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NC STATE EXTENSION

Master Gardener | Johnston County

The Gardener's Dirt

Johnston County Center **June 2017**

Feature Article

Butterfly Highway

Brenda Clayton, Extension Master Gardener Volunteer

Photo Courtesy of NC Wildlife Federation

Photo Courtesy of NC Wildlife Federation

More and more we see less and less. As their native habitat is stripped away, bees and butterflies grow fewer and fewer.

More neighborhoods, stores, schools, offices, and parking lots are being built. Native trees, shrubs, and meadows are cut down to make room for all the bricks and concrete. We are destroying the very habitat that our pollinators and wildlife depend upon for survival. In so doing we are destroying the "circle of life". Bees, butterflies, and 200,000 species, mostly insects, pollinate plants we use for food, but we are clearing away what they need to survive. We are starving the pollinators. No food for pollinators, no food for us. All of this is very simplistic, but you get the idea.

Up to 40% - mostly bees and butterflies - face extinction according to a 2016 report from the United Nations. Loss of native plant habitats, invasive plants that leave no room for natives, overuse of pesticides/fungicides are just a few of the problems. We must find ways to combat this issue.

So here's one. A student at UNC-Charlotte by the name of Angel Hjarding turned a doctoral research project into one of the fastest growing wildlife conservation programs in the state. Her original mission was to determine how much land remained in the urbanized area around Charlotte to support butterflies and other pollinators and then to encourage residents to fill in the gaps with perennial pollinator gardens. The program began in February, 2016 with 50 volunteers. Angel had little hope of getting more volunteers. However, by June more than 800 people had signed up statewide. The NC Wildlife Federation (http://www.ncwf.org/) partnered with Hjarding and launched the Butterfly Highway, recruiting volunteers to create a network of pit stops for the pollinators. Last posting I could find for pit stops was 1400. Wow!

This is something that anyone can do. It doesn't cost any money. All you need is six hours of sun daily, offer native trees, shrubs or flowers, have a place for insects to raise their young and don't use chemical pesticides. Oh, and don't forget they need water. Currently, sites include farms, college campuses, school gardens, residential landscapes, and even apartment balconies with container gardens. The Department of Transportation is doing their part by planting flowers and shrubs along our highways.

Looking for a neighborhood, church or other building beautification project? Create a pollinator pitstop!

You will need host plants and nectar plants. What is the difference? Most butterflies require specific host plants on which to lay their eggs. For example, Monarchs are obsessed with their host plant. It has to be the milkweed plant. Milkweed (Asclepias) is found along the roadsides, in fields and open woods. So what is a host plant? Butterflies lay their eggs on their preferred host so the tiny caterpillars can immediately begin to eat - as they are too small to go looking for food. The host plant is actually eaten by the caterpillars; the nectar plants provide nourishment for the butterfly. So you see why you need both host and nectar plants. I have a 3' bronze fennel (host) that gets eaten up each year by the Black Swallowtail caterpillars. They are fun to watch as they grow quickly from tiny to adult size. They wrap themselves in cocoons and before long I have lots of Black Swallowtails that then enjoy the flowers (nectar) in my garden.

There are 174 species of butterflies in NC, so I leave further research to you. Find the native plants roadmap at: http://www.ncwf.org/programs/garden-for-wildlife/butterfly-highway/. They list pollinator plants for each area of NC and answer lots of questions regarding the Butterfly Highway. Also research the numerous host plants for your butterflies. Plant and the butterflies will come!

I encourage you to join the Butterfly Highway (it's free) and do your part to provide a habitat that will result in rebound for our graceful, lovely beauties. And don't squash those caterpillars!

References:
http://www.ncwf.org/
The News and Observer, article67789707

Grow Native

Floral Natives to Attract Butterflies

Silvia Caracciolo, Extension Master Gardener Volunteer

What uses antennae to smell and has overlapping scales like roof shingles which reflect light to give them their color? Butterflies. There are 175 different kinds of butterflies in North Carolina that are looking for a place they can call home.

Photo Courtesy of Silvia Caracciolo

While building a landscape, we usually plant flowers to add interest to our gardens. My butterfly garden is laced with butterfly attracting flowers such as Stokes Aster, which features a fringed edge. This purple flower can reach four inches across, and grow 12-24 inches high, making it an excellent cutting flower. These blooms last up to seven days once cut. When the plant is established, they are very drought tolerant. Another favorite of mine is the Purple Coneflower which is easily recognized having a rounded brown dome. The petals droop which enhances the very showy structure. This beauty likes well-drained soil. It attracts butterflies along with the added benefit of repelling deer.

Where do you begin? Contact a nursery which specializes in native plants. There are over a dozen I found quickly on the internet. I spent plenty of time discussing my landscape with nursery personnel describing it as full sun, good drainage and no supporting trees or shrubs. I knew butterflies need plants that feed them (they are picky eaters), along with host plants that encourage egg laying and food for the new caterpillars upon arrival. Natural plants that provide cover are necessary as well - trees, shrubs, vines, herbs and wildflowers. Taking all of this into consideration and guidance from nursery experts, I purchased some natives to start building a natural habitat for our beautiful winged friends.

Photo Courtesy of Marshall Warren

I put the garden where I can enjoy the bright colored blooms, resting butterflies, bees and an occasional bird from multiple windows. I have included a lovely glass water feature where I have provided nylon scrubs for the butterflies to drink from to provide a place to rest.

Go native and provide butterflies an oasis they can visit. The delight will be all yours!

A Veggie Tale

Herb Hosts for Butterflies

Tiffany Whichard, Extension Master Gardener Volunteer

Nectar plants are what most folks think of when they

Photo Courtesy of Pixabay

install a butterfly garden, but people mustn't forget that these winged beauties need places to lay their babies. For vegetable gardeners, there are herbs you can tuck into your plots that will act as a nursery to the next generation of butterflies. Females will flit around, carefully placing their tiny eggs in sheltered locations--often the underside of leaves--hidden from predators. Then, in as little as 10 days, the minuscule caterpillars will begin to emerge with voracious appetites and munch their way through the stems and leaves you've provided. Trust me when I say that watching them making their transition from little babies to enclosure in a chrysalis is nothing short of amazing!

So, what should you plant? Well, dill is very aromatic, with fronds that are a favorite for Swallowtails. Fennel is another must-have plant, a delicacy for our butterfly friends. It can grow to six feet tall and has a showering burst of yellow flowers, come summer, that are reminiscent of a Fourth of July fireworks celebration. Parsley is another great one. With its easy to grow nature, and loose clumping habit, it can provide a haven for growing butterflies-to-be. Lastly--and this is stepping outside of the vegetable garden slightly--I'll mention Pawpaw trees. They bear tropical looking fruits with a custard-like flesh that taste of mango and banana. This foliage is the sole food source for striking and equally exotic Zebra Swallowtail Caterpillars.

Do you have more questions about how you can bring butterflies to your yard and entice them to stay? If so, please feel free to give us a call.

Quick Tip:

How to Determine Fertilizer Requirement

Marshall Warren, Horticulture Extension Agent

When fertilizing your lawn and confused about how much fertilizer to apply, use these simple calculations:

To apply 1 pound of nitrogen per 1,000 sq ft: Divide 100 by the first number on the fertilizer bag to determine the amount of product to be used per 1,000 sq ft.

Example: a 16-4-8 fertilizer. 100 divided by 16 equals 6.25. Therefore, 6.25 pounds of fertilizer per 1,000 sq ft will deliver 1 pound of nitrogen.

To apply 0.5 pound of nitrogen per 1,000 sq ft: 50 divided by the first number on the fertilizer bag equals the amount of product to be used per 1,000 sq ft.

Example: a 10-10-10 fertilizer. 50 divided by 10 equals 5. Therefore, 5 pounds of fertilizer per 1,000 sq ft will deliver 0.5 pound of nitrogen.

Ask An Expert

"Roundup®" and "Roundup® For Lawns" Now Available in the Marketplace - Confused Yet?

Patrick Maxwell, Travis Gannon, and Fred Yelverton

Roundup®	Roundup® For Lawns (Southern)	Roundup® For Lawns (Northern)
		
glyphosate	dicamba	dicamba
	sulfentrazone	sulfentrazone
	2,4-D	MCPA
	penoxsulam	quinclorac

Recently, a new product "Roundup® For Lawns" was granted registration by the US EPA and has generated a lot of attention, concerns and questions largely because of the trade name. Many are asking, "if I apply this product to my lawn, will it not kill my grass"? The answer is no, because Roundup® For Lawns does not contain the active ingredient glyphosate which is the active ingredient in Roundup; however, it is a source of confusion and individuals should be aware and pay close attention to the product they select. So, if Roundup® For Lawns does not contain glyphosate, why is this new product being marketed under the Roundup® portfolio? This is likely due in part to marketing efforts.

Roundup® is arguably the most recognized herbicide trade name ever and has been synonymous with the active ingredient glyphosate since its introduction in the 1970s. Glyphosate is a broad spectrum nonselective herbicide, meaning it controls many desirable and weedy species compared to selective herbicides which control specific weed species while not adversely affecting desirable species. Numerous products have been distributed under the trade name Roundup® for use in agricultural and consumer sectors, yet glyphosate has remained the primary active agent in all prior Roundup® products until Roundup® For Lawns was registered.

Several formulations of Roundup® For Lawns are currently registered. Although there are several formulations registered, many big-box stores in the region are carrying two formulations, one recommended for southern (Roundup for Lawns4) and one for northern turfgrass species (Roundup for Lawns1). Each formulation includes dicamba, a synthetic auxin used for broadleaf weed control and sulfentrazone, a PPO (protoporphyrinogen oxidase) inhibitor marketed primarily for nutsedge and kyllinga suppression but offers activity on some problematic broadleaf weeds (e.g. ground ivy, wild garlic, etc.). Additional ingredients in the southern version include, 2,4-D, another common synthetic auxin used for select broadleaf weed control and penoxsulam, an ALS (acetolactate synthase) inhibitor offering control of select broadleaf weeds. Not surprising, PBI Gordon produces a product (Avenue® South) that contains the same four active ingredients found in the southern version at five-times the active ingredient concentrations. Additional ingredients in the northern version include, MCPA a synthetic auxin used for broadleaf weed control and quinclorac a cellulose biosynthesis inhibitor offering post-emergent crabgrass control and excellent control of many troublesome broadleaf weeds (e.g. dichondra, dollarweed, etc.).

Further complicating matters, both southern and northern formulations of Roundup® For Lawns are available at many local home improvement stores in North Carolina. Determining which product is right for your situation is critical to achieving desired results and minimizing turfgrass damage. This situation offers an excellent lesson in the importance of distinguishing the difference between an active ingredient and a product trade name. We often treat the two synonymously, but as evident with Roundup® compared to Roundup® For Lawns understanding the difference and applying the correct product is essential to avoid potentially detrimental consequences. In conclusion, PLEASE make certain you

purchase the intended formulation and carefully read and follow all label instructions and guidelines when applying any pesticide.

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Monthly Garden Tasks

June Garden Tasks

Photo Courtesy of Pixabay

LAWN CARE

- When do you water your lawn? When the grass blades are just starting to curl and your footprints remain on the lawn when you walk on it. Applying an inch of water in the early morning allows the lawn to dry during the day. When the ground is dry, cycling the irrigation, applying a little at a time will allow the water to soak deep into the soil. It's a good time to plant new sod in damaged areas. Get your soil tested first. Come by the Ag Center for a soil kit.
- Grasses vary in their needs for nutrients, mowing height and watering. To learn how to best care for your grass type check out the Lawn Maintenance Calendar for your grass and learn how best to care for it, month by month... This is not the time for planting or fertilizing fescue! Wait until the fall.
- Mow fescue at a height of 3-3 ½" to help it survive hot, dry periods. Fescue is a cool season grass that slows down in the summer and if cut too short the tender roots will be exposed to extreme heat which will certainly damage, if not kill, it. It is difficult for fescue to recover from being cut too short as it is not actively growing at this time.
- Check out Turffiles at www.turffiles.ncsu.edu to see the Maintenance Calendar for your particular grass. There is also a lawn care app available at the Apple App Store!

TREES, SHRUBS and ORNAMENTALS

- Prune climbing roses after they bloom, then fertilize them to stimulate new growth. This summer's growth carries next year's buds, so keep the plants growing vigorously! Train long shoots horizontally to stimulate more branching.
- As soon as their foliage dies, dig bulb clumps of daffodils, crocus, Dutch iris, etc. that have become crowded. Divide and replant bulbs immediately, or store them in a cool, dry place for planting this fall. Please note that tulips and hyacinths generally don't perennialize in our area because our spring and winter is too warm.
- Give plants room to grow. Pull/transplant excess seedlings of marigold, cosmos, zinnias, etc. Growing plants need room to develop. Spacing plants properly reduces the risk of fungal diseases like powdery mildew.
- Remove faded flowers. Many annuals and perennials will stop blooming once they've started to set seed. Dead heading or removing spent flowers will prolong the bloom period.
- Pinch growing tips of ornamentals to encourage compact, sturdy, branched growth with lots of blooms.
- Protect plants from dehydration. Transplanting on overcast days, early in the morning, or late in the afternoon will reduce water loss in transplants. Keep newly planted ornamentals well watered for the first several days. Apply a 2-3" layer of mulch to conserve water and keep roots cool.

VEGETABLES & FRUITS

- Squash plants wilting? Squash vine borers may be the culprit. Check near the base of the plant for a small hole and a mass of greenish-yellow excrement. Slitting open the stem may reveal the villain - a fat, white caterpillar. It may be possible to save the plant by removing the caterpillar, then

covering the injured vine with moist soil to encourage rooting.

- Warmer temperatures and longer days send a signal to spring greens that it is time to flower (bolt). At this point leaves generally do not taste as good. Once this quick process starts, there is no turning back. To delay bolting try the following. Cover spring salad greens with a cardboard box in mid afternoon. Remove it after sunset and give the plants a slurp of water to cool them down. This procedure fools the plants into thinking the days are shorter than they actually are and can delay bolting by a couple of weeks.

LANDSCAPE IDEAS

- Tropical natives make excellent additions to our summer gardens, with colorful foliage, bright flowers, and heat-loving constitutions. They can't survive our winters, but we can try overwintering our favorites indoors. Ornamental peppers and Jerusalem cherries are also heat-lovers. More exotic tropicals, such as Alternanthera (Joseph's Coat), Plectranthus (with lovely gray felty leaves), and Acalypha (Copper Plant) are also available. Visit the J.C. Raulston Arboretum at NCSU to see first-hand how tropicals can spice up the summer garden.
- Mulch flower beds and vegetable gardens now to reduce watering chores later. Choose a mulch that will enhance the beauty of your garden. Check out https://content.ces.ncsu.edu/mulches
- Keep outdoor potted plants watered as they lose a lot of moisture during the hot days. If you're going on vacation, ask a friend to check your plants regularly.

Cool Connections

NC Extension Gardener Manual

Past Issues of Gardeners Dirt

NCSU Publication Links

NC Extension Gardening Portal

NC Extension Plant Database

Going Native (Selecting and Planting Native Plants)

NCSU Pruning Trees and Shrubs

Cooperative Extension Search

Field Guide to the Southern Piedmont

Photo Courtesy of Pixabay

Upcoming Events

SRS Regional Conference and Turfgrass Field Day!

June 14, 2017 7:30am - 12:45pm at **Sandhills Research Station** in Jackson Springs, NC 27281
The content benefits anyone managing a lawn/landscape. Advanced registration is $20 and includes lunch. On-site registration is $25, but space is limited. Special discount fee for TCNC members: $5. Pre-registration is strongly recommended to guarantee a spot. For more information and to register: www.turffiles.ncsu.edu/srsfieldday

NEWSLETTER EDITED BY: Silvia Caracciolo, Katie Maynard and Marshall Warren

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For accommodations for persons with disabilities, contact Bryant Spivey at (919) 989-5380, no later than five business days before the event.

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Home Horticulture in Johnston County, NC

Johnston County NC Extension Master Gardener Volunteers