

Forsyth Field Notes

Forsyth County Cooperative Extension News

August 2022

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Tour Extension gardens and count pollinators on August 20

By Heather N. Kolich
County Extension Coordinator
UGA Extension Forsyth County



Pollinators are vital players in ecosystem health and crop production. Photo by H.N. Kolich, UGA Extension

Did you know that Forsyth County Extension Master Gardener and Master Naturalist

volunteers partner with Forsyth County Public Libraries and the Parks and Recreation Department to provide public demonstration and education gardens around the county? Although one of the gardens is named “The Secret Garden,” we don’t want these gardens to stay secret. That’s one reason why Extension volunteers will be hosting events and activities at each garden on August 20, 2022. The other reason is to encourage people to participate in the 4th Annual Great Georgia Pollinator Census, happening August 19-20, 2022.

Why count pollinators?

Around 2006-07, the sudden demise of honeybee colonies around the world gained public attention. As researchers tried to understand causes for this phenomenon, termed Colony Collapse Disorder, that claimed 30-90 percent of hives in managed apiaries, others noted declining populations of native bees.

Studies estimate there are over 3,500 different species of native bees in North America, and over 540 have been documented in Georgia. Some native bees are crop specialists, like the southeastern blueberry bees and squash bees. Around the world, 87 major food groups, representing 35% of our global food supply, depend on insects and other nectivores to spread pollen so that fruits, nuts, vegetables, and seeds can develop. Agriculture is the primary basis of Georgia’s economy, and insects provide an estimated \$488 million in pollinator services to the Georgia agriculture industry.

Habitat loss and habitat fragmentation, often caused by land disturbance, development, and urbanization, are major issues in pollinator decline. Negative attitude towards insects is another threat to pollinators. In 2016, at the urging of the U.S. Environmental Protection Agency (EPA), Georgia joined other states in creating a pollinator protection plan. Georgia’s plan was jointly created by the University of



Georgia's Entomology Department and the Georgia Department of Agriculture, with input from beekeepers, fruit and vegetable producers, and others.

In the Georgia Pollinator Protection Plan, every Georgia resident has a role in supporting healthy pollinator populations. The Great Georgia Pollinator Census, another UGA initiative, is a citizen science project launched in 2019 as a way to educate people about the importance of pollinators in our ecosystems as well as our food production systems, and to encourage all Georgia residents to participate in pollinator protection and habitat creation.



Purple coneflowers provide late summer and fall food for a variety of native bees and butterflies. Photo by H.N. Kolich, UGA Extension

Why count pollinators in August?

Many flowering plants begin to wane in late summer and fall, making pollen and nectar collection challenging for bees, butterflies, wasps, and other animal pollinators. Scheduling the pollinator census for August accomplishes two goals. First, it helps people learn about late season plants that enhance their landscapes and support pollinators, such as crape myrtles, buttonbush, purple coneflowers, asters, sages, and goldenrod. Second, children are back in school in August, and the pollinator census is a great STEAM project for the whole school. Teachers can find activities and lesson plans at <https://ggapc.org/educators/>.



Learn and count at Extension volunteer gardens

Forsyth County Extension and our garden host partners invite everyone to visit the public gardens anytime, but we'll have family-friendly activities in each garden on August 20, 2022. Visit these gardens between 11 a.m. and 2 p.m. to talk with Master Gardener and Master Naturalist volunteers and learn about pollinators.

The Secret Garden is behind the Cumming Library, 585 Dahlonega Street, Cumming. This garden showcases shade and drought tolerant plants.

The Pollinator Garden is at Hampton Park Library, 5345 Settingdown Road, Cumming. In addition to supporting pollinators with flowering and host plants, this garden helps protect water quality in the Upper Etowah River watershed.

The Poetry Garden at the Post Road Library, 5010 Post Road, Cumming, features edible landscaping.

The Sustainable Community Orchard, located inside Chattahoochee Pointe Park, 5790 Chattahoochee Pointe Drive, Suwanee, hosts a variety of native fruit and nut trees.

The Bethelview Trailhead Native Garden, 5120 Bethelview Road, Cumming, and the *Louise Mashburn Native Plant Garden*, at the foot of Sawnee Mountain, 2500 Bettis Tribble Gap Road, Cumming, both feature native plants, shrubs, and trees.

Please come see us at the gardens. We're counting on you!



Forsyth County Master Naturalists keep an eye on Eastern Bluebirds

By Heather N. Kolich
County Extension Coordinator
UGA Extension Forsyth County



Eastern bluebirds are lively, colorful, and beneficial for insect control. Photo by Jack Bulmer on Unsplash

It's hard to believe it's been over 10 years since Fowler Park opened, but it was this construction that inspired the 2010 class of Forsyth County Extension Master Naturalists to develop their first citizen science project, the Bluebird Trail. The goal of this project was encouraging eastern bluebirds to return to the area they had fled during the land disturbance associated with creating the park.

Working with the Parks and Recreation Department, Master Naturalists built and installed 14 bluebird nesting boxes at Fowler Park. The following spring, all 14 boxes hosted nesting bluebird pairs and successful fledges from each box. Nesting pairs returned each year, and the success at Fowler Park has been replicated with a second Bluebird Trail at Chattahoochee Pointe Park.

Nesting and raising hatchlings are significant undertakings. The female bluebird spends 2-5 days gathering pine needles, grass, and straw and weaving them together to form a nest. Then she lines the

nest with soft materials, like feathers and hair. When the nest is ready, she'll lay one egg per day for 3-7 days.

Incubation requires 13-20 days, during which the female remains on the nest, keeping the eggs warm and waiting for her mate bring food. Good nutrition and warm temperatures shorten incubation time. Fortunately, all the eggs hatch on the same day, reducing size differences between babies so that the first hatchling doesn't outcompete later hatchlings for food. But with no feathers, the babies still depend on their mother's body heat to keep them warm.

Both parents work to feed the hatchlings a high-protein diet consisting mostly of insects, delivered to their gaping mouths about every 20 minutes. Finding the abundance and variety of insects they need for the babies is easier in a foraging environment that is rich with plant diversity, especially native plants, including trees, shrubs, herbaceous plants, and grasses. After feeding them for 17-20 days, the parents coax the young out of the nest to take their first flight.

Nest box monitoring

A team of Master Naturalists monitor the Bluebird Trail boxes during the mating season and maintain them during the off season. I joined Bluebird Trail project leader Nancy Mitchell during one of her weekly monitoring and maintenance hikes. A first brood had already fledged from many of the boxes this spring, but Nancy explained that if the parents have been successful with the first nesting, they may return to the nesting box and try for a second brood.

Since the team has found that a clean nesting box encourages a second nesting, clearing out old nests was one of the tasks for the day. Our removals included an empty

bluebird nest and two unoccupied nests made of materials that indicated other species. A nest made of sticks on top of a bluebird nest probably belonged to a mouse. We also removed two wasp nests from unoccupied boxes and moved a box that had never been occupied to what we hope will be a more attractive location.



Forsyth County Extension Master Naturalist Volunteer Nancy Mitchell uses a mirror to check for eggs in a bluebird nesting box at Chattahoochee Pointe Park. Photo by H.N. Kolich, UGA Extension

Attracting Bluebirds

Bluebirds are cavity nesters, but they can't excavate a cavity in a tree like a woodpecker does, so they must find a ready-made house. Select a bluebird box with a hinged side that opens to allow cleaning and mount it on a sturdy post at least 3 feet above the ground. Locate the box where the bluebirds have a good view of a meadow or grassy area in front and some trees or shrubs behind where they can land and reconnoiter.

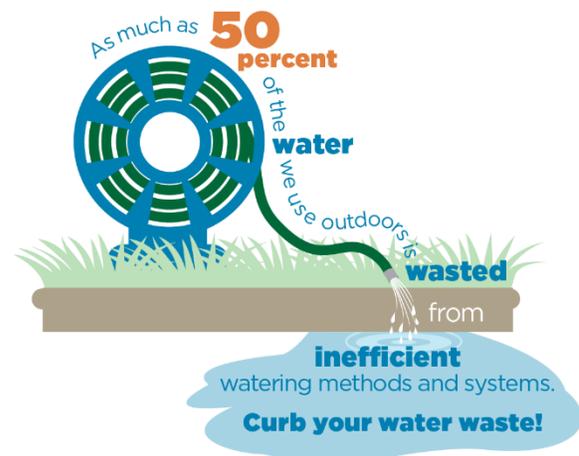
Insects comprise two-thirds of adult bluebirds' diets, so avoid use of pesticides to ensure abundant food sources. Berries and fruit from native plants comprises the balance of their diet. Caterpillars are

especially important first foods for hatchlings. This diet generally meets the birds' water needs, as well.

For more information and instructions for building bluebird nesting boxes, see the Natural Resources Conservation Service publication [Eastern Bluebirds](#).

Wise water practices for summer landscapes

By Heather N. Kolich
County Extension Coordinator
UGA Extension Forsyth County



According to the U.S. Environmental Protection Agency, as much as 50 percent of outdoor irrigation is wasted. Image from EPA.gov

Summer drought and heat conditions can cause stress in landscape plants. Keeping plants healthy while keeping the water bill manageable requires a balance of sensible irrigation practices.

Household water use increases in summer

According to the Environmental Protection Agency, household water use increases around 60 percent in the summer, primarily because of outdoor watering. Also according to the EPA, about half of that water is wasted due to poor watering practices, such as watering sidewalks and streets, watering



during rain or the heat of the day, and overwatering.

Water roots, not leaves

Roots absorb water from moist soil, but wet leaves grow fungus. Apply irrigation as close to the soil as possible; this practice minimizes water loss to wind and evaporation and reduces fungal leaf diseases. Drip irrigation is the best choice where it is practical, such in landscape beds and vegetable gardens. Drip tape and soaker hoses can be hidden under mulch, which also helps to conserve soil moisture.

Water early, deeply, and infrequently

Along the lines of reducing evaporation and leaf wetness, set lawn sprinklers to come on around 5:00 or 6:00 in the morning and turn off before 9 a.m. It's cooler then, and morning sun and breezes that dry the dew will also dry irrigation water from the leaf blades. Established lawns typically need an inch of water per week. Watering deeply and infrequently encourages roots to grow deeper into the soil, where water lingers longer. Short, frequent irrigation sessions keep roots close to the soil surface. Shallow roots are subject to drought stress and desiccation during even short dry spells.

Calibrate irrigation output

To figure out how much water your irrigation system of choice is supplying per hour, put a clean tuna can under the soaker hose or near the edge of the sprinkler spray. Turn on the water and let it run for 30 minutes. Turn off the water and use a ruler to measure the water collected in the tuna can, then multiply by 2. If the can collects ½ inch of water in half an hour, then the system puts out one inch of water per hour.

Water by landscape zone

Landscape plants have different water needs. Ideally, plants with similar water needs are

grouped together in the landscape, allowing us to plan irrigation by hydrozones, or high, medium, and low water need zones.

Low water zone (Xeric Zone)

In many landscapes, the zone with the lowest water needs, also called the xeric zone, is dominated by well-established trees and shrubs. These plants have deep, extensive root systems that can scavenge moisture from large areas of soil. They usually need supplemental irrigation only during extreme drought, heat, or long periods without rainfall, such as the three consecutive, utterly dry weeks we had in June. Following water wise principles, the xeric zone should comprise 60 percent of the landscape. As this area is rarely disturbed, it reduces your labor load, too.

Medium water zone (Transition Zone)

A transition zone of moderate water-use plants helps segue between the high and low water needs zones. Plants with moderate water needs include flowering native trees and shrubs, like redbuds and azaleas, as well as drought-tolerant herbaceous perennials, like day lilies and coreopsis. Watch these plants for signs of drought or heat stress, including wilting and leaves showing a yellow or gray color change, and hand water in the root zone of affected plants as needed.

High water zone (Oasis Zone)

Annual bedding plants, vegetable gardens, and newly planted trees and shrubs have high water needs. For a water efficient landscape, limit areas hosting these plants to a small portion of the landscape. For example, put flowering annuals in beds near the front door to make a bright, colorful welcome statement. Water annuals when the leaves begin to wilt. Apply one-inch of water evenly around the root zone of newly planted trees and shrubs each week.



Upcoming Extension Programs

Lunch and Learn Webinars



Get ready for fall lawn and garden care with four Wednesday Lunch and Learns presented by UGA Extension horticulture professionals beginning August 11, 2022.

Basics of Landscape Care

August 11, 2022, noon-1 p.m. [Register](#)

Fall Lawn Care and Maintenance

August 18, 2022, noon-1 p.m. [Register](#)

Fall Food Gardening

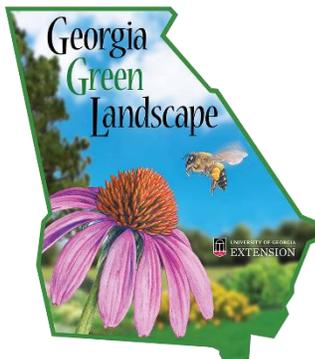
August 25, 2022, noon-1 p.m. [Register](#)

Foodscaping with Perennials

September 1, 2022, noon-1 p.m. [Register](#)

Georgia Green Landscape Stewards

Wednesday evenings, Sept. 7- October 5



Join UGA Extension Master Gardeners and Master Naturalists on Wednesday evenings at Cumming Library for this

five-session program and learn how to make your landscape more sustainable. Topics covered include soil and water health, managing for lower maintenance, increasing biodiversity, and planting for pollinators and wildlife. Visit our [website](#) to register.

Georgia 4-H Mission Make-It Youth Engineering Challenge

August 20, 2022 at Rock Eagle 4-H Center Through Mission Make-It, middle school students engage in the engineering design process as non-competitive teams. Students will see agricultural machinery, drone demonstrations, and visit a petting farm. [Registration](#) includes transportation and lunch.



UGA Extension strives to translate the science of life for use in everyday living. Forsyth County Extension is supported by the University of Georgia, Forsyth County Board of Commissioners, Forsyth County Board of Education, and United Way of Forsyth County.