Butterflies & Their Food Plants:
EASTERN GIANT SWALLOWTAIL

By Will Stuart

“Butterflies & Their Food Plants” is a new series by Will that is to appear quarterly in our Society newsletter. All photos are by the author.

Some North Carolina butterflies are common statewide. The Eastern Tiger Swallowtail (Papilio glaucus), our official state butterfly, is a large yellow (well, usually) butterfly with dark tiger stripes, which flies from early spring into fall. The species uses many host plants including Black Cherry, Tulip-poplar, and Sweetbay Magnolia. Adults are attracted to a wide variety of nectar sources including Buttonbush, Ironweed and Joe-Pye Weed. Add one or more of these native plants to your garden and expect a visiting Eastern Tiger Swallowtail.

Other butterfly species are restricted to a small set of host plants. Zebra Swallowtail (Eurytodes marcellus) caterpillars feed only on native Pawpaw (Asimina triloba). Adults may be seen throughout most of the state, perhaps far from their host plant, but most Zebra Swallowtails are found where Pawpaw is common. When Butterflyweed blooms along roadsides in the Pee Dee National Wildlife Refuge (where Pawpaw is very common), I often find a half-dozen "Pawpaw butterflies".

The Eastern Giant Swallowtail (Papilio cresphontes) is North Carolina's largest and least common swallowtail butterfly. Prickly Ash (Zanthoxylum clava-herculis) is the primary host plant near the coast. Mountain populations lay their eggs on Wafer Ash (Cont. on P3)
I volunteered at the Society’s native plant garden at the NC state fair this year and answered many questions about the Society and the garden. However, most questions were about what native plants (trees, shrubs and groundcovers) could be used for landscaping. Although I did my best in answering the landscaping questions, I wish I had known more. I know many of NCNPS members answer similar questions. Educating homeowners on what native plants could be planted and where (habitat requirements) and where to acquire the plants is something the Society will address.

Gov. Roy Cooper declared Oct. 21-27 as Native Plant Week in North Carolina. The NC State University Extension Service (Lucy Bradley) compiled a lot of information on native plants in response to this declaration. I found the Extension Gardener Toolbox interesting and useful. It is one among many of the online databases (such as ours) in which the user can search for information on specific plant species.

I attended the (NC) Friends of Plant Conservation annual meeting on Oct. 26. During the morning, there was a field trip to Picture Creek Diabase Barren in Granville County. Jennifer Stanley’s master’s thesis and subsequent book provide excellent lists of the flora found at this diabase barren (click here for the MS thesis, click here for the book). Leslie Starke of the NC Plant Conservation Program provided an overview of the staff changes at the NC Plant Conservation Program. Noteworthy are Leslie’s promotion to the director of the program, and the Virginia Natural Heritage Program employing Jennifer Stanley as a botanist. The NCNPS works closely with the NC Plant Conservation Program.

Finally, I need to say that after three years of retirement, I returned to work. I find myself without the time to address the Society’s short-term and long-term term needs. Therefore, I will not be seeking a subsequent term as president after the Society’s annual meeting in June 2020. I want to thank everyone for the opportunity to serve you.
Butterflies & Their Food Plants (cont.)

(Ptelea trifoliata). In August, I visited the gardens of Jean Kolk Wilson along the New River in Ashe County where Jean had found early instar Giant Swallowtail caterpillars on her Wafer Ash. We did not see the adult butterfly that afternoon.

The New River meanders northward through Ashe County. I selected several narrow, gravel roads bordering the river and planned a two-day trip to photograph an Eastern Giant Swallowtail on Ironweed or Joe-Pye Weed, nectar plants common along the river in August. Jean told me many New River homeowners mow their lots to the river’s edge, limiting both host plants and nectar sources. I found that to be all too true.

On Aug. 18, I followed my planned route from south to north, finding Wafer Ash and several caterpillars but no butterfly. The following day I reversed my route, starting at King’s Creek and working my way south. Clusters of Ptelea along Garvey Bridge Road hosted several more "cats" but still no butterfly. My second stop at Fulton-Reeves Road near New River State Park on NC 221 produced a fresh Giant Swallowtail "puddling" along the gravel road. I continued to nearby Absher Road and found a female ovipositing on roadside Ptelea. My day ended along Hartzog Ford Road where masses of Joe-Pye Weed basked in afternoon sun. Shortly after I arrived, a fresh Giant Swallowtail began to visit every Joe-Pye Weed in sight. Success, and what a treat!

Over the past several years I have learned that the distribution of many of our native butterfly species is closely linked to both their host and food plants. Often, I find the best way to find a butterfly is to first locate its native food plants. You can do the same!

Will Stuart is a professional photographer and a longtime member of the Society.

Correction

This photo by Bettina Darveaux shows a Rugel’s Ragwort (Rugelia nudicaulis), endemic to the Great Smoky Mountains. The photo in our last edition identified as a Rugels Ragwort was actually an aster.

Welcome!

Our newest at-large director is Paula LaPoint of Chapel Hill, who was unanimously approved at the Society’s 11-16-19 Board of Directors Meeting. Paula is a retired geologist, former assistant entomologist, and a volunteer with various organizations for the past 38 years.
Leave Some for the Birds!

By Bettina Darveaux

I was picking blueberries (Vaccinium spp.) this past summer when my thoughts wandered toward the subject of harvest etiquette. As I was picking, I made sure that I was leaving some blueberries for the birds and other critters, as well. On this hot 95-degree day, I am sure that a nice, juicy blueberry may provide lifesaving hydration for birds and their nestlings. Sustainable harvesting should always be applied, especially when collecting seeds or other propagules from our native plants in the wild. Leaving enough seeds will ensure the continuation of a healthy plant stand, as well as food for wildlife during the entire year, our winter season included.

Giving something back to nature as a thank-you for nature’s bountiful gifts is vital for the health of our environment and for the many other species with whom we share our planet. This practice of reciprocity is a very important part of Native American culture. The promotion of landscaping with native plants and their conservation, I believe, is our gift back to nature. Each plant species plays an important part in the ecosystem. When we plant natives in our yards, we are helping in more ways than we realize. Aside from their humble beauty and lower maintenance, we are providing sources of plant propagules for future plant dispersal and establishment, encouraging healthy gene flow, and in turn supporting a myriad of other organisms that depend on those plant species. I will admit that I do use fencing to protect my native shrubs from hungry rabbits and deer during early establishment, but after the plant has become well established and that vulnerable period has passed, I remove the protection and am willing to share! I receive great enjoyment from seeing the wildlife that is attracted to my native plants.

As I made my way around the blueberry bush that day, a female Cardinal landed on the opposite side of the bush from me, not more than two feet from my face. I was grateful for this close-up experience and delighted that I was able to reciprocate by having left her some delicious berries. And just maybe, she will stick around and be there to brighten up my winter days too. Who doesn’t love seeing our beautiful red Cardinals against a snowy backdrop?
More than 5,400 acres along Salters Creek, with a spectacular 17 miles of waterfront, has been saved by the North Carolina Coastal Land Trust, with help from Society funds. The Salters Creek Project was made possible thanks to partnerships with North Carolina Wildlife Resources Commission and the U.S. Marine Corps, and the support of other partnering organizations and funders, including the NCNPS’s Alice Zawadzki Land Conservation Fund.

“This property represents the best of what is left down east in terms of relatively pristine, natural areas,” said Janice Allen, deputy director of the Coastal Land Trust. The Salters Creek tract features estuarine marsh, pocosin and longleaf pine forest. It is a Natural Heritage area ranked by the state as having exceptional ecological significance, as well as an Important Bird Area, as designated by National Audubon Society. The property provides habitat for 23 rare plant and animal species including the Black Rail, a small marsh bird that has been proposed for listing under the federal Endangered Species Act.

The property adjoins the 14,494-acre Cedar Island National Wildlife Refuge, and is across Long Bay from the Marine Corps Air Station (MCAS) Cherry Point’s 11,000-acre Piney Island Bombing Range, resulting in a significantly large, landscape-sized conservation area. The Coastal Land Trust transferred the majority of the tract, approximately 5,170 acres, to the State of North Carolina to be managed by the North Carolina Wildlife Resources Commission as public game lands.

Camilla is executive director of the NC Coastal Land Trust.

Our volunteers with the Dilworth Community Association have been working diligently in Latta Park, a large park near downtown Charlotte, to remove invasives from a beautiful ravine at the heart of the park, encompassing approximately 10 acres. Thanks to funding from the NCNPS B.W. Wells Stewardship Grant, and assistance from TreesCharlotte and the Mecklenburg County Parks & Recreation Department, we are replanting the area with native shrubs.

For our primary planting effort, we installed evergreen native shrubs along the streambank, including Florida Leucothoe, Piedmont Fetterbush, Sweetshrub and Cherry Laurel. In one section, dubbed “Wisteria Gulch,” we replaced the namesake invasive with American Beech, Yellowwood, American Holly and Buttonbush. We also planted Staghorn Sumacs in an open area where we have recently lost two large oaks.

Funds from NCNPS were also used to expand our re-planting efforts to the far side of the park and to our “Butterfly Highway” pollinator garden. Our guiding principle is to make Latta Park more appealing to wildlife and to people by removing invasive species and replacing them with native trees, shrubs and perennials. Latta Park is a public park and all are welcome to enjoy a natural space in the heart of Charlotte, at 601 East Park Avenue.

Ruth Ann and Nancy are coordinators of the Latta Park project.
We are all too familiar with the spread of Japanese Stiltgrass (*Microstegium vimineum*), which was the focus of the Spring 2015 Chlorofiends! article. Stiltgrass is a spreading, annual grass, famous for rapidly covering forest floors and out-competing native vegetation. There are several clumping perennial grasses, however, that are of increasing threat to our local natural communities.

**Chinese Silver Grass** (*Miscanthus sinensis*, also called Eulalia) has spread quickly along roadsides in the North Carolina mountains and piedmont, and is heading into the coastal plain. Anyone who has driven the highways around Asheville is familiar with this tall (up to 12’) bunching grass, especially noticeable in late summer when its feathery, flowering panicles (which may be up to 1’ long) are reddish; later in the season the inflorescence becomes silvery and finally tan. The sharp-tipped leaves have rough margins and a silvery midrib.

There are many cultivars of this commonly sold ornamental grass, which I have nicknamed “Takes-no-prisoners Grass” because it seems to be swallowing up all other plants in its march down our roadsides and into old fields and forest margins. Weakley (2015) calls it “aggressively weedy”. A native of eastern Asia, Chinese Silver Grass was introduced into the US in the late 1800s as an ornamental; it has now spread from Québec into New England, south to Florida and into the midwestern states and California. It reproduces both via rhizomes and seeds; Larry Mellichamp notes that it does not appear to spread by seed in the Charlotte area, where it may be too warm for it. While cattle and other domestic livestock may graze on Chinese Silver Grass, native grazers (such as deer) do not appear to use it.

**Pampasgrass** (*Cortaderia selloana*), a South American native, was introduced in the mid-1800s as an ornamental plant and was later touted by the USDA for erosion control. Weakley (2015) lists Pampasgrass as a rare escape in the NC mountains and coastal plain, but it is now present in over half of the US, is considered invasive in several states, and is banned in several.
countries. Clumps of Pampasgrass can be up to 13’ tall and wide, with very showy, up-to-4’-long flowering panicles; each flowering head can produce as many as 100,000 wind-dispersed seeds, which can germinate rapidly without requiring a dormant period and can be found as far as 20 miles away from the parent plant. The leaf margins are rough and sharp, and the leaves may be green or variegated, depending on the cultivar.

As well as being a copious seed producer, it reproduces from root fragments. This plant prefers sandy soils in full sun and can tolerate more moisture than Chinese Silver Grass; it utilizes huge quantities of water, making it a particular problem in natural areas where water is in short supply. Eradication can be very difficult—it may require a backhoe or tractor to pull out a clump, with careful follow-up to make sure there are no root fragments left.

A new invader on our horizon is Chinese Fountaingrass (*Cenchrus purpurascens*; also listed as *Pennisetum alopecuroides*). Weakley (2015) did not list this species in NC, but the NC Rare Flora Listserv recently lit up with observations on Chinese Fountaingrass growing along roadsides in at least 7 NC mountain and piedmont counties. This native of Asia and Australia is also known as Swamp Foxtail Grass, and along with several other grasses in this group, is very popular in the nursery trade. This species can form clumps that are 2’ to 5’ tall and wide, and produces bristly, purplish-to-silvery-to-tan seedheads up to 6” long. As the season progresses, the leaves and flowering stems arch, giving the plant a fountain-like effect. It spreads primarily by seed, which can remain viable for several years.

All three of these grasses have a big impact in natural areas. Their large clumps and rapid reproduction displace native grasses and other plants, crowding out the animal life that relied on those plants. The volume of biomass they produce increases the likelihood of fire, making them of great concern to both natural areas as well as human structures.

If you love grasses in your landscape, consult Larry Mellichamp’s delightful *Native Plants of the Southeast: A Comprehensive Guide to the Best 460 Species for the Garden* [2014, Timber Press, with beautiful photos by Will Stuart]. Another excellent resource is William Cul-lina’s *Native Ferns, Moss, & Grasses: From Emerald Carpet to Amber Wave: Serene and Sensuous Plants for the Garden* [2008, New England Wildflower Society/Houghton Mifflin]. As always, GO NATIVE!

Chlorofiends! *is a regular column in Native Plant News. If you have information or comments on invasive species in North Carolina, please share them with Lisa Gould (lisalgould@gmail.com).

*Thanks to Jim Butcher’s The Dresden Files for the column title.*

**Photographers:**

Bonnie Millon, Bureau of Land Management, Bugwood.org  
John Ruter, U of GA, Bugwood.org
NCNPS State Fair!
Volunteers from the Reid (Triangle) Chapter and Triad Chapter "manned" the Society Demonstration Gardens, featuring beautiful displays of native plants and a tranquil water feature designed by Stefan Bloodworth. John Clarke designed this new brochure holder. Thank you to Jeff Prather, Tom Harville, Margaret Partridge and Lynne Hebble for sprucing up the garden this year. The fair was held Oct. 17-27 in Raleigh.

South Piedmont Chapter
Brave "plant nerds" from the South Piedmont Chapter braved some of the first downpours of the fall season to see Larry Mellichamp point out "Fall Fruits & Nuts" on their Clark's Greenway Hike in Charlotte.

Blue Ridge Chapter
This year, Bill Dunson, a retired professor of biology from Penn State University, started a new type of nature walk for the Blue Ridge Chapter called "Birds, Bugs & Blooms". The walks were co-sponsored by the High Country Audubon Society and Long Learners, based in Boone. The purpose of these walks was to identify any creatures and plants of interest and to discuss the ecological inter-relationships between them.

Six walks were offered between May and October, with a total of 127 participants. "In general, we walked for about 1.5 miles over two hours," Bill reported. "Three hikes were on sections of the Mountain to Sea Trail along the Blue Ridge Parkway (Jeffress Park and Osborn Overlook), one on Mt. Jefferson, (cont. next page)
Chapter News

Blue Ridge (cont.)

one at Todd Island Park, and one at a private farm that was being restored near Todd. One of these walks, on May 12, occurred during the spring NCNPS Wildflower Field Trip to Jefferson.

“The participants seemed to appreciate a broader ecological perspective that discussed in particular the major but often under-appreciated role of deer herbivory on forest plant ecology, and the use of plants to reconstruct the recent history of each site,” Bill wrote, adding, “Many of the forested ridge understory sites are now dominated by the few shrubs that can resist deer feeding, such as Mountain Holly (Ilex montana).”

Bill is planning a second season of walks for 2020, to be held primarily on the third Saturday of each month, May-September, in the Boone area. Contact him at wdunson@comcast.net for further information and visit his nature blog at https://lemonbayconservancy.org/news/nature-notes-by-bill-dunson/

Blue Ridge Chapter photos provided by Debbie Shetterly:
(Top Left) White Bergamot
(Top Right) Visit to Doughton Park
(Left) Silver-spotted Skipper on Dense Blazing Star
Chapter News: Native Demonstration Gardens!

By Charley Winterbauer, SE Coastal Chapter

As most of us know, when we suggest to folks to use native plants in their landscapes, the problem of availability becomes the big issue. It is very difficult to approach growers and plant distributors to persuade them to change over to natives. They will say that the demand is not there for significant income. This means the demand has to be created by the ultimate users, homeowners and landscape designers.

The Coastal Landscapes Initiative, or CLI, is a new collaborative effort to address landscaping at every stage of the process, from planning and design to installation and management. The ultimate goal is to foster coastal landscapes that are beautiful, functional, cost-efficient and environmentally friendly. Excerpt from https://ncseagrant.ncsu.edu/coastwatch/previous-issues/2018-2/winter-2018/coastal-landscapes-initiative-highlights-planning-planting-strategies/

This public-private partnership began in earnest in December 2017. The team’s initial focus is to raise awareness and increase the availability of highly beneficial plants; identify and recognize the exemplary coastal landscapes that already exist; and increase access to relevant, reliable information. Excerpt from https://ncseagrant.ncsu.edu/program-areas/healthy-ecosystems/coastal-landscapes/

The SE Coastal Chapter of NC Native Plant Society has been participating with CLI since its beginning. The local participants, besides myself, are Michael Abicht, my co-chair of the SE Chapter, Lara Berkley, past co-chair and landscape architect Beth Sheppard, owner of a landscaping business, and Dr. Paul Hosier, author of Seacoast Plants of the Carolinas.

Various working pairs among this local group have worked with the communities and identified and encouraged the establishment of sites that can be pointed out for the public to see how native plants look and behave, e.g., demo gardens.

The following are some of the sites either completed or being established in the SE Coastal area and are all open to the public.

**New Hanover Arboretum, Wilmington**

**Halyburton Park, Wilmington**

**Sunset Beach**
Membership Spotlight: BETH DAVIS

Beth has been active in the South Piedmont Chapter since taking a Basic Botany Class in 2010 at the UNCC Botanical Gardens.

What is your background?
I was born in Raleigh, grew up in Virginia and Georgia, and returned to UNC-Chapel Hill, and have been in NC ever since. My career was advertising and marketing for various ad agencies in Charlotte. Now, it is interesting to me to think about native plants and the ecology of NC from a marketing perspective, as in teaching and advocating for conservation and preservation of our native flora.

How did you get interested in native plants?
I’ve always dabbled in gardening, but somehow got more interested in native plants with the UNCC Botanical Garden and their adult education series, the Native Plant Studies Program. In addition, the hikes available through the Society have allowed me to visit many beautiful native plant communities...really some of the hidden gems of our state.

How do you support native plants in your chapter?
I’ve been active locally as the Southern Piedmont Chapter co-chair with Lisa Tompkins. Lisa is a “plant whisperer”, and I have met so many wonderful people in the area working with her to set up programs and hikes, staff tables at events, and generally find many wonderful and friendly fellow native plant nerds as new friends.

Do you have a favorite native plant?
Somehow I have gravitated to the entire Rudbeckia genus. I have tried to feature as many species in my home garden as I can keep alive, and explore other coneflowers to supplement their summer-blooming glory.

Certificate in Native Plant Studies!
The 2019 graduates of the UNC Charlotte Certificate in Native Plant Studies include several members of the NCNPS. The Nov. 12th graduates are: Julie Higgie (photo below), Jean Wilson, Kristyna Culp, Karen Kottkamp, Linda McDermitt, Laurel Millaci, and Alice Sudduth. Program founder, Professor Emeritus Dr. Larry Mellichamp, handed out the certificates.
We’re Wild About Natives!

*Monarch on Common Milkweed—Debbie Shetterly*