Greening Your Space

Creating Eco-Friendly Container Gardens for Coastal North Carolina

From the COASTAL LANDSCAPES INITIATIVE

You can create a small habitat of eco-friendly plants – even if you have limited yard space, live in a rental property or have difficulty physically caring for a more traditional garden. Containers are not difficult to maintain, and because you control the soil, light and watering conditions, you can grow a wide variety of plants.

While traditional container gardening relies mainly on non-native annuals and tropical plants that usually offer minimal or no wildlife benefits, by using species native to the area, you can provide shelter and food for small birds, butterflies and other pollinators that live here. If you include a host plant, you may find caterpillars munching on the leaves and eventually have the opportunity to watch them transform into a butterfly or moth.

This document will provide ideas and tips for creating and maintaining your own eco-friendly container garden using “container friendly” native plants.

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Acknowledgments

The following people contributed their time, expertise and talents to create this document:
Rachel Veal, NC Aquarium on Roanoke Island; Emilee Morrison, NC State Cooperative Extension - Onslow County; Kathy Mitchell, Coastal Roots Garden Design; Carol Peoples, NC Native Plant Society – Central Coastal Plain Chapter; Gloria Putnam, North Carolina Sea Grant; and Mary Kathryne Cooper and Monica Hunter of the Beaufort Garden Club.

This resource was produced by the Coastal Landscapes Initiative (CLI), a North Carolina Sea Grant led collaborative, public-private partnership fostering coastal landscapes that are attractive, desirable, and environmentally beneficial. For additional CLI resources, use your smartphone to scan the QR Code to the right or visit go.ncsu.edu/CoastalLandscapes.

Cover image: The pots include these plants, among others: on the left is *Baptisia australis* (Wild Blue Indigo), *Aquilegia canadensis* (Eastern Columbine), and *Salvia lyrata* (Lyreleaf Sage) by Debbie Berman Lavine; in the center is *Passiflora incarnata* (Passionflower), *Callirhoe involucrata* (Purple Poppy Mallow), and *Gaillardia spp.* (Blanketflower) by Carol Peoples; and on the right in the partially pictured container is *Salvia spp.*, *Cuphea spp.*, and *Verbena rigida* (Slender vervain) and the pot in back has *Guara* 'Whirling Butterflies', *Echinacea pallida* (Narrowleaf Coneflower), and *Phlox spp.* 'Minnie Pearl'.

Sources

In addition to the partners acknowledged above, information for this document was drawn from:

"Gardening in Containers," University of Georgia

"Best Practices for Container Gardening," Extension Master Gardener Volunteers of Durham County

North Carolina State Extension Gardener Plant Toolbox

DESIGN TIPS

Containers give you freedom to express your unique gardening style so you don't have to follow specific rules. However, the design principles below may help guide your decision making.

Choosing Plants

Many of the suggested plants in this document are perennials. They generally bloom for 3-6 weeks so choose plants, or plant combinations, with staggered bloom times and interesting foliage for longer periods of visual interest.

Some non-native plant choices provide wildlife benefits and can be added to extend the bloom time of your container. The plants suggested in this resource are either perennial Mediterranean herbs (which can tolerate root restriction), tropical perennials (not frost-hardy), or annuals (which live until they set seed). These non-native plants are alsonot known to be invasive to the area, so they will not harm local flora or wildlife.

For healthier plants, combine selections based on similar growing condition needs (light and moisture). For example, group plants that like shade in one container, and sun loving plants in another.

Number of Plants and Proportion

When creating combinations, consider the size of the container and don't overcrowd. Imagine all the plants at least doubling in size to be safe.

A good of rule of thumb is to aim for the height of the plants to generally be 1.5 - 2 times the height of the container. If your container is wider than tall, a target plant height would be 1.5 - 2 times the diameter of the container.

Single Plant Containers and Groupings

Containers can be very beautiful with only one species of plant in them.

Grouping containers together provides more visual impact and better habitat and foraging for wildlife and beneficial insects. Use plant stands or bricks to vary container heights for added interest.

Thriller, Filler, Spiller

Figure 1 shows a simple three-ingredient recipe that results in an attractive container garden for large containers. First select a "thriller," a centerpiece plant with star quality, something big, tall or bold. Then, add a few "fillers," foliage or flowering plants that will complement but not overwhelm the "thriller.". Finally, add a "spiller" that tumbles over the edge of the container.

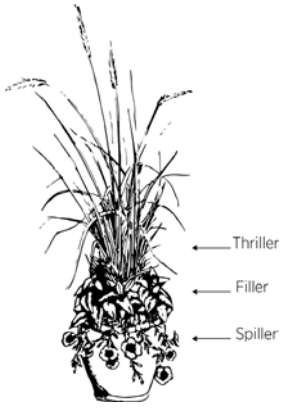

Figure 1. Three elements can help organize plants in a container. Illustration: Vince Giannotti.

Color and Texture

Use the color wheel (Figure 2) to select plants that will be attractive together. Winning combinations are colors directly opposite, or beside each other (analogous) on the wheel. Shades of the same color also work well.

For a more dramatic planting, combine contrasting textures of leaves, stems and flowers. Soft, fine textures near larger, coarse textures will appear more interesting. Native grasses offer texture and movement that continue to be beautiful throughout the Winter.

Figure 2. Color wheel.
Illustration: Rebekah VanWieren.

GETTING STARTED

Choosing a Container

The material and size of your container is important. Plastic or other non-porous containers made of metal, fiberglass, and glazed pots hold moisture longer than containers like terra-cotta or unglazed ceramic. If you use porous containers, you may want to select plants that prefer drier soil conditions.

Drainage is essential in containers. Drill additional holes as needed. Do not add gravel or other materials in the bottom as this can cause water to sit closer to the roots and may cause the roots to rot.

The size of your container will need to be proportionate to what you plan to grow. A one-gallon container could support one small plant for the growing season. However, in order to provide sufficient space for roots to grow, and reduce how often you need to water, a larger container is recommended. For the best results, a small container (up to 3-gallons), should be at least 10-12 inches deep. A medium container between 3 to 7-gallons in size provides space for planting a variety of native plants, and a larger container (over 7 gallons) would offer even more flexibility.

Consider up-cycling items you already have for containers. A 5-gallon bucket that did not previously contain chemicals, a galvanized bucket, a watering trough, and even an old canoe will work if you drill sufficient drainage holes in the bottom. Get creative and have fun! Your native plant containers can be used to decorate your home and garden.

Shade loving container featuring *Heuchera americana* (Coral Bells), *Mitchella repens* (Partridgeberry), *Asplenium platyneuron* (Ebony spleenwort fern) and others. Photo: Ellen Honeycutt

Filling Your Container with Potting Mix

When filling your container, use a commercial potting mix or make your own blend from bulk materials. Do not use soil from your yard to fill your container. It will usually be too heavy, not provide sufficient drainage, and may potentially have disease present. Commercial mixes do not contain soil but rather are usually a blend of materials like peat moss, ground pine bark, coconut coir, perlite, compost, and vermiculite. A good potting mix will hold moisture while also having good drainage and aeration to support plant roots.

Placement of Containers

Place containers where they will receive the appropriate amount of sunlight. If the plants require full sun, find a location that receives a minimum of 6 hours of sunlight per day. If the plants prefer partial shade, place the container where it will receive about 4 hours of morning sunlight and afternoon shade.

Avoid placing containers on areas with very poor drainage unless the chosen plants are adapted to wet soil conditions. This will prevent them from being in standing water after heavy rain. Consider placing containers near a water source to make watering easier.

The rectangular plastic container at top holds *Rudbeckia spp.*; and the blue ceramic pot contains *Dicentra exima* (Bleeding Heart). Photo: Ellen Honeycutt

PLANT SUGGESTION TABLES

The tables on the following pages were created as guides to help you create attractive containers based on container sizes and plant preferences (color, season, etc.). These suggestions are not exhaustive and the photos in this document provide additional species to consider. Experiment and have fun designing combinations that are appealing to you and your desires to support wildlife!

Using the Tables

There are separate tables for sun-loving plants that need at least six hours of direct sunlight and for shade-loving plants that can take early morning or dappled sun but need shade for most of the day.

Plants from the "small" and "medium" container lists can be combined in larger containers. Whereas plants from the large container list can easily fill out a large pot by themselves and should not go into small or medium-sized conatiners. For explanations of sizes, refer to "Choosing your Container" in the "Getting Started" section.

Plants that are native to eastern North America are noted with **BOLD CAPITAL LETTERS**. And for many of the plants, growing tips, special features, substitutions, and/or wildlife benefits are also provided.

Fall blooms from *Aster* and *Solidago* provide important late season pollen. Photo: Margaret Fisher.

Regarding "Wildlife Benefits"

With the exception of ferns and grasses, all recommended plants provide pollen and/or nectar to bees, butterflies and other flower seekers as a wildlife benefit. Assume these advantages are for all flowering species suggested. Additional wildlife benefits, such as being a host plant for butterfly and moth caterpillars, providing pollen for specialist bees, or being especially favored by a particular pollinator, are noted in the tables.

Many of the recommended plants come from two plant families that contain species with high wildlife value: *Asteraceae* (the Aster family) and *Lamiaceae* (the Mint family). For brevity, the wildlife values of these families are listed here, and specific relevant species are denoted in the tables.

To a lesser extent, there are several other recurring high-wildlife-value plant families in the charts (Verbena Family, Plantain Family and Carrot Family), but their individual merits will be denoted with the recommended plant species.

Aster Family: Asteraceae is widely seen as the plant family with the most wildlife benefits. First, they act as a host plant for specialist native bees who rely on aster species for pollen to feed their young (at least 59 pollen specalist bees in North Carolina alone). Secondly, asters act as host plants for the most lepidopteran (butterfly and moth) larvae, including the Pearl Crescent and Painted Lady. Third, the open shape of their flowers and abundant pollen and nectar resources support a wide-range of pollinators and invertebrates. Lastly, they produce seeds that support bird populations in the fall and winter.

Mint Family: Though this family does include the rather aggressive European mints, don't be alarmed -- many mint family species are "well behaved" garden plants. While not hosting as many specialist bees and caterpillars as the Aster Family (no other family does!), this family is known for attracting both a wide variety and large quantity of pollinators to its pollen and nectar resources. In addition, many species in this family have a long bloom period, making them especially attractive for container gardens.

Plants for SMALL Containers in SUNNY Locations

These plants could also be used in combinations in medium and large containers

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
MOSS PHLOX *Phlox subulata*	pink, lavender, white	Spring	Semi-evergreen groundcover.
WILD PINK *Silene caroliniana*	pink	Spring	
WILD PETUNIA *Ruellia humilus*	lavender	Spring to early Summer	Host plant for Common Buckeye butterfly.
PINK STONECROP *Sedum pulchellum*	pink	Spring to early Summer	Annual
Parsley	pale yellow	Spring to early Summer	Host plant for Black Swallow-tail butterfly. Annual/biennial. Evergreen if fall planted.
SCARLET SAGE Salvia coccinea	red	Spring to Fall	Mint Family. Tropical.
Basil, dwarf	white	Summer	Mint Family. Annual.
Mexican Heather *Cuphea hyssopifolia*	purple	Summer	Blooms non-stop till frost. Tropical.
'Diamond Frost' *Euphorbia hypericifolia*	white	Summer	Attracts small pollinators such as syrphid flies.
WHORLED MILKWEED *Asclepias verticillata*	white	Summer	Host plant for Monarch butterflies & several moth species.
ASTER 'WOODS SERIES' *Symphotrichum spp.*	pink, blue, purple	Late Summer to Fall	Aster Family
GOLDENROD *Solidago spp.* 'LIL LEMON' cultivar	yellow	Late Summer to Fall	Aster Family
DUNE BLUE CURLS *Trichostema nesophilum*	blue	Fall	Mint Family
Pansies & Violas (*Viola spp.*)	various	Fall to Spring	Provides resources for early season pollinators in February and March. Hardy annual.

Plants for MEDIUM Containers in SUNNY Locations ...

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
BLANKETFLOWER *Gaillardia aristata*	mostly red & yellow, but can vary	Spring-Fall	Aster Family; keep dead-headed for all season bloom; multiple species and hybrids available.
BEARDTONGUE *Penstemon hirsuitus*; and other native species like *P. digitalis* & *P. australis*	pale pink or white	Spring	Host for pollen specialist bee; seedheads attractive and will persist through winter.

(continued) Plants for MEDIUM Containers in SUNNY Locations

Plant Name	Flower Color	Bloom Time	Notes
MOUSE-EARED TICKSEED *Coreopis auriculta*	yellow	Spring	Aster Family
BRADBURY'S MONARDA *Monarda bradburiana*	pink	Spring	Mint Family; host for pollen specialist bee.
CAROLINA PHLOX *Phlox carolina*	pink	Spring	Visited by hummingbird moths and butterflies.
GOLDEN ALEXANDER *Zizia aptera*	yellow	Spring	Host for Black Swallowtail butterfly; host for pollen specialist bee.
NODDING ONION *Allium cernuum*	pink	Late Spring	Bee favorite.
ORANGE MILKWEED *Asclepias tuberosa*	orange	Late Spring-Summer	Host for Monarch butterfly and several moth species.
LICORICE FLOWER *Agastache foeniculum*	purple	Late Spring	Mint family; cut back for fall rebloom
ROSE VERBENA *Verbena canadensis*, 'Homestead Purple' culitvar	purple	Late Spring-Summer	Trailing, deciduous groundcover.
Red Ruellia *Ruellia elegans*	red	Summer	Host plant for Common Buckeye butterfly. Tropical.
Stiff Verbena *Verbena rigida*	purple / lavendar	Summer	
Zinnia *Zinnia haageana* and other short *species*	various	Summer	Aster Family. Annual.
SHORT BLACK-EYED SUSANS *Rudbeckia fulgida var. sullivanti* 'Goldsturm' cultivar	yellow w/ black center	Summer	Aster Family
CALICO ASTER *Symphyotrichum lateriflorum*	white and pink	Summer	Aster Family
BUTTON ERYNGO /RATTLESNAKE MASTER *Eryngium yuccifolium*	White (blue pollen)	Summer	Pollinator favorite; foliage evergreen.
THREADLEAF IRONWOOD *Vernonia lettermannii*	purple	Late Summer	Aster Family
HELEN'S FLOWERS *Helenium spp & hybrids*	yellow, hybrid colors vary	Summer-Fall	Aster Family
Bat Flower *Cuphea llavea* 'Batface'	red and purple		Tropical
Star Cluster *Pentas lanceolata*	various		Tropical
Summer Snapdragon *Angelonia spp.*	various	Summer-Fall	
SWEET GOLDENROD *Solidago odora*	yellow	Summer-Fall	Aster Family
AROMATIC ASTER *Symphotrichum oblongifolium*	purple w/ yellow	Fall	Aster Family
COTTONY GOLDENASTER *Chrysopsis gossypina*	yellow	Fall	Aster Family
LITTLE BLUESTEM *Schizachirium scoparium* & SEASIDE LITTLE BLUESTEM *S. littorale*	Grown for foliage & flower	Fall	*S. littorale* is a host for Crystal Skipper on our Central Coast.

Plants for LARGE Containers in SUNNY Locations

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
FALSE INDIGOES *Baptisia spp.*	various: blue, white, yellow, etc.	Spring	Host for Sulphur butterfly species.
CORAL HONEYSUCKLE *Lonicera sempervirens* & cultivars	red or yellow	Spring-Fall	Host for Hummingbird & Snowberry Clearwing moths.
Gaura & cultivars	pink or white	Spring-Summer	Deadheading will extend bloom season.
CONEFLOWERS *Echinacea spp.*	Various, mostly shades of pink and purple	Late Spring - Summer	Aster Family. **Avoid "double flowered" cultivars which make pollen/nectar inaccessible to pollinators!**
Spanish Lavender *Lavandula stoechas*	purple	Late Spring	Mint Family; evergreen.
Meadow Sage *Salvia nemorosa*	purples, pinks & blues	Late Spring	Mint Family; many cultivars and hybrids available.
Oregano spp. *Origanum vulgare* & other *species*	various, mostly purple	Late Spring-Summer	Mint Family; evergreen.
Rosemary *Rosmarinus officinalis*	blue	Winter & sporadic year -round	Mint Family; Trailing and upright varieties available; evergreen.
ADAM'S NEEDLE *Yucca filamentosa*	white	Late Spring	Don't place in high traffic areas - leaf tips are pointed & sharp; host for Yucca Skipper and pollinated only by Yucca moths.
DOWNY SKULLCAP *Scutellaria incana*	lavender	Late Spring-Summer	Mint Family; will rebloom if cut back, but leave second bloom for attractive seedheads in fall.
SHOWY ST. JOHN'S WORT *Hypericum prolificum*	yellow	Late Spring-Summer	Host plant for Gray Hairstreak and Emerald Moth; favorite of bumblebees; provides pollen only - no nectar.
STOKE'S ASTER *Stokesia laevis*	lavender	Late Spring-Summer	Aster Family
DWARF PALMETTO *Sabal minor*	white	Summer	Usually grown for foliage; flowers attract various pollinators.
MOUNTAIN MINTS *Pycnanthemum spp., like P. tenuifolium*	white	Summer	Mint Family. Shorter & less aggressive species best.
LIATRIS *Liatris spp.*	purple	Summer	Aster Family
BLUE VERVAIN *Verbena hastata*	purple	Summer	Host for pollen specialist bee.
HOARY VERVAIN *Verbena stricta*	lavender	Summer	Host for pollen specialist bee.
NARROWLEAF IRONWOOD *Vernonia angustifolia*	purple	Summer	Aster Family
Cigar Flower *Cuphea ignea and other spp.*	orange and yellow	Summer-Fall	Tropical

(continued) Plants for LARGE Containers in SUNNY Locations

Plant Name	Flower Color	Bloom Time	Notes
Salvia spp. hybrids & cultivars	various (red, blue, pink, etc.)	Summer-Fall	Mint Family. Varieties under 2.5 feet work best. Mostly tropical, but some are cold hardy.
Lantana *Lantana spp.*	various	Summer-Fall	Dwarf, trailing varieties are best; do not plant in Florida!
Porter Weed *Stachytarpheta jamaicensis*	lavender	Summer- Fall	Tropical
Penstemon 'Cha Cha' series and other hybrids	various	Summer-Fall	Long-blooming Penstemons from Western US.
SMOOTH ASTER *Symphyotrichum laeve*	purple w/ yellow center	Fall	Aster Family
GOLDENROD *Solidago spp., 'Fireworks'*	yellow	Fall	Aster Family
PANIC GRASS Shorter varieties of *Panicum virgatum, like* 'Cape Breeze', 'Shenandoah', etc.	grown for foliage/ texture	Fall color	Grasses host Skipper, Satyr & Wood Nymph butterflies.
NATIVE LOVE GRASSES *Eragrostis spectabilis & E. elliottii*	purple; grown mostly for texture	Fall	Grasses host Skipper, Satyr & Wood Nymph butterflies.
MUHLY GRASS *Muhlenbergia capillaris*	pink; white form available also	Fall	

These planters were placed in public spaces in the Town of Beaufort in 2024 where they are maintained by the Beaufort Garden Club. Growing in the terra-cotta container (left) is *Liatris spicata* ('Blazing Star'), *Coreopsis verticillata* (Threadleaf Coreopsis 'Zagreb'), *Solidago sphacelata* (dwarf Goldenrod 'Golden Fleece'), and *Phyla nodiflora* (Frogfruit). Long-blooming *Gaillardia pulchella* (Blanketflower 'Gold Star Ruby Tubes') is in the large propane-tank planter on the right, along with *Phyla nodiflora* (Frogfruit), *Liatris spicat*a ('Blazing Star') and *Symphyotrichum oblongifolium* (Aromatic Aster "October Skies'). The addition of the sign seen on the right, helps to educate passersby. Photos: Mary Kathryne Cooper and Monica Hunter.

Plants for SMALL Containers in SHADY Locations ...

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
SMALL CREEK SEDGE ***Carex amphibola***	insignificant	Grown for foliage.	Carex species host Skipper & Satyr butterfly species; many other Sedge species would also work well in containers; evergreen.
SPREADING SEDGE ***Carex laxicumulus, 'Blue Bunny' and other cultivars***	insignificant	Grown for foliage.	
WOODLAND GERANIUM ***Geranium maculatum***	pink	Spring	Host for pollen specialist bee.
DWARF CRESTED IRIS ***Iris cristata***	lavender or white	Spring	
FOAMFLOWER ***Tiarella cordifolia***	white	Spring	Evergreen foliage.
WILD STONECROP ***Sedum ternatum***	white	Spring	Succulent
BLUE VIOLET ***Viola sororia***	blue	Spring	Host for Variegated Fritillary & Common Buckeye; other *Viola spp.* also work well.
WILD STRAWBERRY ***Fragaria virginiana***	white w/ yellow center	Spring-Summer	Host for specialist bee; evergreen.
KITTEN PAWS ***Antennaria plantaginifolia***	insignificant	Grown for foliage.	Aster Family; host for American Lady butterfly.
PATRIDGEBERRY ***Mitchella repens***	white	Late Spring	Red berries in fall; evergreen.
PIEDMONT ROSELING ***Callisia rosea***	lavendar- pink	Spring-Summer	
EBONY SPLEENWORT ***Asplenium platyneuron***	not applicable	Grown for foliage	Ferns have no pollen or nectar, but are host plant for several moth species.

Plants for MEDIUM Containers in SHADY Locations ...

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
COLUMBINE *Aquilegia canadensis*	red and yellow or yellow	Spring	Hummingbird favorite.
DOWNY WOOD MINT *Blephila ciliata*	purple	Spring	Mint Family
CORAL BELLS *Heuchera americana*	pink (evergreen)	Spring	Host for pollen specialist bee.
CREEPING PHLOX *Phlox stolonifera*	pink or lavender	Spring	
Wishbone Flower *Torenia fournieri*	various	Summer-Fall	Annual
WHITE WOOD ASTER *Eurybia divaricata*	white w/ yellow center	Late Summer-Fall	Aster Family
HEART-LEAVED ASTER *Symphotrichum cordifolium*	lavender	Late Summer- Fall	Aster Family
ZIG ZAG GOLDENROD *Solidago flexicaulis*	yellow	Fall	Aster Family
MAIDENHAIR FERN *Adiantum pedatum*	none	Grown for summer foliage.	Also A. cappilus-veneris; host plant for several moth species; evergreen.
CHRISTMAS FERN *Polystichum acrostichoides*	none	Grown for foliage.	Host plant for several moth species; evergreen.

Plants for LARGE Containers in SHADY Locations ...

*Plants native to Eastern North America are identified using **BOLD CAPITAL LETTERS**.*

Plant Name	Flower Color	Bloom Time	Notes
JOE PYE *Eutrochium purpureum*	mauve	Summer	Aster Family
BOWMAN'S ROOT *Gillena trifoliata*	white w/pink	Summer	Host plant for Coral and Striped Hairstreak butterflies as well as White-lined Sphinx and other moth species.
CULVER'S ROOT *Veronicastrum virginianum*	white, lavender	Summer	Host plant for Common Buckeye butterfly.
DWARF SWEET PEPPERBUSH *Clethra alnifolia*	white or pink	Summer	Several dwarf cultivars available.
WREATH GOLDENROD *Solidago caesia*	yellow	Fall	Aster Family

SEVEN SUN-LOVING PLANT COMBINATIONS

Scarlet Sage *Salvia coccinea* Sweet Goldenrod *Solidago chilensis* (formerly *S. odora*) Aromatic Aster Symphyotrichum oblongifolium
Little Bluestem *Schizachyrium scoparium* Downy Skullcap *Scutellaria incana* Threadleaf Coreopsis *Coreopsis verticillata*
Beardtongue *Penstemon spp.* Mexican Heather *Cuphea hyssopifolia* Whorled Milkweed *Asclepias verticillata* Aster Aster dumosus 'Wood's Pink'
Widow's Cross *Sedum pulchellum* Flase Indigo *Baptisia spp*. Button Eryngo or Rattlesnake Master *Eryngium yuccifolium* Showy or Purple Love Grass *Eragrostis spectabilis*
Summer Phlox *Phlox paniculata* Black Eyed Susan *Rudbeckia fulgida* Stokes Aster *Stokesia laevis*
Button Eryngo or Rattlesnake Master *Eryngium yuccifolium*Sundrops *Oenothera fruticosa* Wild Petunia *Ruellia humilis*
Golden Alexander *Zizea aurea* Orange Milkweed *Asclepias tuberosa* Threadleaf Ironweed *Vernonia lettermani* Switchgrass *Panicum virgatum* 'Cape Breeze'

Figure 3: The drawing above represents the last combinaton in the table to the left, with Golden Alexander. The plants will not all be in bloom at the same time, as shown here. The switchgrass, in the center, will be green from spring until fall. Artist: Mary Kathryne Cooper

FIVE SHADE-LOVING COMBINATIONS

Christmas Fern *Polystichum acrostichoides* Foamflower *Tiarella cordifolia* Culver's Root *Veronicastrum virginicum* White Wood Aster *Eurybia divaricata*
Creek Sedge *Carex amphibola* Wild Geranium *Geranium maculatum* Sweet Joe Pye *Eutrochium purpureum* Zig Zag Goldenrod *Solidago flexicaulis*
River Oats *Chasmanthium latifolium* Sweet Goldenrod *Solidago odora* Blue Wood Sedge *Carex flaccosperma*

Soft rush *Juncus effusus* Southern Maidenhair Fern *Adiantum cappilus-veneris* Coral Bells *Heuchera sanguinea*
Southern Shield Fern *Thelypteris normalis* False Solomon's Seal *Maianthemum racemosum* Green and Gold *Chrysogonum virginianum*

MAINTENANCE

Water

Containers tend to dry out much faster than soil in the ground and will need more water. Check containers frequently for moisture levels. A moisture meter is a great device to assure you are not under or over-watering.

Another method to check moisture levels is sticking a finger into the growing media. If the soil is dry beyond one inch depth, it is time to water.

The weight test is another option. Pick up the container, if it is very light for its size, it's definitely time to water.

Plan on watering long enough to see water coming out of the of the bottom, to ensure soil saturation.

Fertilizer

Many native plants are adapted to low fertility growing conditions. Incorporating a slow-release fertilizer in the spring can provide sufficient nutrients for your native plants for most of the growing season.

Whichever product you choose, read the label to determine the rate for the size of your container. If you can, incorporate the fertilizer into the top few inches of the soil, such as when you plant or repot, to allow the fertilizer to be located where the roots can take it up.

Avoid any type of synthetic fertilizers with galvanized metal containers.

Yarrow, wild strawberry, and a native grass fill this ceramic container. Photo: Margaret Fisher

Mulch

One to two inches of organic mulch can be applied to the top of the container to help retain moisture. Be careful not to pile it up around the stems.

Tidying the Container: Prune and Divide

Some plants will produce denser growth and more blooms if periodically pruned/deadheaded. However, toward the end of the season, allow spent flowers/seed heads to remain for fall and winter interest and to feed seed-eating birds. Leaving stems through the winter can also provide nesting sites for native bees and other beneficial insects.

Perennials can be maintained in a container by pruning the roots. Other options include transplanting to a larger container or into the ground, or dividing plants and sharing them with others.

For more information watch these videos:
***Repotting Basics* from the University of Georgia**

***Dividing Perennials* from NC State Extension**

Damage/Disease

An important reason for planting natives is that they provide food for the larvae of butterflies/moths and other beneficial insects. If insects are eating your plants it means your garden is functioning as part of the ecosystem. Be sure to properly identify insects visiting your plants before deciding to do anything about them.

Most native plants that receive proper care (including appropriate sunlight, water, and soil conditions) will not have serious disease problems. However, there are still some diseases that can affect plants and may require management. Check for any diseased plant material and remove and discard it. Always be sure to properly identify a problem before treating. Many issues are caused by environmental conditions or planting mistakes. Call the county office of NC Cooperative Extension for assistance with identifying and managing any plant problems.

MORE EXCELLENT CONTAINER EXAMPLES

Bring color to a tree planter in early spring with *Phlox spp.*. Photo: Margaret Fisher

Here is a nice example of varying height to achieve a dynamic collection. Photo: Margaret Fisher

Small trees can work in containers, like this *Zanthoxylum clava-herculis* (Hercules Club). Photo: Carol Peoples

A lovely pot with native flowers and a few Zinnias for longer bloom when the time arrives. Photo: Amy Jo Edwards

This *Wisteria frutescens* (American wisteria) is in a large pot and easy to view when going to and from the house. Photo: Carol Peoples

Cinnamon fern fills this clay pot on the right and is located in a shady spot. Photo: Margaret Fisher

Native plants in containers are attractive in these more formal and public settings and include *Rudbeckia spp*. (Black-eyed Susan) on the left; *Rudbeckia spp.* (Black-eyed Susan) and *Veronicastrum virginicum* (Culver's Root) on the right. Photos: Margaret Fisher

Sea Grant
NORTH CAROLINA

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