazing. There are lots of different types of ornamental grasses available. Most are long lived and tough, making attractive and low maintenance additions to the landscape. They provide a nice contrast to shrubs and can be planted in mass as a groundcover. The following ornamental grasses are recommended for area landscapes:

### Korean Feather

### Reed Grass

*Calamagrostis brachytricha*

### River Oats\*

*Chasmanthium latifolium*

### Pampas Grass

*Cortaderia selloana*

### Maiden Grass

*Miscanthus sinensis*

### Pink Muhly Grass\*

*Muhlenbergia capillaris*

### Blue Muhly Grass\*

*Muhlenbergia lindheimeri*

### Panic Grass\*

*Panicum virgatum*

### Fountain Grass

*Pennisetum alopecuroides*

& *Pennisetum orientale*

### Indian Grass\*

*Sorghastrum nutans*



For more information about these and other ornamental grasses, see the plant list on ornamental grasses, available from the Brunswick County Cooperative Extension office or online at

<http://brunswick.ces.ncsu.edu/>

# VINES AND GROWDCOVERS

## Frequently Damaged

Common Name	Scientific Name
Clematis	<i>Clematis</i> species and hybrids
Wintercreeper	<i>Euonymus fortunei</i>
English Ivy	<i>Hedera helix</i>

## Occasionally Damaged

Common Name	Scientific Name
Trumpet Vine*	<i>Campis radicans</i>
Goldflame Honeysuckle	<i>Lonicera x heckrottii</i>
Clumping Liriope	<i>Liriope muscari</i>
Spreading Liriope	<i>Liriope spicata</i>
Virginia Creeper*	<i>Parthenocissus quinquefolia</i>
Lady Banks Rose	<i>Rosa banksia</i>
Japanese Wisteria	<i>Wisteria floribunda</i>

## Seldom Damaged

Common Name	Scientific Name
Ajuga, Bugleweed	<i>Ajuga reptans</i>
Crossvine*	<i>Bignonia capreolata</i>
Climbing Fig	<i>Ficus pumila</i>
Carolina Jessamine	<i>Gelsemium sempervirens</i>
Junipers	<i>Juniperus</i> species
Coral Honeysuckle*	<i>Lonicera sempervirens</i>
Patridgeberry*	<i>Mitchella repens</i>
Mondo Grass	<i>Ophiopogon japonicus</i>
Cherokee Rose	<i>Rosa laevigata</i>
Creeping Rosemary	<i>Rosmarinus officinalis</i> 'Prostratus'
Star Jasmine	<i>Trachelospermum asiaticum</i>
Confederate Jasmine	<i>Trachelospermum jasminoides</i>
Large Leaf Periwinkle	<i>Vinca major</i>
Periwinkle, Vinca	<i>Vinca minor</i>

## MORE GROUNDCOVER POSSIBILITIES



There are many perennials, ornamental grasses, and low growing shrubs that make excellent groundcovers when planted in masses. To find out about more plants recommended for use as groundcovers in coastal landscapes in the southeast, see the plant list on recommended groundcovers available from the Brunswick County Cooperative Extension office or online at:

<http://brunswick.ces.ncsu.edu/>

## FERNS

Deer rarely browse fern foliage, making them an excellent addition to deer ravaged landscapes. Most ferns prefer shade and moist soil and are attractive combined with shrubs and perennials or used as a groundcover. The following ferns are recommended for use in New Hanover County landscapes.

### EVERGREEN FERNS

**Autumn Fern,**

*Dryopteris erythrosora*

**Christmas Fern\*,**

*Polystichum acrostichoides*

**Florida Shield Fern\*,**

*Dryopteris ludoviciana*

**Holly Fern,**

*Cyrtomium falcatum*

**Tassel Fern,**

*Polystichum polyblepharum*

### DECIDUOUS FERNS

**Southern Maidenhair Fern\*,**

*Adiantum capillus-veneris*

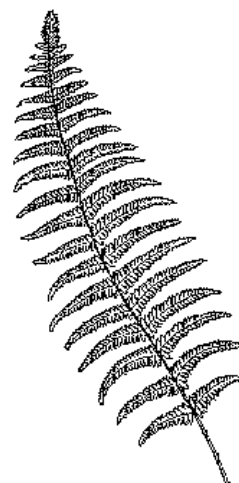
**Lady Fern\*,** *Athyrium filix-femina*

**Japanese Painted Fern,** *Athyrium nipponicum* var. *pictum*

**Royal Fern\*,** *Osmunda regalis*

**Cinnamon Fern\*,** *Osmunda cinnamomea*

**Southern Shield Fern\*,** *Thelypteris kunthii*



# PERENNIALS

Frequently Damaged	
Common Name	Scientific Name
Daylilies	<i>Heemerocallis</i> species and hybrids
Hosta	<i>Hosta</i> species and varieties

Occasionally Damaged	
Common Name	Scientific Name
Shasta Daisy	<i>Chrysanthemum</i> x <i>superbum</i>
Hardy Ice Plant	<i>Delosperma cooperi</i>
Gerbera Daisy	<i>Gerbera jamesonii</i>
Hardy Hibiscus*	<i>Hibiscus moscheutos</i>
Evergreen Candytuft	<i>Iberis sempervirens</i>
Iris	<i>Iris</i> species and hybrids
Phlox*	<i>Phlox</i> species
Black Eyed Susan*	<i>Rudbeckia fulgida</i> 'Goldstrum'
Sedum	<i>Sedum</i> species
Stoke's Aster*	<i>Stokesia laevis</i>
Verbena*	<i>Verbena canadensis</i>
Speedwell, Veronica	<i>Veronica spicata</i>

Seldom Damaged	
Common Name	Scientific Name
Yarrow	<i>Achillea</i> species and hybrids
Blue Star*	<i>Amsonia</i> species
Columbine	<i>Aquilegia</i> species
'Powis Castle' Artemisia	<i>Artemisia</i> x 'Powis Castle'
Butterflyweed*	<i>Asclepias tuberosa</i>
Cast Iron Plant	<i>Aspidistra elatior</i>
False Indigo*	<i>Baptisia</i> species
Angel's Trumpet	<i>Brugmansia</i> species and hybrids
Leadwort	<i>Ceratostigma plumbaginoides</i>
Green and Gold*	<i>Chrysogonum virginianum</i>
Coreopsis*	<i>Coreopsis</i> species and hybrids
Dianthus	<i>Dianthus gratianopolitanus</i>
Purple Coneflower*	<i>Echinacea purpurea</i>
Joe Pye Weed*	<i>Eupatorium dubium</i>
Gaura*	<i>Gaura lindheimeri</i>
Blanket Flower	<i>Gaillardia</i> x <i>grandiflora</i>
Lenten Rose	<i>Helleborus orientalis</i>
Coralbells, Alumroot*	<i>Heuchera</i> species and hybrids
Red Hot Poker	<i>Kniphofia</i> species
Lantana	<i>Lantana</i> species
Sleeping Hibiscus*	<i>Mahaviscus drummondii</i>
Bee Balm*	<i>Monarda didyma</i>
Catmint	<i>Nepeta</i> species and hybrids
Russian Sage	<i>Perovskia</i> hybrids and varieties
Mexican Petunia	<i>Ruellia brittoniana</i>
Texas Sage*	<i>Salvia greggii</i>
Anise Sage	<i>Salvia guaranitica</i>
Mexican Bush Sage	<i>Salvia leucantha</i>
Purple Heart	<i>Setcreasea purpurea</i>
'Fireworks' Goldenrod*	<i>Solidago rugosa</i> 'Fireworks'
Lamb's Ear	<i>Stachys byzantina</i>
Society Garlic	<i>Tublbughia violacea</i>
Prickly Pear *	<i>Opuntia</i> species

## HERBS AS ORNAMENTALS

Deer tend to avoid plants with strong fragrances, which makes many herbs great choices for deer prone landscapes. In general, herbs grow best in full sun and well drained soils. The following perennial herbs are attractive in the landscape and grow well in New Hanover County.

**Thyme**, *Thymus* species

**Fennel**, *Foeniculum vulgare*

**Sage**, *Salvia officinalis*

**Chives**, *Allium schoenoprasum*

**Oregano**, *Oreganum* species

**Mint Marigold**, *Tagetes lucida*

**Tansy**, *Tanacetum vulgare*

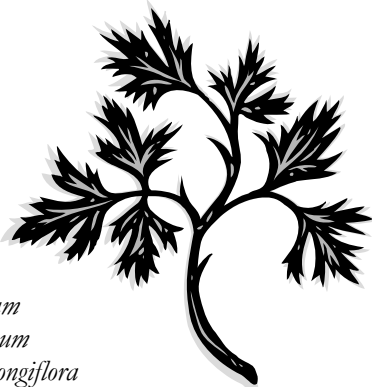
**Anise Hyssop**, *Agastache foeniculum*

**Southernwood**, *Artemisia abrotanum*

**Mexican Oregano**, *Poliomentha longiflora*

**French or Spanish Lavender**, *Lavandula stoechas*

**Lavender Cotton**, *Santolina chamaecyparissus* and *S. virens*



Also, annual herbs such as **basil**, **parsley**, and **perilla** make great additions to containers or bedding displays!

# ANNUALS

## Frequently Damaged

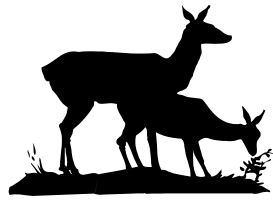
Common Name	Scientific Name
Celosia	<i>Celosia argentea</i>
Impatiens	<i>Impatiens</i> species

## Occasionally Damaged

Common Name	Scientific Name
Johnny Jump Ups	<i>Viola tricolor</i>
Pansies	<i>Viola x wittrockiana</i>
Flowering Kale	<i>Brassica oleracea</i>
Sunflowers	<i>Helianthus annuus</i>
Moss Rose, Purslane	<i>Portulaca</i> species
Mexican Sunflower	<i>Tithonia rotundifolia</i>

## Seldom Damaged

Common Name	Scientific Name
Ageratum	<i>Ageratum houstonianum</i>
Snapdragons	<i>Antirrhinum majus</i>
Begonia	<i>Begonia semperflorens</i>
Ornamental Peppers	<i>Capsicum</i> species
Cleome	<i>Cleome hassleriana</i>
Coleus	<i>Solenostemon scutellarioides</i>
Cosmos	<i>Cosmos bipinnatus</i>
Polka Dot Plant	<i>Hypoestes phyllostachya</i>
Melampodium	<i>Melampodium padulosum</i>
Pentas	<i>Pentas lanceolata</i>
Mexican Oregano	<i>Plectranthus</i> species
Mealycup Sage	<i>Salvia farinacea</i>
Marigold	<i>Tagetes</i> species
Curry Plant	<i>Helichrysum angustifolium</i>
Vinca	<i>Catharanthus roseus</i>
Dusty Miller	<i>Senecio cineraria</i>
Zinnias	<i>Zinnia</i> species
Petunias	<i>Petunia</i> species



## ZONING DEER OUT OF THE LANDSCAPE

Sometimes there are plants you just want to grow no matter what. Maybe it was one of your mother's favorites or something that reminds you of a special occasion in your life. What happens if you have deer problems and one of your 'can't live without it' plants happens to be a deer favorite? Fencing off your entire yard can be very expensive, while constantly reapplying repellents soon becomes a time consuming task.

One approach creative gardeners have borrowed from the xeriscape concept is to divide the landscape into **zones**. Deer prone plants are only planted in areas **closest** to the house, that are easiest to manage intensely. This zone is either protected from deer by fencing or regular application of repellents. In the area farthest away from the house only **highly deer resistant plants** are used. In the mid-zone, or area between, less resistant plants can be used with the understanding that they may receive **occasional** damage.

## BULBS

### Frequently Damaged

**Tulips** and **Crocus** are deer favorites! Neither perennialize well in this area and should be treated like annuals. Summer blooming **Lilies** are also frequently eaten by deer.

### Occasionally Damaged

**Grape Hyacinths** (*Muscari* species) and **Dahlias** are both occasionally browsed by deer. Both perennialize fairly well in southeastern North Carolina.

### Seldom Damaged

Many of the bulbs that come back reliably year after year in this area are also deer resistant. Spring blooming perennial bulbs include **Daffodils**, **Summer Snowflake** (*Leucojum aestivale*), **Amaryllis**, **Scillas**, and **Ornamental Onions** (*Allium* species).

Deer resistant summer blooming perennial bulbs include **Agapanthus**, **Crinum Lilies**, **Crocasmias**, **Oxalis**, **Colchicum**, and **Hardy Cyclamen** (*Cyclamen hederifolium*).

# LEARN MORE!

The following online resources can help you learn more about how to manage deer and reduce damage:

## **NCSU Wildlife Publication—Deer**

<http://www.ces.ncsu.edu/nreos/wild/pdf/wildl>

## **Designing for Deer Resistance, Jeff Chorba Design**

<http://home.ptd.net/~jchorba/green1.htm> [ife/DEER.PDF](#)

## **Deer Control Options, ATTRA factsheet**

<http://attra.ncat.org/attra-pub/deercontrol.html>

## **For More Information about the plants listed and other garden and landscape topics:**

### **WEBSITES**

For more detailed information about each plant and to see images, visit the **Plant Fact Sheets** on the **NC Cooperative Extension Consumer Horticulture website: [www.ncstate-plants.net](http://www.ncstate-plants.net)**

More fact sheets of recommended plants and other local garden and landscape information is available from the **Brunswick County Cooperative Extension** website at <http://brunswick.ces.ncsu.edu/>.

### **VISIT US!**

To see many of these plants growing in a landscape setting, visit the Brunswick Botanical Garden; part of the Brunswick County Cooperative Extension program. The garden is located at in the Brunswick County Government Complex in Bolivia, N.C. and is open seven days a week during daylight hours, free. To find out more, call 910-253-2610.

### **PLANT INFORMATION HOTLINE**

If you have questions about plant selection and maintenance, lawn care, vegetable gardening or plant pest problems, call or visit the Brunswick County Cooperative Extension **Plant Information Hotline**. The Hotline is open from 9am to 12 noon and 1 to 4 pm Monday through Friday and is staffed by trained Master Gardener volunteers and Extension Horticulture Agents. Call direct at 910-253-2610 or stop by during operating hours. The **Brunswick County Cooperative Extension Center** is open 8:30 am to 5pm, Monday – Friday and is located at 25 Referendum Drive, Bolivia, N.C. in the Brunswick County Government Complex.

Prepared by:

*Charlotte Glen, Horticulture Agent*

*North Carolina Cooperative Extension – Pender County Center*



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# Pruning

## Trees & Shrubs

### *A Guide for Grounds Managers*

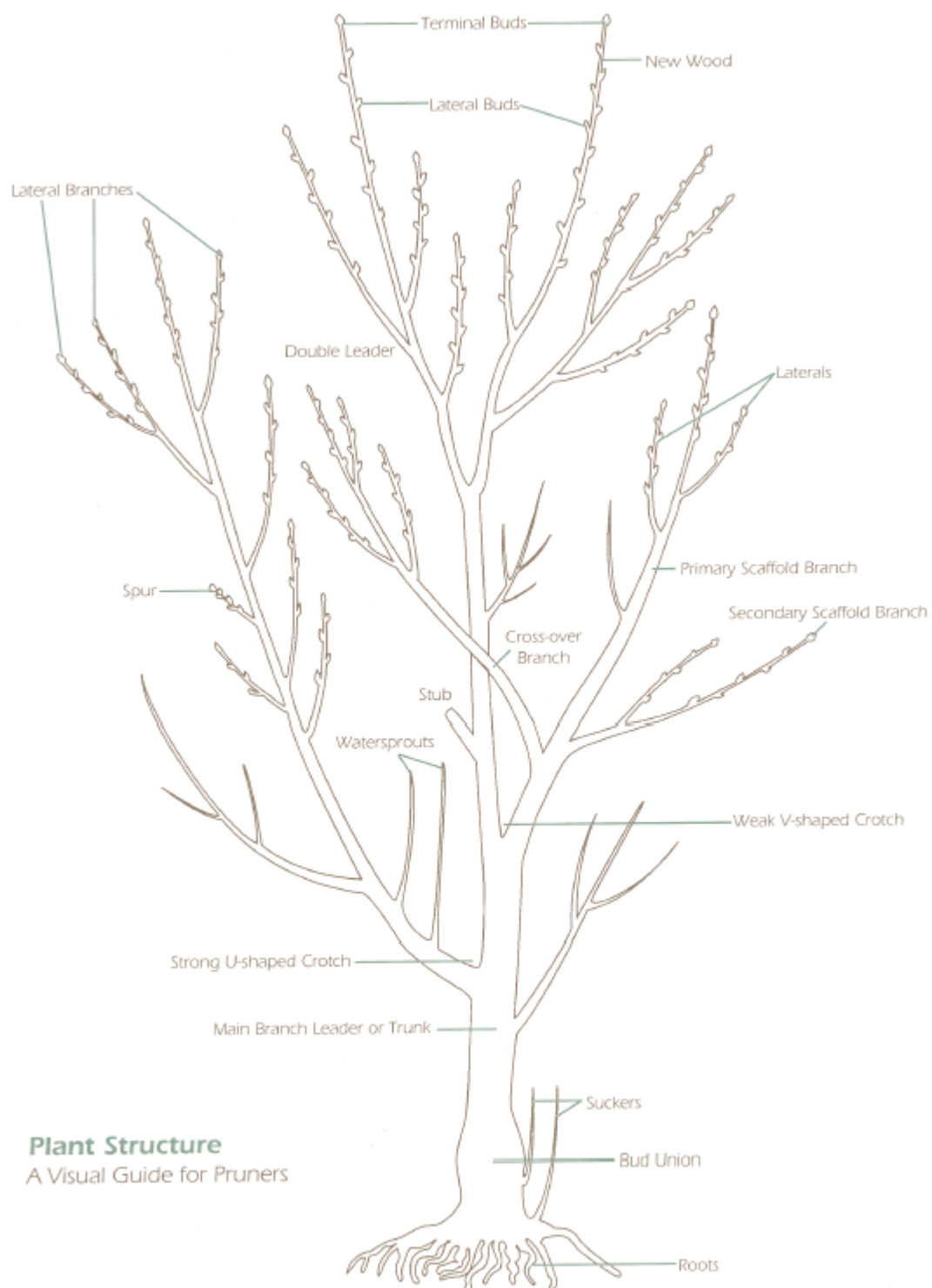
Prepared by

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Extension Landscape Specialist

*Pruning Trees and Shrubs* is a revision of *Pruning Shrubs*, AG-71,  
originally printed in 1983.

The use of trade names in this publication does not imply endorsement of products  
or services named or criticism of similar ones not mentioned.





## Plant Structure

A Visual Guide for Pruners

One of the most important aspects of tree and shrub management is pruning. Knowing why, when, and how to prune correctly will make the difference between a healthy, aesthetically pleasing plant and one that is unhealthy, misshapen or both. The following information contains the basic pruning practices for grounds managers.

### What is pruning?

Pruning is the removal of plant parts to improve form and growth. Branches are removed with minimum damage to cambium or growing tissue so that the wound will close in the shortest period of time and with the least possibility of wound infection.

The reasons for pruning can be grouped under the four following categories:

- 1) training the plant,
- 2) maintaining plant health,
- 3) improving the quality of flowers, fruit, foliage, and stems, and
- 4) controlling growth.

### Training

The first pruning of young trees and shrubs always consists of removing broken, crossing, and weak-structured branches. The recommendation to remove one-third of the top to compensate for root loss of balled and burlapped material at transplanting has been revised. Prune these plants for structural integrity and cosmetic reasons only. Plenty of water during establishment will take care of the root loss problem.

Trees with a central leader (excurrent form), such as cedar, sweet gum, or pin oak, may need little or no pruning except to eliminate branches competing with the central leader; these should be shortened. Some pruning may be necessary to maintain desired shape and shorten extra-vigorous shoots on trees that spread (decurent form). Depending on the species and the desired impact, the height of the lowest branch can be a few inches above the ground (for screening or windbreaks) or 10 to 12 feet or more above the ground (as needed near a street or patio). Lower limbs are usually removed, beginning in the nursery and continuing for several years after transplanting, until the desired height is reached.

For greatest strength, branches selected for permanent scaffolds should have a wide angle of attachment with the trunk. Branch angles of less

than 30 degrees from the main trunk result in a weak attachment, while those between 60 and 70 degrees have a very strong attachment.

Vertical branch spacing and radial branch distribution are important. If this has not been done in the nursery, it should begin once it is planted into the landscape.

Major scaffold branches of shade trees should be vertically spaced at least 8 inches and preferably 20 inches apart. Closely spaced scaffolds will have fewer lateral branches. The result will be long, thin branches with poor structural strength. Eventually they will cross and rub as they get longer.



***Scaffold branches of trees should have proper radial spacing around the trunk.***

### Maintaining Plant Health

In pruning to maintain plant health, consider the elimination of dead, dying, or diseased wood. Any dying branch or stub can be the entry point for insects or disease that could spread to other parts of the tree. When removing diseased wood, such as a fungal canker or fire blight, it is important that the cut be made into healthy wood, beyond the point of infection, with a sterile blade.

The development of a sound framework through proper thinning will help prevent disease and loss of vigor while maintaining good form. Even evergreen shrubs usually will benefit from an occasional

thinning of foliage. This thinning will allow light and air to penetrate throughout the shrub, resulting in even growth of the foliage.

### Improving the Quality of Flowers, Fruit, Foliage, or Stems

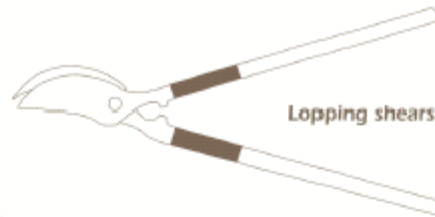
The more flowers and fruit a plant produces, the smaller they become, as can be seen on an unpruned rose bush or fruit tree. Pruning reduces the amount of wood and diverts energy into the production of larger, though possibly fewer, flowers or fruit or both. Most flowering shrubs will bloom either on 1-year-old growth or on new growth. Properly timed pruning will increase the production of wood that will bear flowers or fruit.

### Restricting Growth

Over time, trees and especially shrubs will often grow to sizes that exceed the space allowed for them. Where space is limited, regular pruning becomes necessary to keep plants in bounds. Regular pruning is necessary to maintain a uniform size and shape of street trees and formal hedges. It is best to plant wisely, so that the tree will "fit" the space with a minimum of pruning.

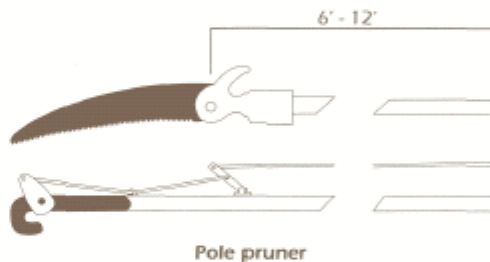
## PRUNING TOOLS

Pruning shears are good for branches up to 1/2 inch in diameter. Using pruning shears to cut larger branches may result in a poor cut, ruined shears, or both. There are two styles of hand shears: anvil cut and scissor action. In the anvil style, a sharpened blade cuts against a broad, flat plate. In the scissor style, a thin, sharp blade slides closely past a thicker (but also sharp) blade. The scissor style usually costs more, but makes cleaner, closer cuts.



Lopping shears have long handles and are operated with both hands. Even the most economical pair can cut material 1/2 inch in diameter. The better ones are designed to cut 2-inch limbs.

Pole pruners have a cutter with one hooked blade above and a cutting blade beneath. The cutter is on a pole and is operated by a lanyard pulled downward. The poles can either be in sections that fit together or telescoping and can be made of several materials. Wooden poles are heavy, but aluminum but can conduct electricity if it touches an overhead electric wire. Fiberglass or some type of plastic compound is probably the best.

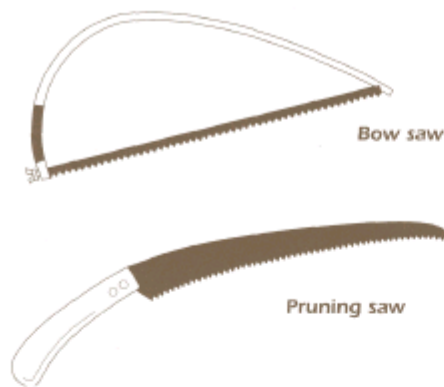


Use of pole pruners can be dangerous, as material cut overhead can fall on the operator. Be sure to exercise caution and wear the correct head and eye protection when using a pole pruner.

There are many makes and models of pruning saws. Fineness of cutting edge is measured in points (teeth per inch). An 8-point saw is for delicate, close work on small shrubs and trees. Average saws are about 6 points, while 4 1/2-point saws are for fairly heavy limbs.

A fixed-blade saw with a leather scabbard is safe and easy to use. Folding saws require either a screwdriver (for a slotted-head holding screw) or will have a protruding wing nut, which can scar the trunk when a limb is cut. If the saw suddenly folds while in use, your fingers can be injured.

Blades can be either straight or curved. Many prefer a curved blade that cuts on the draw stroke. A double-edged saw has fine teeth on one side, and



coarse teeth on the other; these can be difficult to use in densely branched plants.

Bow saws are good only where no obstruction exists for a foot or more above the area to be cut.

Chain saws come in a variety of sizes, both gas and electric. However chain saws are not appropriate for pruning live plant material except for large limbs. They are better suited to tree removal and cutting firewood.

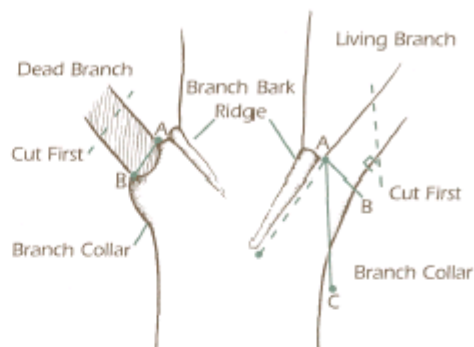
## GENERAL PRUNING TECHNIQUES

### Twigs and Small Branches

When pruning twigs and small branches, always cut back to a vigorous bud or an intersecting branch. When cutting back to a bud, choose a bud that is pointing in the direction you wish the new growth to take. Be sure not to leave a stub over the bud or cut too close to the bud. When cutting back to an intersecting (lateral) branch, choose a branch that forms an angle of no more than 45 degrees with the branch to be removed.

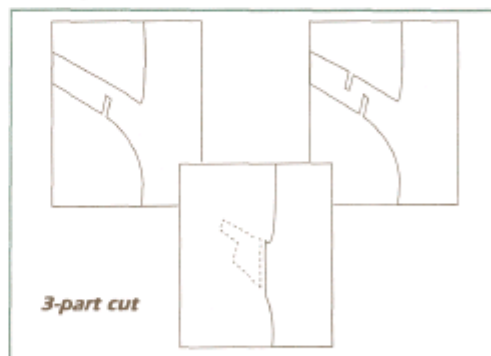
### Thick Heavy Branches

Large branches should be removed flush with the collar at the base of the branch, not flush with the trunk. The collar is an area of tissue that contains a chemically protective zone. In the natural decay of a dead branch, the decay advancing downward meets the internal protected zone (an area where very strong wood meets an area of very weak wood). The branch then falls away at this point, leaving a small zone of decayed wood within the collar. The



decay is stopped in the collar. This is the natural shedding process when all goes according to nature's plan. When the collar is removed, the protective zone is removed, causing a more serious trunk wound. Wood-decay fungi can then easily infect the trunk. Even if the pruned branch is living, removal of the collar at the base still causes injury to the tree.

For over half a century, the recommendations for pruning have been to flush-cut and paint. These outdated recommendations have no basis in scientific fact. The flush-cut increases the tree injury, which the paint hides. The paint is primarily cosmetic, a psychological treatment for the person doing the pruning, to show that he or she has done something to "help" the tree. In fact, paints or wound dressings may trap moisture and increase disease problems.



When cutting branches over 1 1/2 inches in diameter, use a 3-part cut. This is accomplished by first sawing the bottom of the branch, 6 to 12 inches out from the trunk and about one-third of the way through the branch. Next, make a second cut from the top, about 3 inches further out from



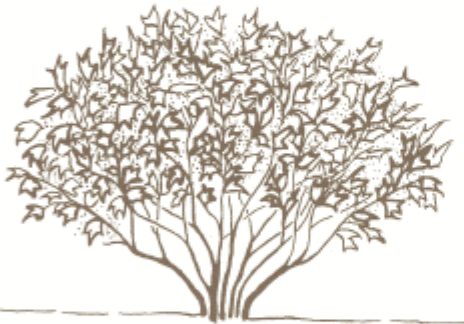
cut from the top, about 3 inches further out from the undercut, until the branch falls away. The resulting stub can then be cut back to the collar of the branch.

## PRUNING SHRUBS

Modern landscaping calls for the natural look or enhancement of most plants. Plants should be chosen because of their particular characteristics—shape, size, color, form, or texture. A plant should be pruned to enhance this natural beauty and accentuate its particular features. Proper pruning can only be accomplished by using the right tools in the right way, and working with the natural growth habits of the landscape plants. Always keep tools well oiled and sharpened.

Most shrub pruning will involve two basic techniques.

- ◆ **Thinning** means the removal of an entire branch back to the main trunk or stem.
- ◆ **Heading back** is simply shortening the length of the branch.



*Repeated heading back with no thinning.*



*Continued thinning with no heading back.*

Problems result when either of these techniques is used continuously without the other. Proper pruning should involve a combination of the techniques to keep a plant at a chosen size, shape, and density.

When a shrub gets completely out-of-bounds, it is often necessary to prune drastically or head-back. Some varieties of shrubs tolerate severe pruning while others do not. Tolerant shrubs will put on new growth and may have several growing periods confined to one area. Sometimes an overgrown evergreen shrub can be pruned from the bottom to expose the main trunk. This creates a small tree.

Rejuvenation is only a temporary solution to overgrown shrubs. Very often the plant will need severe pruning again and again. Consider removing such a shrub and planting a species which grows more slowly and remains smaller.

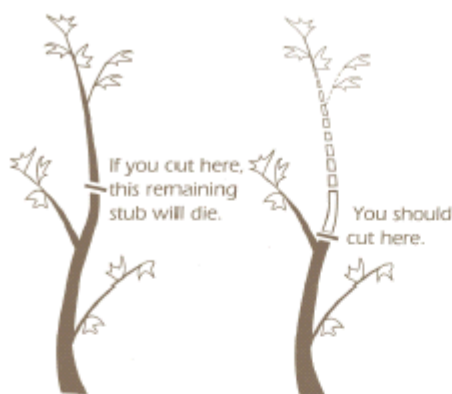
Formal landscapes require a formal type pruning, such as a hedge. Shearing is simply pruning the plants on the surface, usually with hand shears or electric shears. Plant species normally sheared have buds very close together so that new growth will begin wherever a cut is made.

### When and How to Prune:

**Abelia**—It is beneficial to cut out tips and shoots of new abelia growth during the growing season each summer. To keep this semi-evergreen within bounds, heavy pruning near the ground level every 3 or 4 years may be necessary. Dwarf abelia and spreading abelia seldom need more pruning than removal of dead wood and stray shoots that detract from the low compact form.

**Aucuba**—Prune this showy, shade-loving shrub only to remove diseased or dead branches, or to keep plant in desired form for the landscape scheme. The broad evergreen leaves, both the solid green and Gold Dust aucuba with yellow splotches, make excellent foliage for indoor use. Such cuttings will root in water after a few weeks. Under ideal growing conditions, female aucuba will produce red cranberry-like berries. Prune after berries have fully ripened (when they darken in color).

**Boxwood**—Prune boxwood to cut out unsightly limbs before growth begins in the spring. Prune with hand shears, tipping each branch. Do not prune boxwood only across the top unless you have a very specialized contemporary planting.



**Don't leave a stub.**

junction with larger branches. On large plants, when large branches are removed, make a clean, close cut without bruising or tearing back.

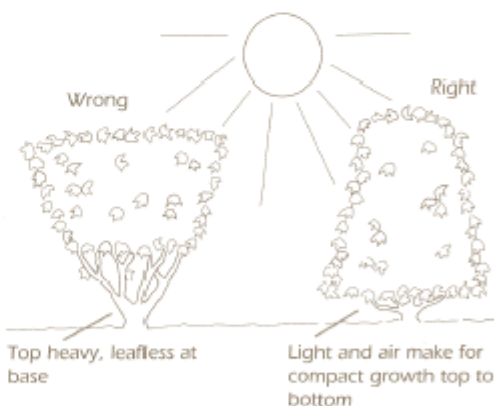
**Cleyera**—This handsome plant needs pruning to remove "shoot growth," which appears in the upper part or on the outer fringes of the plant. Cut these stems well back into the plant where they will put out new buds to cover cutting wounds. This gives the shrub a fuller, bushier form. Pruned away limbs of cleyera make excellent foliage for indoor use, and the handsome thick glossy leaves last for several weeks in water.

**Large-growing hollies (American, Japanese, and Chinese)**—Most hollies are evergreen, but a few shed their leaves in the fall. Large hollies properly placed in the landscape need little pruning, except to keep them neat. They can be pruned at any time, but late winter pruning is best to ensure a good berry crop the next season. Many gardeners prune hollies at Christmas time and use the greenery in holiday decorations. *Cornuta* species, including Burford, grow faster than some of the native American species and require heavier pruning to keep them in shape. Prune to remove individual branches, shaping the plant as you prune. This will avoid giving the plant a severely clipped appearance. Holly hedges require pruning to encourage full, compact growth. Clip away any shoots which stray from the desired form. Espalier hollies should be pruned while in bloom in order to prevent cutting away berry-forming flowers.

**Smaller-Growing Hollies**—The dwarf and semi-

dwarf hollies are popular shrubs throughout the south. Prune them to remove long shoots that stick up after plants have put on new growth. Round-leafed Japanese holly needs heavier pruning to help keep its shape. Small-scale Helleri holly has a tendency to spread more if tops are shaped periodically. Most dwarf forms of Chinese and Japanese hollies require periodic pruning to maintain the desired shape and size.

**Photinia**—Few evergreens give such a vivid splash of red color to the landscape as photinia in the early spring when the plant puts on new growth. After growth matures and turns green, additional summer pruning will produce more red leaves. Cut each branch a different length for a well-proportioned handsome plant. Photinia makes an excellent background hedge as well as accent-specimen plant. It is a very effective espalier specimen or multi-stem tree for a large wall.



To achieve the desired shape, trim using the proper tool.

- Wrong—Top-heavy, leafless at base.
- Right—Light and air make for compact growth from top to bottom.

When pruning a hedge, decide if you want the

When pruning a hedge, decide if you want the formal or the natural look. Be sure to have the shrub pruned wider at the base than the top. This allows sunlight to hit more surface. Lower branches will have more foliage and appear to be more dense.

**Narrowleaf Evergreens**—Cedars, junipers, and arborvitae should be planted in unrestricted areas where little pruning is necessary. Heavy pruning can kill them.

Such needle-leaf shrubs can be tip pruned in the spring, beginning when plants are young. Cut tips back far enough so that cutting wounds are hidden by other overlapping leaves and branches since these plants will not make new growth to hide the stubs.

**Forsythia, spirea, weigelia, flowering almond and quince, sweet shrub, pearl bush, and the oriental magnolias** are typical of the many deciduous shrubs that bloom in the spring. These are pruned so that new growth conforms to the plant's general appearance. They should be pruned immediately after flowering—just as the blooms lose their color.

Plant form is greatly improved if these shrubs are pruned to remove about one-third to one-half the top growth. To encourage new shoots that will prevent shrubs having an open scraggly base, cut about one-third of the older mature stems at ground level.

Prune spring-flowering shrubs with a hand-clipper unless they are grown as a formal hedge. In hedge form, prune with hedge clippers. Specimen shrubs may look scalped if sheared with hedge clippers.

**Azaleas**—Contrary to popular opinion, most azaleas do need pruning. Pruning is especially desirable to produce more handsome and compact growth for tall-growing varieties. Any heavy pruning should be done immediately after the flowering period. Tall, rangy limbs that appear in the top of the plant should be removed back inside the body of the plant. To induce branching, pinch out tips of new growth between flowering and the first of July. Later pinching would reduce next year's flower production. Always remove any dead or injured branches when shaping or heading-back azaleas.

**Camellias**—*Camellia japonica* varieties require little pruning. If a plant is poorly shaped, remove undesirable limbs at a point within the plant. An overgrown plant which has become too large for its landscape position should be pruned by cutting branches of flowers rather than individual blooms. There is a risk in moving such large plants.

*Camellia sasanqua* varieties sometimes require heavy pruning. To preserve the natural effect, prune out individual limbs, cutting back into the heart of the plant. Prune *sasanquas* immediately after flowering so that next year's flower crop will not be affected. Espaliers of both *camellia* species are pruned just as they go out of flower to maintain the pattern of espalier on wall or fence.

**Crepe Myrtle**—This popular plant may be grown as a base-branching large shrub, or as a single or multi-trunked tree. The way to prune depends upon the landscape use of the plant. A tree form should have three to five main stems, equidistant apart. The branches should begin about 4 to 5 feet above the ground. The overall plant will have a vase shape. Tip pruning will encourage new terminal growth and more flowers. All blooms should be removed as they fade as this will promote another succession of flowers. This can be done all summer long. Basal sprouts and water sprouts are best removed in mid-summer to discourage this type of growth. Heavy pruning in the winter will only encourage more flushes of growth at the pruning cut.

**Hydrangea**—This showy shrub of the summer landscape starts setting buds for next year's blooms on this year's growth. Don't cut off flower buds when you prune. It is safest to cut off blooms as they fade, cutting stems enough to give plants the desired landscape shape and size. New growth will appear, forming flower buds for next year's show.

**Gardenia**—In general, gardenias require little pruning. However, if the plant is much too large for its landscape position, prune back just before growth starts in the spring. When large plants are pruned heavily, frequent watering will stimulate new growth and flower production. Nature often prunes gardenias by freezing them back to the ground in winter. If this happens to your plants,

cut them back to ground level—they will often sprout out and grow into sturdy plants the next summer.

**Nandina and Mahonia**—Prune these evergreens in late winter when the red berries of nandina and dark blue berries of mahonia fall or are eaten by birds. If plants have been neglected for several years and allowed to grow leggy, prune away tallest and oldest stems—usually the ones with the oldest bark. This encourages new growth to appear and the plant will fill in at the base. Heading back tall stems will not correct legginess. The stems must be removed at ground level. Once a seasonal program of pruning is established, plants will have a compact growth from the ground up.

**Pyracantha**—This shrub has many landscape uses and must be pruned and trained to conform to its designated landscape function. Pyracantha produces berries on second-year growth, and the showy clusters of red, yellow, or orange berries are second to none. Removing growth in the fall and winter will reveal the colorful berries, but reduces next year's crop. Annual light pruning is recommended as the plant matures. If the plant becomes completely too large, a severe heading back is necessary. This can be accomplished in

the winter with lots of subsequent growth, or in the summer when the regrowth will be limited. An espalier pruning design requires several tip prunings each season so that the plant conforms to the intended design.

## **Groundcovers, Ornamental Grasses, Perennials, and Vines**

Many groundcovers benefit from an annual pruning. This is especially true for liriope and mondo grass. Mow off the old tops before new growth resumes in the spring. Mass plantings of periwinkle, ivy, and pachysandra can also be cleaned up in late winter before the new growth begins. Use a string-trimmer type device, lawn mower, or shears to remove faded foliage and dead leaves. Do not damage the crowns or roots of the groundcover. This is also a good time for raking and removing fallen leaves from the beds.

Pruning ornamental grasses, such as pampas grass, miscanthus, northern seacats, and pennisetum, should also be trimmed before new growth appears in the spring.

Aggressive vines such as wisteria, clematis, honeysuckle, and campsis should also be pruned periodically to keep them in bounds. Be sure to prune at the appropriate time so that flower buds are not removed with the general vine growth.



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