

FALL 2015

COASTAL NEWS

Groundcover alternatives to turfgrass

Cool-season crops

Fall webworms

Prepare your lawn for winter

STATE NEWS

Creating wildlife habitat

Green bunch onions

‘Welch’s Pink’ beautyberry

Improving soil

Extension Gardener provides timely, research-based horticultural information. We publish four issues per year. Send comments about *Extension Gardener* to:

Content Editor and Team Leader
Lucy Bradley, Ph.D.
NC State University
Campus Box 7609
Raleigh, NC 27695-7609

Managing Editor
Charlotte Glen

Regional Editor, Coastal
Sam Marshall

Regional Editor, Piedmont
Randy Fulk

Regional Editor, Mountains
Donna Teasley

Statewide Editor
Shawn Banks

The use of brand names does not imply endorsement by NC State Extension nor discrimination against similar products or services not mentioned.

© 2015 NC State Extension

Extension Gardener may not be reproduced without written permission. News media quoting the newsletter should credit NC State Extension.

Creating Wildlife Habitat

If you love plants, birds, and other wildlife, you probably have already created a wildlife habitat in your yard whether you realize it or not. For wildlife to be happy in your yard, they need food, water, cover, and a place to raise their young. Give them these four things, and they will come.

How can you provide these things? Let’s start with food. Many insects need nectar from flowers as a food source. Providing an array of plants that flower throughout the year makes the backyard a haven for the gardener, as well as for many insects that are needed for pollination. If the right flowers are used, hummingbirds will visit. Flowers produce fruits, berries, and seeds that provide food for animals and birds.

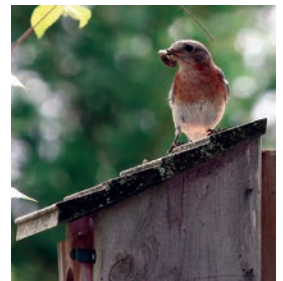
Water is next on the list. Most of us don’t have a big enough yard to create a large water feature—complete with a waterfall or fountain, but most of us can provide water in the form of a birdbath or a saucer on the ground. With birdbaths and saucers, remember to dump them and add fresh water every two to three days. Keep the water fresh, and the birds will visit more often.

Creating cover can be as simple as building a brush pile so wildlife will have a place to hide. Insects such as solitary bees and most butterflies and moths need a place to take shelter from the wind. Thick evergreen shrubs can provide the shelter they seek. Other animals may take shelter under these shrubs as well, while birds will prefer to shelter in trees. Trees of different sizes are needed for different kinds of birds.

Every creature needs a place to rear their young. Some birds build nests in the branches of trees, while others prefer the shelter of a birdhouse. Insects also need a place to raise their young. With insects, mom and dad might not stick around, but the young still need something to eat. For butterflies, these food plants are called host plants. Some species have a very short list of plants they can use as host plants, while others may have a long list of plants to choose from.

In most cases, if you have been living in a house for more than a couple of years, the yard is probably teeming with life, from birds to bees and the squirrels in the trees to the opossums, snakes, and other insects. For more information on building a backyard wildlife habitat, visit ncsu.edu/goingnative.

—Shawn Banks



Goldfinch (top) and butterflies
©Sharon Denning

Bluebird (top) and female cardinal
©Sharon Denning

Extension Showcase

Backyard Naturalist Program

In March 2015, NC State Extension collaborated with the NC Coastal Reserve to offer the Backyard Naturalist Program to residents living in Pender, New Hanover, and Brunswick counties.

Program coordinators included Natural Resources Agent Sabrina Woofter and Horticulture Agent Sam Marshall with NC State Extension and Education Specialist Marie Davis with the NC Coastal Reserve.

The 12-week program was designed to teach residents the concepts of backyard ecology and ways they can mitigate environmental impacts to become better stewards of the environment.

Classes were taught by a variety of local experts, including two entomologists from NC State University. Family-friendly field trips were held every other Saturday in various natural areas throughout the Cape Fear Region.

As part of a class project, each participant was asked to take part in the "10% Challenge," a project whereby individuals converted at least 10 percent of their yards into a natural wildlife-friendly area. Nearly 80 percent of the 15 individuals in the class participated in the challenge.

Future Backyard Naturalist programs are planned for public educators as a way to achieve continuing education credits, and as a potential program for school-age children and at public outreach events.

Sam Marshall

Smart Gardening: Groundcover alternatives to turfgrass

If summer weather has taken its toll on your lawn and lawn maintenance has taken its toll on you, consider replacing some areas of the lawn with a groundcover. Groundcovers are great alternatives for areas that are unfavorable for grass, as well as for areas that are difficult to mow or require erosion control.



Moss pink @Paul Cooper, CC-BY-NC

Several types of groundcovers are available, offering various textures, heights, colors, and growth habits. Woody groundcovers include low-growing spreading shrubs such as juniper and dwarf gardenia as well as vines such as star jasmine. Perennial groundcovers include ajuga, hardy iceplant, liriopse, and moss pinks. Select groundcovers according to the given growing conditions. Consider the slope, the amount of sunlight received, and the moisture availability in the soil.

To ensure success with a selected groundcover, it is important that you prepare the area well. Begin by killing or removing any existing vegetation. Till the soil at least 4 inches deep, and fertilize according to soil test results. It is

also beneficial to incorporate organic matter such as compost. Space plants according to how quickly the area should be covered while keeping mature size in mind. Perennials should be placed approximately 1 foot apart, while woody groundcovers should be placed 3 to 5 feet apart.

Keep newly planted areas weeded during groundcover establishment. As the groundcover fills in, weeds will become shaded out and less of a problem. Little pruning will be necessary. It is a good idea to fertilize and remove any damaged or dead foliage in the late winter. Most groundcovers are not intended to be walked upon and can be damaged with high levels of foot traffic.

—Katy Shook

Food Production: Cool-season crops

Just because it's fall doesn't mean the vegetable gardening season is over.

You still have time to plant crops that will keep you harvesting produce through the winter and on into spring. In the coastal plain, many cool-season crops can be planted in September. Brassicas such as broccoli, cabbage, cauliflower, collards, kale, and kohlrabi can be planted through the middle of September. Keep an eye out for caterpillars on these crops. You can protect your plants with row covers or control caterpillars with products containing *Bacillus thuringiensis* or spinosad, if needed. Root crops are another great fall option. Plant beets, radishes, and turnips through the middle of September. Parsnips and rutabagas can be planted through the end of September. These vegetables will hold well under cool conditions and can be harvested as needed.



©Charlotte Glen

Plant leafy greens such as lettuce, arugula, and mustard for a quick harvest. You can harvest baby greens when the leaves are 4 to 5 inches high. Trim the leaves off with a pair of kitchen shears while leaving the growing point intact. These plants will grow new leaves for multiple harvests. Cool-season herbs such as dill, parsley and cilantro can be direct sown or set out as transplants in September and will stay green well past the first crop. Harvest as needed for fresh use. Consider planting garlic and onions in October. These crops will be ready to harvest next spring. Choose short-day onion varieties such as 'Grano' or 'Texas Supersweet'.

Sample your soil now to determine fertilizer needs for the next growing season. In our area, gardeners should test the soil every two to three years. Make sure your soil samples are submitted to NCDA&CS before Thanksgiving to avoid peak season soil sample fees.

—Lisa Rayburn

Pest Alert: Fall webworms

Every autumn fall webworms make their annual appearance in trees across North Carolina. Their nests are made up of a mass of webbing found at the end of tree branches. The webs contain many tiny hairy caterpillars.

Fall webworms are most commonly found on pecan, sourwood, and persimmon trees, though they can feed on more than 600 species of trees and shrubs.

Fall webworms can be easily disrupted by using a stick or pole to pull open webs that are within reach to expose the caterpillars to predators such as birds and wasps. Insecticides containing *Bacillus thuringiensis* or spinosad can be used to spray webs within reach.

When using an insecticide, spray the foliage just beyond the web mass. Spraying the web itself is not very effective because the webbing prevents good contact with the caterpillars. If the webs are not within reach, do not worry. Although they are unsightly, the webs usually do not harm the tree's overall health.

Fall webworms overwinter as pupae in mulch, leaf litter, and soil. Next year, adult moths will emerge in March and April to start the cycle over again.



©Ronald F. Billings, Texas Forest Service, Bugwood.org

— Jessica Strickland

Lawns: Prepare your lawn for winter

September is the time to get your lawn ready for the winter months. One of the widest misconceptions for turfgrass in our area is that you need to add fertilizer to your lawn in the winter months. While this is true for cool-season turfgrass such as tall fescue, this does not apply to our warm-season grasses such as centipede, zoysia, Bermuda, and St. Augustine.

Fall is the time when warm-season turfgrasses begin to go dormant. Applying nitrogen to the soil only encourages weed growth and the spread of turfgrass diseases such as large patch. Excess fertilizer can run off into storm drains and end up in streams and rivers. If you do apply fertilizer, the nutrient to focus on is potassium (K), also referred to as potash, because it improves drought tolerance and plant hardiness in the winter months.

The only way to be sure if your lawn needs fertilizer is to have your soil tested. Soil samples can be taken any time of the year for analysis. Soil samples submitted between December and March are charged a \$4 peak-season fee per sample. Getting your samples in now will avoid this fee. Contact your local Extension office to learn how. Having your soil test results in hand before the spring season gives you more time to amend your soil, lowering the last-minute scramble to get your soil ready for spring planting.

If you irrigate your lawn, you should not water past late September. Overwatering in the fall can be just as harmful as over-watering in the summer. It can increase injury in colder weather, encourage plant diseases, and also gives those pesky fall weeds like Florida betony a leg up.

— Sam Marshall

Tips & Tasks

Saving Seeds

As the summer garden is winding down, fruits and seeds are ripening, making this a great time to try your hand at seed saving.

First you will need to clean or process your seeds, and then you will need to store them properly.

Processing seeds can be as simple as removing mature seeds from dry flowers, husks, or pods. Seeds are mature as soon as the pod becomes dry and changes color to yellow or tan.

For fleshy fruits such as tomatoes, viable seeds can be separated from bad ones through a simple fermentation period. Extract a combination of pulp, seeds, and juice and place into a mason jar. Add water to double the total volume and stir.

Allow this to ferment for about three days at a temperature of 70°F, stirring twice a day. Healthy viable seeds will sink, while bad seeds will float.

After fermentation is complete, remove and discard the floating seeds, then rinse and dry the remaining seeds.

Let seeds air dry for several weeks before storing. Avoid drying in direct sunlight. Once the seeds are dry, they should be labeled and packed in a sealed container such as a Mason jar.

— Tim Mathews

@joyfuldesigns, bigstockphoto.com



Helping You Grow

Photography

Photography is a vital tool for gardeners. Having a good picture of an unknown plant, weed, or insect to share with your Extension agent, or to compare to a good identification book, can help you obtain accurate answers quickly.

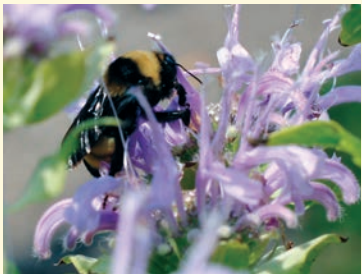
Photography can also bring a lot of pleasure. One of the important basic skills is understanding how to do macrophotography, which is simply getting an up-close picture (great for insects, weeds and flowers).

You might think that having a powerful zoom lens would be the ticket, but in many cases you would do much better by using your feet.

Use those feet to move closer to your subject! Most modern cameras and even smartphone cameras allow you to hold the lens only 1 or 2 inches from the subject (with some, you need to click on a tulip shaped icon to put it in macro mode).

Also be certain you aren't shading the subject with your hand or the camera. Unless doing so would scare off your subject, get a better picture by moving closer!

—Paul McKenzie



Bee on monarda ©Shawn Banks

NC State University promotes equal opportunity and prohibits discrimination and harassment based upon one's age, color, disability, gender identity, genetic information, national origin, race, religion, sex (including pregnancy), sexual orientation and veteran status. NC State University, North Carolina A&T State University, U.S. Department of Agriculture and local governments cooperating.

New from NC State: 'Welch's Pink' American beautyberry

Pink colors in the fall landscape are rare. Pink fruit was almost unheard of until now with the JC Raulston introduction of *Callicarpa americana* 'Welch's Pink'. Think cotton candy or gobs of bubblegum along green stems. You may be familiar with the native *Callicarpa americana* with purple or sometimes white berries. 'Welch's Pink' grows smaller, approximately 6 feet tall in Zones 5 – 9. It has small pink flowers throughout the summer that attract bees and butterflies, followed by pastel pink fruits from September until the birds eat them. Pink American beautyberry will grow in shade to sun and tolerates both dry and wet soils. Fruiting is best in a bright location, but afternoon shade reduces berry fading. 'Welch's Pink' is easy to grow in most landscapes, making it a welcome addition to wildlife gardens, native gardens, and anywhere late-season color is desired.

— Cyndi Lauderdale



©Bob Hauver, JC Raulston Arboretum

Incredible Edibles: Green bunch onions

Whether you're short on space, time, or patience, green bunch onions, also known as scallions, make an ideal fast growing alternative to their full-sized onion counterparts. To grow green onions at home, select a full sun site with fertile, well-drained soil, preferably high in organic matter.

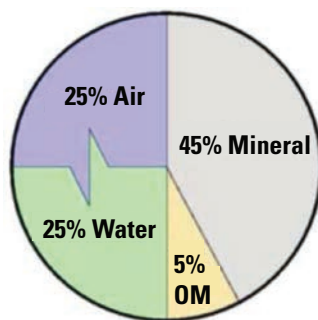
Green onions can be grown from seed planted directly in the garden. For a fall crop, seeds can be planted in August and September and should be spaced 1 to 2 inches apart. Onions are heavy feeders and prefer soil pH to range from 6.0 to 6.5. Have the soil tested before planting to determine nutrient and lime needs. Pests are seldom a problem, but it is important to keep the area well weeded. Harvest when the tops reach 6 to 8 inches tall.

—Katy Shook

Sustainability: Improving soil with organic matter

Before talking about how to improve soil, we first have to define what soil is. The Soil Science Society of America's definition of soil is "A mixture of minerals, organic matter, water, and air, which forms on the land surface. Can support the growth of plants." An ideal soil is roughly half solids and half pore space. Pores contain a mix of water and air, the proportion of which changes with rain events and dry periods.

Solid particles include sand, silt, clay, and organic matter. The best way to improve soil is to add organic matter such as compost. Two terms associated with soil improvement are tilth and humus. *Tilth* refers to the soil's suitability to support root growth. Soil with good tilth is friable (easily crumbled), allowing deep root penetration. Compacted soil results in poor root growth.



Humus is the dark, rich, crumbly organic material produced when twigs, leaves, and other animal and vegetable matter decompose. Humus is very beneficial to soils. It contains compounds that act as soil glue, improving tilth and creating aggregates. And it binds plant nutrients, so they remain available to plants and don't leach away. Finally, humus has a high water-holding capacity, helping protect plants from drought.

To amend soil, add a 2-inch layer of compost (humus). Work this into the soil to a depth of about 8 inches.

—Diana Rashash