

November/December 2013



Environmental Update



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What eggs are these?

After the Aug. 8 Master Gardener meeting in Onslow County, one of the Master Gardeners approached the guest speaker while holding a small container filled with soil and four leathery oval eggs. The speaker had just given a presentation about eastern NC snakes. When she was gardening a few days before, the Master Gardener had disturbed a clutch of eggs and didn't know what type they were. Snake? Turtle? Lizard? So she brought them to the meeting.

Her concern was that they might belong to a venomous snake. Although the speaker couldn't identify the eggs, she could state that the chances of the eggs belonging to a venomous snake were *extremely* remote. Why? Because of the six types of venomous snakes in eastern NC (coral snake, water moccasin, copperhead, and three rattlesnakes), only one - the coral snake - is an egg-layer; the others give live birth. The coral snake is very rare in NC.

That still left the question of what type of eggs these were. It was decided to try to hatch them. Unlike chicken eggs, reptile eggs should not be rotated or otherwise disturbed once they are laid. Since we didn't know if the eggs had been rotated when dug up and put in the container, the odds of them hatching were pretty low.

The container was placed in a warm location and left undisturbed. On Sept. 16, it was noticed that the eggs had hatched over the weekend. What were they? Baby box turtles! After checking them over and taking some baby pictures, the box turtle babies were released back into the wild... where they belonged.



If you come across round or oval leathery eggs in your yard or compost pile, try not to disturb them. The chances are very good that they are lizard, turtle, or non-venomous snake eggs. The eggs should not be taken out of the wild, and rotating them will usually cause the embryos to suffocate.

Golden silk spider, cicada killer wasp, & snowshoe hares ...

What do golden silk spiders, cicada killer wasps, and snowshoe hares have in common? They are each being impacted by climate change. In the case of the golden silk spider (*Nephila clavipes*) and the cicada killer wasp (*Sphecius speciosus*), their ranges are changing. As mentioned in the September/October issue of this newsletter, the golden silk spider has moved north into southern NC coastal counties. Since that article was printed, several emails were received about seeing the spider in Pender, Onslow, and Carteret.

The cicada killer wasp is a common sight in our state. It's hard to ignore a 2-inch wasp! Fortunately, it is only interested in hunting down cicadas, in which the female will lay an egg. The female is very hard to convince to sting you, and male wasps don't even have a stinger. Although common here, they weren't found in Wisconsin until several years ago. Entomologist Phil Pellitteri (University of Wisconsin) believes that milder winters have permitted the wasp's range to extend into Wisconsin's southern counties. His interview about the wasp may be seen online at <http://video.wpt.org/video/2232466884/>.

That leaves the snowshoe hare. Rather than a range change, the hare is facing a camouflage problem. Apparently, the signal for its body to molt and change fur color is based on length of day, not on temperature. With recent warmer autumns and delayed snowfall, these hares - found in the northernmost states - have frequently been very white in a brown world... and easy prey. A recent National Public Radio (NPR) broadcast about the snowshoe hare and ongoing population research can be found online at <http://www.npr.org/2013/09/08/220188619/>.

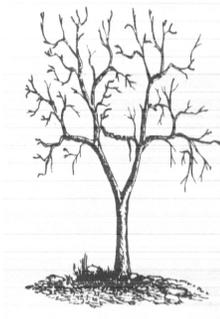
Are you interested in helping track some of these "little changes" of climate change? The National Phenology Network (<https://www.usanpn.org/>) is a possible option for you. You may very well be asking, "What on earth is phenology?" Well, phenology is the scientific study of periodic biological events - such as flowering, migration, and insect emergence - in relation to climatic conditions. As



such, it tracks key event dates with the goal of developing long-term data sets. You can even track observations for the trees in your own yard. This information is then available to researchers and others.

Climate change & coastal NC ...

In case you missed it, the New River Roundtable presentation of *Climate Change & Coastal NC* was held on Sept. 17 at Jacksonville City Hall. The presenters were Dr. Alex Glass (Duke U.) and Dr. Ryan Boyles (NC State Climatologist). The event was aired live on G10 and also taped for rebroadcast. If you don't have cable, you can also watch the program on your computer at http://www.youtube.com/watch?v=s_kfOylBww4.



2014 Arbor Day photo contest ...

The NC Forest Service's Urban & Community Forestry Program is sponsoring a photo contest. The competition is open to students in 5th - 12th grade - public, private, and home schools included. There are two grade divisions: 5th - 8th, and 9th - 12th. Entries will be accepted through February 28, 2014.

The theme is *Young & Old*. The photo must be taken in North Carolina and located in or near an urban area. The subject - trees, people, places, and context - needs to relate to the theme. Photos can include a mix of people, animals, and trees.

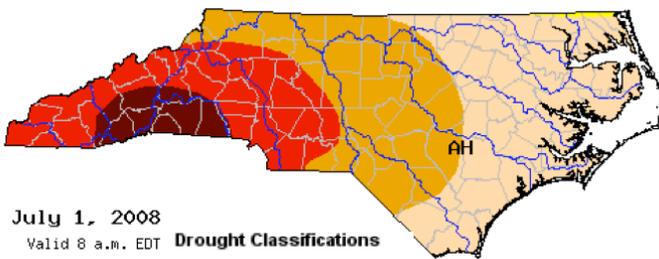
Additional information about photo criteria and how to submit is available at the contest's web site, located at http://www.ncforestservice.gov/Urban/arbor_day_photo_contest.htm. You can also contact Jennifer Rall at (919) 857-4849 or by email at Jennifer.rall@ncagr.gov.

Stormwater & rain gardens ...

Eastern North Carolina receives roughly 54 inches of rain each year. Unfortunately, it is neither consistent, nor evenly distributed. If it was, and we received one inch each week, we wouldn't have to worry about drought or irrigation.

Our rainfall can be very erratic. In 2002, we received roughly 44 inches of rain; in 2003, it was more than 80 inches. In Sept. 2010, we were well below our annual average... until we received more than 20 inches in five days! During that event, Jacksonville received 12 inches of rain during a 6-hr period. That's a lot of water!

The NC Drought Monitor is one way to track moisture conditions in the state. As seen below, the entire state was in a drought in July 2008.



July 1, 2008
Valid 8 a.m. EDT

Drought Classifications

- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought



This past summer was the first time in years that the entire state was out of drought condition. In fact, our office received many calls about how wet we were. Although we had some extended periods of wet weather, southeastern NC is actually at or slightly below our “normal” year-to-date annual total (graph above, as of 10/21/13).

It is important to remember that no surface water enters Onslow from our surrounding counties. Water that lands in Onslow may drain eastward to the White Oak, westward to the Northeast Cape Fear, or into our New River. The New River is also “flashy”. When it rains, the level rises rapidly; then decreases nearly as rapidly.

This rapid movement of stormwater runoff can carry pathogens and nutrients into our rivers and shellfish areas. Efforts to slow the movement of runoff are why stormwater permits and detention methods (ponds, swales, infiltration basins, and others) are used in developments.

With our dependence on aquifers (deep groundwater) to provide our drinking water and the negative impacts of stormwater runoff, it makes sense to either capture rooftop runoff for use in our gardens - using cisterns or rain barrels - or redirect runoff for treatment onsite.

Prior articles in this newsletter have described rain barrels. This time, the focus will be on rain gardens. As with rain barrels and cisterns, the only difference between rain gardens and bioretention cells is... size. Both are basically landscape depressions created to treat stormwater.

When designing a rain garden, soil type is an important consideration: the drainage rate impacts plant selection, and the garden should drain at least 1-inch of rainfall within three days. The design also should include an outlet for overflow, so as to release water during high rainfall events. There are several websites that provide excellent information on rain garden design and plant selection. Two such sites are:

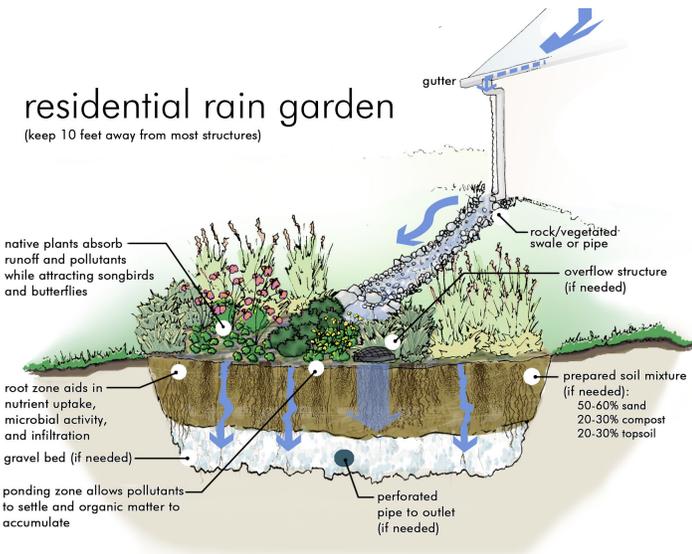
NCSU Backyard Rain Gardens

<https://www.bae.ncsu.edu/topic/raingarden/>

Rain Gardens: a how-to manual for homeowners
<http://learningstore.uwex.edu/assets/pdfs/GWQ037.pdf>

Properly sizing the rain garden is very important. These sites and others provide tables to help with calculating how big the rain garden should be. No

matter how it's done, you need to know the amount of impermeable area draining to the rain garden.



(Image source: <http://vienna-wv.com/portal/2013/07/18/what-is-a-a-rain-garden/>)

their holiday spirit.

On December 3rd, join us at 6:30 pm for the social gathering and assembling of items. Please plan on attending and completing a wonderful community service project.

In the meantime, please tell everyone you know that we are collecting the following items. All of these can be dropped off at the NC Cooperative Extension office, 4024 Richlands Hwy. Please remind our staff that they are for the Elder Cheer program. Items requested by Onslow County Elder Cheer are: lotion, candy (diabetic), aftershave, fruit baskets, socks, puzzle books, key chains, watches, blankets, deodorant, electric blankets, combs, perfume, slippers, hair brushes, night gowns, batteries, gospel cd's, holiday novelties, toothbrushes, writing paper, stationery, support hose, powder, pajamas, disposable razors, personal care items (soap, shampoo, etc.), small flashlights, fashion jewelry, live plants, pens, and window mounted bird feeders.

4-H is also in need of baskets, tins, and gift bags to help wrap these items. **All of these items are due in the 4-H office by November 27th.** For more information, contact Wanda Mills or Kelly Abma at (910) 455-5873.



Christmas Cheer Time is Here Again



The Onslow 4-H County Council is again participating in the Elder Cheer program. Since 1996, the Onslow County Adult and Family Services unit at the Department of Social Services has coordinated the Elder Cheer program. This program places an emphasis on the elderly and disabled population who are in resident care facilities, while giving our community members the opportunity to share

Don't forget ...

Help save paper, postage, and your tax dollars! This newsletter and the annual reader survey are available online at:

<http://onslow.ces.ncsu.edu/content/Envedarchive>

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