



Native Plant News

NEWSLETTER OF THE NORTH CAROLINA NATIVE PLANT SOCIETY

Native Plant News
Julie Higgin, editor

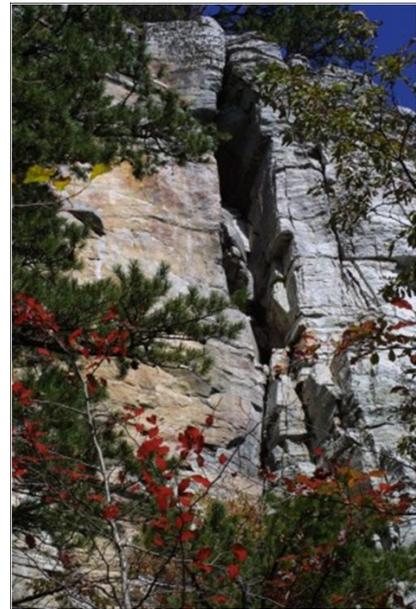
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Don't Miss NCNPS Fall Trip to Pilot Mountain

Our 2014 Fall Trip, October 3—5, takes us to two of the Piedmont's most distinctive sites, Pilot Mountain and Hanging Rock state parks. Part of the ancient Sauratown Mountains, these parks are home to many plant and animal treasures.

The weekend kicks off with two optional events Friday afternoon: a visit to Trena McNabb's meadow garden in Pfafftown, and a walk at Black Walnut Bottoms in nearby historic Bethania. Friday evening, in the town of Pilot Mountain, we'll enjoy social time and a talk by Dr. Ken Bridle, stewardship director of the Piedmont Land Conservancy and a former NCNPS president.

Saturday we'll gather at Pilot Mountain State Park, where Dr. Bridle will lead us in exploring some of the higher, drier sections of the park, and we'll visit a recently burned area to learn about the beneficial effects of fire on the local plant life. Saturday afternoon we'll botanize in the river section of the park. Saturday night we'll enjoy a catered dinner and a seed exchange (bring labeled seeds!), and NCNPS artist Betty Lou Chaika will share with us some of the drawings she's made on NCNPS trips and talk about the plant communities



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President's Letter



Jean Woods

Pollinators, invasive species, and sustainability are three topics that keep appearing in articles that I encounter. I even see these topics in the *Wall Street Journal*, so they are being noticed by people other than the nature-loving nuts that most of us are!

According to Doug Tallamy in *Bringing Nature Home*, people have modified about 95–97% of the land in the lower 48 states. The US Fish & Wildlife Service reports that 80% of our natural riparian vegetation has been lost and, as of November 1, 2009, about 1,200 animals and 750 plants are listed as endangered or threatened in North America.

The Nature Conservancy website states, "Damage from invasive species worldwide totals more than \$1.4 trillion—5 percent of the global economy. More than 50,000 invasive species in the United States cause an estimated \$138 billion in damage annually. Exotics have contributed to the decline of up to 46% of imperiled U.S. species. Almost half of threatened or endangered species are at risk from invasive species." (<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/southcarolina/placesweprotect/invasives-fact-sheet-final.pdf>)

It is more important than ever that we consider our yards and properties as ecosystems and do what we can to provide sanctuary for our native plants and a habitat for pollinators and other wildlife. Doing this addresses all three of these topics.

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CHLOROFIENDS*

Predicting Invasion

By Lisa Lofland Gould

Venus's Looking-glass, Poor-joe, Tall Goldenrod, Black Locust, Broomsedge, Giant Ragweed, Wingstem, Saltmarsh Cordgrass, Pokeweed, Blue Toadflax, Common Ragweed, Cutleaf Coneflower...all familiar native North Carolina plants, and all of them considered invasive...in Japan. In turn, many Japanese plants are well-known invasives here, including species of knotweed, honeysuckle, wisteria, holly, hops, barberry, privet, and stiltgrass—not to mention Kudzu, the “weed that ate the South”.

What makes a plant behave (relatively) politely in its native haunts and become a “chlorofiend” away from home is the subject of much research and debate. People have been moving plants from one part of the globe to another for eons, and as we know, some introduced plants naturalize and become part of the local flora: ~30% of North Carolina's flora consists of introduced, naturalized species. The majority of naturalized plants (~80%) do not become invasive, but the remaining 20% (or ~1% of all introduced plants) has a huge impact on biodiversity, ecosystems, and human economies. As agents of biodiversity loss, invasive species are second only to habitat destruction.

Ecologists have sought to develop models to predict the invasive potential of introduced species. It would be grand to have a straightforward method that would tell us *It's OK to bring this plant into the country* or *Don't you dare import that monster!* Farmers and fishermen alike would rejoice—invasive species cause billions of dollars of damage to agriculture and fisheries each year—and land man-



agers and many others would surely benefit. Clear prediction would be a huge boon to the horticulture and pet trades, which get lots of negative press for selling plants and animals that run

amok; these trades also lose revenue from folks like us, who refuse to purchase known invasives or even non-native plants in general (and we tell our friends about it, too: the Virginia Native Plant Society has a t-shirt that proclaims *Friends Don't Let Friends Plant Invasives*).

There are some pretty clear “red flags” for introduced woody plants: early maturity (which means they produce fruit on younger plants than do native competitors) and rapid growth, a lack of pests and diseases to keep them in check, production of fruit the local wildlife eats (so they are easily spread over long distances), and the ability to grow in a wide range of conditions. *Rapid Grower! Pest Free! Will Grow Anywhere! Great for Wildlife!* are how many invasive plants are advertised—after all,



Lonicera japonica, Japanese Honeysuckle

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CHLOROFIENDS*

(Continued from page 3)

these are traits that gardeners and landscapers frequently demand.

But overall, prediction has proved far more difficult than hoped. It appears that the ability of a plant to invade depends a great deal on the conditions at its new home: an intact ecosystem is harder to invade than a recently disturbed one. Change the water regime, the frequency of fires, the soil or air chemistry, or make other disruptions, and the system is ripe for invasion. Take another look at the plants listed in the first paragraph: almost all of them are species that thrive in disturbed habitats.

Another way for an introduced species to be able to naturalize is for it to find an empty

niche, a role in an ecosystem that no other species is filling. An old field, for example, may be populated by plants that thrive in dry, sterile soils; introduce a plant capable of fixing nitrogen (such as Autumn Olive or Chinese Lespedeza), and the field's soil chemistry is changed in a way that favors the invading species.

Successful invaders also have to adapt to the local pollinators: if a plant is to reproduce sexually it must be self-fertilizing or pollinated by the wind or wildlife. A plant that is pollinated by fruit bats isn't likely to naturalize here in North Carolina, unless some native animal comes along and takes a liking to it. Of course, we've helped many Eurasian plants succeed in North America, because we also brought in the European Honeybee.

(Fall Trip Continued from page 1)

we've visited over the years.

Sunday morning will feature walks at Hanging Rock State Park, with habitats varying from spray cliff communities to pine-oak heaths and lake edges. Throughout the weekend, our wonderful walk leaders will provide walk opportunities that vary from easy to strenuous.

A block of rooms has been reserved at the Pilot Mountain EconoLodge, 711 S. Key Street, Pilot Mountain NC 27041. Tel (336) 368-2237. http://www.econolodge.com/hotel-pilot_mountain-north_carolina-NC580. The group rate is \$52.99 +tax/night (smoking rooms \$79.99+tax/night). The deadline for the NCNPS group rate is **September 19**, so book soon!

Questions? Contact Patrick Mecimore at NCNPSTrips@ncwildflower.org or call (704) 929-1944.

Plants not only need successful pollination, but also a means to disperse their seeds. Wind and water carry many seeds, but lots of plants rely on animals for dispersal. In Korea, Korean Dogwood (*Cornus kousa*) fruit is eaten and dispersed by monkeys; here in North Carolina, Gray Squirrels relish it. While I haven't seen Korean Dogwood naturalize here, I have seen it begin to spread in New England. Scientists have found that introduced species may behave very differently in their new homes and sometimes evolve quite rapidly, adapting to new environmental conditions, pollinators, and seed dispersers.

Another frustration is *time*: an introduced species may show no sign of spreading for many years, and then suddenly it's growing all over the place; "an explosion in slow motion" some have called this phenomenon. It may take as few as 8 years or as many as 388, with an average of 147 years, for a plant to become invasive. The time lag may be due to several factors: it may take the plant a while to

CHLOROFIENDS*

(Continued from page 4)

colonize and build up sufficient population numbers to spread widely; the species may change genetically over time, as the population develops adaptations that favor its spread; and the environment may change in ways that enhance the spread of the plant.

For those of us who love plants—and surely that includes everybody in the North Carolina Native Plant Society!—our current inability to discern what plants will become ecosystem-level destroyers is of major concern. So for now, most of us think it's best to stick with growing North Carolina (or nearby) native species in our yards, and encouraging nurseries and landscapers to sell and plant native plants. *Go Native!*

Chlorofiends will be a regular column in *Native Plant News*. Sometimes we'll focus on issues surrounding invasive species, and sometimes we'll focus on specific plants. If you have information or comments on invasive species, please share them with Tom Harville (tomhar@bellsouth.net) and/or Lisa Gould (lisal Gould@gmail.com).

For more information about invasive species in North Carolina, visit the NCNPS's website at www.ncwildflower.org/index.php/plant_galleries/invasives_list and the NC Invasive Plant Council website at <http://nceppc.weebly.com/>. To determine the nativity of North Carolina plants, you can consult Alan Weakley's *Flora of the Southern & Mid-Atlantic States*, which is available as a searchable and downloadable PDF at <http://www.herbarium.unc.edu/flora.htm>.

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

Scientists have found that introduced species may behave very differently in their new homes and sometimes evolve quite rapidly, adapting to new environmental conditions, pollinators, and seed dispersers.



President's Letter (continued from p. 2)

(Continued from page 2)

Native plants are the key to rebuilding ecosystems because they support our pollinators and other wildlife. Plants in general contribute to clean air through respiration and help in creating clean water when growing in riparian buffers along streams and rivers. Wise water use, lawn reduction, judicious use of fertilizers, and, of course, planting native plants and removing invasive plants, create the environment where life can be sustained.

Sustainability is a large topic and I will only mention sustainable gardening. The Missouri

Botanical Garden website has an excellent page on the topic. The article stresses several practices: using drip irrigation and water barrels, mulching, reducing lawn size, manually pulling weeds, composting, not bagging grass clippings, recycling/reusing, and wise plant selection. Check it out at:

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/sustainable-gardening.aspx>

We can make a difference! Just do it!

Monarchs & Milkweed Examined

Will Monarchs Lose the Ability to Self-Medicate Against Parasites?

University of Michigan e-news publication "Biological Station"

Monarch butterflies are already facing challenges from loss of winter habitat and their mainstay food source, milkweed. Now, graduate researcher Leslie Decker, a doctoral candidate in the University of Michigan's Department of Ecology and Evolutionary Biology, is studying whether monarch butterflies are also losing the ability to protect themselves from parasites. She is basing her research on beneficial toxins found in milkweed plants called *cardenolides*, and how increases in atmospheric CO₂ affect that toxin and the monarchs that feed upon it. Follow this link to access the article.

http://www.lsa.umich.edu/umbs/news/ci.willmonarchslosetheabilitytoselfmedicateagainstparasiteswed25jun2014_ci.detail

Contributed by Dr. **Larry Mellichamp**



Photo by Lisa Brown

NEW NCNPS Habitat Garden



In June, NCNPS certified the garden of **Karen Hudson-Brown** as a Native Habitat. Karen lives in Gerton, between Asheville and Bat Cave. Her garden is on the site of a 90-year-old home with rock retaining walls that form five terraces. When she moved there, she had a formidable job of reclaiming the walls and garden from English Ivy and grasses. Eight years later, she has a place of stunning beauty with mulched paths leading from each level to the roadway. A water feature with pond and falling water is on one level, and another is a mossy area with a bench. Karen wrote that she is not an experienced gardener, but started her project with a commitment to create a natural habitat for wildlife. This led to choosing native plants and learning more and more about how to create such an environment. The result is impressive! The Native Plant Society heartily welcomes this newest addition to our list of Certified Native Habitats.

Carolyn Ikenberry, Habitat Certification



Board News

Your NCNPS Board members have worked hard this year, focusing especially on updating our Bylaws, clarifying our Policies & Procedures, and looking at the overall functioning of the Society and how we might improve our outreach efforts. A huge amount of time has been spent by President **Jean Woods** and **Christy Larson** to improve our website and get Wild Apricot up and running; thanks to Jean, Christy, webmaster **Terry Britton**, and others, we are now able to join, register for events, and donate online.

At the June Annual Meeting, NCNPS members approved our updated Bylaws. One of the biggest changes to the Bylaws was to simplify our Board and committee structure. The overall size of the Board was reduced to nine, with committee chairs and chapters chairs invited to Board meetings and having a vote, but not necessarily serving on the Board (unless they are one of the 9 members). We left only three standing committees—Nominating, Finance, and Membership—with other committee considered *ad hoc*; this gives the Society more flexibility to change committee functions, which are now described under the Policies & Procedures, and to add or remove committees. The new Bylaws also added a fifth member-at-large (previously there were four), removed Program Committee duties from the Vice-president's functions, and combined the duties of Corresponding and Recording secretaries into one office, the Secretary.

David McAdoo, our renowned orchid specialist and photographer, is now Vice-president of the Board, replacing **Lisa Lofland Gould**, who is now Board Secretary. We give our grateful thanks to **Carolyn White** for her years as Board Secretary, especially

for all her work on updating our Bylaws and Policies & Procedures.

Darcia McKnight, who has been producing beautiful newsletters for us, has become a new Board member-at-large; **Julie Higgle**, who has years of publishing experience, is now the newsletter editor. **Patrick Mecimore** brings his business expertise as he joins the Board as a member-at-large; Patrick and his wife **Kim Mecimore** have also taken charge of the Program Committee and are busy planning our upcoming trips. For a full list of the NCNPS Board of Directors, Committee Chairs, and Chapter Chairs, go to <http://www.ncwildflower.org/about/board/>

Habitat garden certification

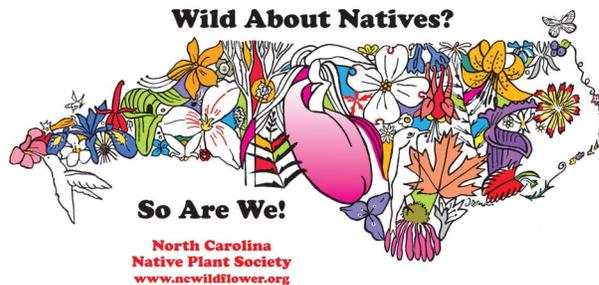
Is your garden a Certified Native Plant Habitat Garden yet? All you need are a few NC native trees, shrubs and perennials, some good conservation practices like composting and mulching, and a desire to continue growing native! Questions? Visit www.ncwildflower.org/certification/certification.htm, or contact

Carolyn Ikenberry at Caroynl@ncwildflower.org.

Show your commitment to preserving, enhancing, conserving, and protecting our environment and apply for certification!



Board News, continued



Our New T-shirts are Here!

We have a new T-shirt! The artwork was done by Trena McNabb and is beautiful, showing North Carolina covered by our native plants and some birds. The Pink Lady's-slipper, our logo, is nestled in the center. Even the Outer Banks are outlined in flowers. All the shirts are 100% organic cotton and the printing was accomplished with a 5-color process on a natural (light tan) T-shirt.

The profit from these shirts will go to our scholarship fund, so you will be supporting our outreach efforts and, at the same time, helping to get our message out to others by wearing your shirt. So consider buying one for yourself and one as a gift!

The shirts are \$18 for members, \$20 for non-members. You can buy online or at the Fall Outing, To purchase online:

<http://www.ncwildflower.org/index.php/resources/tshirts/>

Photo taken by Ed Davis at the Mellichamp Native Terrace in the UNC Charlotte Botanical Gardens includes Pychanthemum muticum, Mountain Mint (bottom right); Schizachyrium scoparium, Little Bluestem (center left); and in the back middleground primarily Rudbeckia triloba, Brown-eyed Susan.

If you order from Amazon, you can support the NC Native Plant Society! We are now set up with Amazon's Smile program for donations to charities. Below are instructions of how to link your Amazon account to the NCNPS.

Go to: <https://smile.amazon.com/>

Log into your Amazon account and type in **North Carolina Native Plant Society**, which will bring up our name.

Click on **North Carolina Native Plant Society**.

0.5% of your eligible AmazonSmile purchases will go to our checking account, which is linked to Smile. Consider doing it today!!! This is a great and easy way to support North Carolina's native plants!



Chapter Reports

Triad Chapter (Greensboro, High Point, Winston-Salem)

The Triad Chapter is winding down a summer series of walks with a visit to the Shallow Ford Natural Area in Alamance County. This 190-acre natural area is part of the Haw River Trail/Mountains to Sea Trail. Thanks go to **Stan Gilliam** and **Dennis Burnette** for planning the walks, which began in May, and to **Lynda Waldrep** for organizing the visit to Bluff Mountain in Ashe County.

September marks the start of our indoor programs, which will be kicked off by **Judy West** sharing some of her research into plant “communication. She will show the PBS video *What Plants Talk About*.

In October, we will look into monoecious and dioecious plants. Want an *Ilex* laden with berries in winter? Then you need to know if you have male and female plants in close proximity. This program will help members learn to identify what they have by looking closely at flower parts.

Our meetings are held at 7 p.m. on the first Wednesday on the month, September to May, at the Kathleen Clay Edwards Library on Price Park Drive in Greensboro. Our December meeting date varies, and features a show of members’ photography. Contact us for date and time at kathyschlosser@triad.rr.com

Kathy Schlosser, Chapter Chair

Western North Carolina Chapter

The Western Carolina Chapter had several great hikes this year, although our first activ-

ity, in February, was a well-attended talk on “Healing Gardens” by **Nina Shippen**, landscape artist. In April we visited **Nancy Shinn’s** property west of Asheville. Her mother- and father-in-law, **Tom** and **Bruce**, bought the property years ago and established a wonderland of native plants. We had a delightful afternoon stroll around the property. Also in April, **Jean Woods** and **Susan Sunflower** participated in a plant sale sponsored by the Master Gardeners in Brevard on Earth Day. Using native plants acquired from Dr. **Larry Mellichamp**, they sold 158 plants in two hours! The profit was donated to the NCNPS.

In May, Dr. **Dan Pittillo** led us on a very informative hike in the Panthertown area near Lake Toxaway. Don is a fountain of knowledge about our mountains and never ceases to amaze me with his stories and wisdom. In June, **Randy Burroughs**, landscape architect, lead a hike just off the Blue Ridge Parkway to one of his favorite spots. We saw the white Sweet Azalea (*Rhododendron arborescens*) and many other early summer flowers.

Outings planned for September include a hike on the 20th with **Gary Kaufman** walking us through grasses and *Parnassia grandifolia* in Buck Creek Serpentine, near Franklin. Some of us will join with the Western Carolina Botany Club on the 19th for purple-fringed orchids and overnight at the local Microtel. The fourth annual Grass of Parnassus and Moonrise outing which takes place at Wolf Mountain Overlook on the Parkway should be Sept. 8th or later, depending on bloom time. We arrive in late afternoon, and enjoy seeing Grass of Parnassus at its peak, along with many other rare and special plants. After a picnic

(Continued on page 11)

Chapter Reports, continued

supper at the Overlook, we watch the full moon come up in the near absence of light! We will post the date on our website and send out an email.

Transylvania Naturally, with whom the chapter often works, has been actively demonstrating the importance of native plants in the county, resulting in a recommendation for using native plants in city plantings, being included in a proposed planning ordinance.

Jean Woods, Interim Chapter Chair

Southeast Coast

The SE Coast Chapter has been focusing on local habitats and their characteristic plants. In June, we visited Halyburton Park in Wilmington on a field trip led by Dr. **John Taggart** of UNCW and **Andy Fairbanks**, park manager. The park is a 60-acre remnant of upland xeric sandhill terrain, a habitat that has been largely lost to development in our area.

We began our walk just outside the park in a Carolina bay slated for development. A 2012 wildfire had destroyed much of the canopy and knocked back the understory so that the rim of the bay was clearly visible, probably a once-in-a-lifetime sight given fire suppression and residential development in the bays.

The park itself contains three limesink depression ponds where we saw the rare plants *Litsea aestivalis* (Pondspice) and *Rhexia cubensis* (West Indian Meadowbeauty). Dr. Taggart pointed out that to change plant assemblages in the xeric landscape, “just add water”. Only a



barely noticeable change in elevation made a difference in the plants we saw; plants less well-adapted to dry soil survive only where rain collects.

Many thanks to our wonderful field trip leaders!

Lara Berkley and Cary Paynter,
Chapter Co-chairs

Southern Piedmont Chapter (Charlotte)

September Meeting

2 p.m. Sept. 14—Nature Walk led by Dr. **Carrie Dejaco** at McDowell Nature Preserve While most of the trails in the preserve are in the wooded areas, we will instead venture into the prairie area to view the late summer extravaganza of a display by many different types of asters, such as the bright and beautiful goldenrod which frequently gets blamed for folks’ ragweed allergies this time of year.

This part of the preserver is not accessible via the main entrance and does not have much of a parking area. I suggest that we meet in the parking lot of the Nature Center and then car-pool the mile or so to the prairie area.

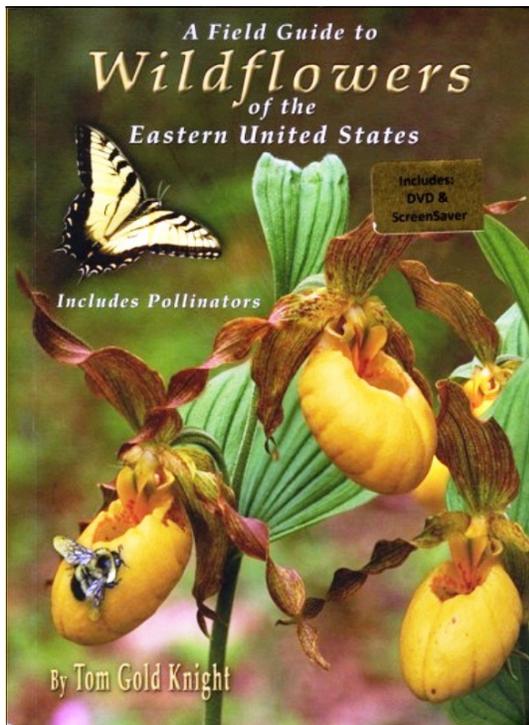
October Meeting

2 p.m., Oct. 12—Tour of Native Plant Terrace at UNCC Botanical Gardens
(Details to come)

NCNPS-Southern Piedmont Chapter is looking for members willing to host native plant booths and/or give short presentations to garden clubs and other community groups. If you are interested in doing this, please contact me at ncnpsspchapter@gmail.com

Beth Davis,
Chapter Communications Chair

Book Review



A Field Guide to Wildflowers of the Eastern United States, by Tom Gold Knight, 2012, Knight Vision Press, www.colorfuluniverse.com. \$14.95.

This sweet field guide of eastern wildflowers (with a few shrubs thrown in) is a pleasure to look at and read. Tom Knight packs lots of information into this book, with descriptions to aid identification, notes on human uses (such as edible or medicinal value), information on pollinators and seed dispersal, and other natural history tidbits. The photographs are very

good, and the color plates often include insets with close-ups of leaves, seeds, and flowers.

One particularly nice feature is the depiction of the plants' pollinators and seed dispersal agents, using tiny photos of hummingbirds, and bees, butterflies, and other insects, so you can tell at a glance some of the animals that utilize the plant.

The 177 plants described are organized by flower color, which is a drawback in my mind, but is an aid to people who are new to plant identification. Knight is clear that his selection is but a tiny sample (like most field guides) of the plants that grow in the eastern United States—his book is a good way to get people interested in wild plants and begin to learn about their fascinating lives.

The accompanying DVD, which includes a screensaver, features the photographs from the book in a larger scale, with a gentle musical background. The camera scans the still photos, and while this can give you a different view from the cropped photos in the books, the close-up views are sometimes not quite in sharp focus.

The book was published shortly before Tom Knight's death in 2012, and is available from Denise Anthes, publisher, at (828) 645-1492, www.ColorfulUniverse.com.

Lisa Lofland Gould



Spring Membership Meeting



Cullowhee Conference

Every year in July, hundreds of people gather in the southern Appalachians at Cullowhee, NC, to attend lectures, hike in the woods, peruse books and plants, and just enjoy being around a great group of passionate plant lovers. The Cullowhee Native Plant Conference is such a highlight of the year for many of the attendees that you will hear them say that they, “never miss it...look forward to it all year long... can’t wait until next year.” If you’ve never been, mark your calendar for the middle of next July, and plan to make it. The NCNPS always has a good-sized group, so join in!

After a pre-conference day that included field trips and hikes into the surrounding mountains, the 2014 conference officially started Wednesday evening with a dramatic performance by William Bartram, played by J. D. Sutton. Period costume and language took us back to Philadelphia in the 1700s where we heard a tale of botanical adventures (and misadventures!) in the Southeast, including the mountains of North Carolina. Bartram discovered and wrote about many of our native plants, most famously *Franklinia alatamaha* and *Jeffersonia diphylla*.

Sessions followed the next day with topics such as, “Growing Native Plants: Pitfalls, Pratfalls, and Downfalls,” with Wilf Nicholls; “Wildflower Ecology—A Step Beyond Identification,” with Tim Spira; “The Tangled Fates of Plants, Caterpillars and Birds,” with David Wagner; “Projects of Promise,” with Mike Berkley, John Magee, and Jesse Turner; “In the Light of Longleaf: How Longleaf Pine Changes the Way We See the Forest and the Garden,” with Bill Finch; “Ecobeneficial Gardening 101: Boosting the Ecosystem in Your



Photo by Robert Jones

Enthusiastic NCNPS members at the 2014 Cullowhee Conference.

Own Yard,” with Kim Eierman; and “Designed Plant Communities” with Thomas Rainer.

The last session with Thomas Rainer was particularly inspirational; he received a standing ovation at the end. The landscape architect, blogger, and soon-to-be author told us that native plants, as the setting of his childhood play spaces, inspired his use of natives in the landscapes he designs today. His lecture was filled with thoughtful information for the native plant gardener.

“There is a persistent notion in America that in order to be good—in this case ‘green’—you must sacrifice,” he said. This has led to homeowners feeling they must *tolerate* native plants because they are the right moral choice. He

Cullowhee Conference, continued

argues that natives are actually more pleasurable to us, and that that should be the focus. He encourages us to change this culture of 'no,' and 'bad,' to 'yes,' instead.

Mr. Rainer went on to point out that gardening is about our relationship with the land, and is ultimately an idea we impose upon it. He believes we can find a higher level of beauty and harmony by establishing plant communities rather than planting landscapes full of individual specimens, and that looking to plant communities for gardening inspiration may offer the solution we are looking for native plants to provide.

He suggested thinking about which plant community you'd like to re-create in your garden—meadow, woodland, woodland edge...? Then select a palette of plants from these habitats. Rather than planting in predictable drifts, arrange them as they might be found in nature. Some plants naturally clump together, but others are loners with wide spaces between individuals of a species. Pay special attention to layering: include trees, shrubs, perennials and particularly groundcovers in your design. Avoid mulch as a permanent solution. Use lots of plants and let them form the ground layer. "Plants interact naturally. How can we work

with it, not fight it?" we should ask.

A couple of other highlights of the conference included a panel discussion with Larry Mellichamp, Bill Finch, Jenny Cruse Sanders, and Wilf Nicholls, about the role of botanical gardens in the native plant movement, and a picnic and "talent" show on Friday night. The talent show is a rare chance to see your peers' special abilities outside the botanical realm. While you might not consider all of these abilities *talents*, exactly, this is certainly a fun time to socialize and be entertained!

Details for the Cullowhee Native Plant Conference for 2015 will be available online after the first of the year at:

<http://www.wcu.edu/academics/edoutreach/conted/conferences-and-community-classes/the-cullowhee-native-plant-conference/>

See you next year!

Darcia McKnight



A Blast from the Past!

GRAMINOIDS— The Basics for Simple Recognition

Note from the Editor:

Thank you to Jean Woods for sending this article from the NC Wildflower Preservation Society Newsletter of Spring 1994.

The “graminoids” in North Carolina consist of three plant families: POACEAE or GRAMINEAE, the grasses, with approximately 93 genera; CYPERACEAE, the sedges, with approximately 17 genera; and JUN-CACEAE, the rushes, with two genera. These three families are found throughout the state and in nearly all habitats and plant communities, although some are more restricted than others.

Generally speaking, grasses are the most important. POACEAE is the third largest family in the Kingdom Plantae after ORCHIDACEAE (orchids) and ASTERACEAE (composites or daisies), but the most dominant ecologically and by far the most important economically. Food for humans may be considered one of their greatest values. Think about these grasses: sugar cane, wheat, rice, maize (corn), barley, sorghum, oats, rye, millet, and bamboo. (Did you know these were all grasses?) The first four are in consecutive order of rank of world food production in 1989!! On this same list, barley was number seven, and sorghum, number 13. Some products from these grasses include flour, breads, pasta, cakes, cookies, crackers, pretzels, breakfast cereals, popcorn, molasses, sugar, and corn oil. Secondary products

are numerous, although alcohol (fermented and/or distilled) is probably best known. Bamboos are a minor food product, but are important building materials and are utilized in many other ways. Grasses make music (reeds for clarinets), help sweep the house (brooms), catch supper (fishing poles), grace our gardens (ornamentals), and provide a soft layer to playing fields. Some grass grains are grown as animal feeds from which we derive beef (and other meats), milk, butter, cheese, hides, wool, and eggs.

Out on the range, the forage of most domestic and many wild herbivores is grass. Grasses are the principal component in about 20% of the earth’s vegetation, and are dominant in steppes, prairies, and savannas. The East African savanna ecosystem that supports the huge number of wildebeest, zebras, gazelles, and other animals, has humble grasses at its base. Gaze out a window into any neighborhood and what do you see? Lawns. Lawns are either monocultures or mixtures of several species of grasses. (But if your “lawn” is like mine, there are lots of mosses and plenty of other herbs.) It would be great fun to see how many species of grass (or other graminoids) would appear over a growing season *sans* cutting. Look along the edges of the woods, on highway banks, in power lines, pastures, meadows, wet ditches and marshes. More grasses and graminoids. What about the salt marshes along the coast or the plants binding the dunes against the constant wind? Right, more grasses. Binding soil, growing dunes, slowing water flow in wetlands, providing homes for insects, spider, and countless



(Continued on page 17)

Blast from the Past, continued

other creatures and food for wildlife, and generally providing the earth with a soft, green mantle, grasses are plants that deserve our attention, appreciation, and thanks. Without them, we could not exist. And when we no longer exist in living form, grass normally covers our final resting places!

Sedges are more restricted in their distribution than grasses, “preferring” areas higher in saturated soil. Of course, there are exceptions, but I’m sticking with generalities. Economically, sedges are relatively unimportant. They have been used to make one of the first papers (papyrus), in mat- and basket-making, as hay or straw, thatching, perfume, etc. A few have edible parts, for example the Chinese Water Chestnut. One society of Bolivians on Lake Titicaca float the lake on, make houses out of, and eat, a species of *Scirpus*. Environmentally, sedges are prominent and important in wetlands.

Rushes are by far the smallest of our three graminoids families, with only two genera. The woodrushes (*Luzula*) are early spring plants mainly of woodlands. The other rushes (*Juncus*) are more numerous, with habitats ranging from granitic balds to woodlands, to coastal salt marshes. Seemingly more numerous in damp locations, these plants are mostly found in freshwater, although Black Needle Rush is found only in salt marshes. They are of little economic value although they can be used for basket weaving, mat-making, chair bottoms, and roofing thatch.

There are some basic morphological differences that can be used to distinguish these three families. Boiled down to a basic four-lined ditty they are:



Tawny Cottongrass *Eriophorum virgileum*

NCNPS Photo

Sedges have edges (*stems usually 3-angled*)

Rushes are round (*stems round and smooth*)

Grasses have nodes (*swellings at base of leaf sheath*)

And much abound. (*the most numerous*)

Remember, this is a generalization that works most of the time, but it must be coupled with close and careful observation. With careful examination of the plant at hand, you will get the right family most of the time! (I expect to hear this chant coursing through the air on the next outing, probably delightfully *ad nauseum*). Start looking at these plants now—many persist throughout the winter. There are many more distinguishing features we can use to help in our identification of these three families that will come in future articles.

—**Edward C. Swab** (Former Trustee and Conservation Chair of the NCNPS)

Member Spotlight!



Christy Larson

Christy hails from the Ann Arbor area of Michigan. She now lives in Mooresville, north of Charlotte and serves as NCNPS Education Chair. Her daughters Ella (pictured) and Tessa, 6, both love common milkweed, *Asclepias syriaca*. Why? It supports Monarch butterflies. "I love *Asclepias tuberosa* because it is beautiful and native to both North Carolina and Michigan," Christy said. "I am interested in connecting children and nature. Together, I believe they can help shape the future of a healthy world ecosystem!" Thanks, Christy!

Do you know a member who is doing something natively, so they can be highlighted in our next newsletter? Please send their name, picture, geographic location and a 2-3 sentence synopsis of their activities to: jchiggie@yahoo.com

Thirty-one new names have been added to NCNPS's ranks since June 1st. Our membership year runs from June 1st until May 31st. Most of our members renew their membership before May 31st. We welcome new members throughout the year. Anyone joining after Dec. 1st will be considered paid for the follow fiscal year. New members are our greatest joy!

Trena McNabb, Membership Chair

Marilyn Avis
Bethel Bailey
Callie Cashwell
Sharon Denning
Kelly Douglass
Barbara Driscoll
Richard and Dottie Fennell
Florrie Funk
Robin Godwin
Janice Goffney

Gregory Goin
Kenneth Gonyo
Sarah Haymond
Joyce Morris Hicks
Ruby Alley Hill
Norma May Isakow
Ronda Johnson
Paula LaPoint
Robert Massengale
Martha Mayberry
Cissy McKissick
Austin Myers
Sandra Permenter
Michelle Reeder
Elly Richards
Irene Sadler
Catherine Savinelli
John Skogman
William Sommers
Mayo Taylor
Joanna Walker

Pilot Mountain & Hanging Rock Area Registration Form

NC Native Plant Society 2014 Fall Trip: October 3-5, 2014

Name(s) _____

Address _____

City/State/Zip _____

Email _____

Phone _____

(Home)

(Cell)

We like to have your cell phone # so we can communicate during the weekend, if necessary.

____ NCNPS member registration fee: \$30/person (\$20 limited income) \$ _____

____ NCNPS member single day fee: \$20
PLEASE circle **Saturday** or **Sunday** \$ _____

____ Non-NCNPS member registration fee: \$40/person \$ _____

____ Non-NCNPS member single day fee: \$25
PLEASE circle **Saturday** or **Sunday** \$ _____

____ Saturday box lunch (optional): \$6/person \$ _____
PLEASE circle choice(s): **carnivore, vegetarian**

____ Saturday night dinner (optional): \$15/person \$ _____
PLEASE circle choice(s): **carnivore, vegetarian**

____ Join the NCNPS: \$25 for individual membership, \$35 for family \$ _____

TOTAL ENCLOSED \$ _____

Registration deadline: RECEIVED by SEPTEMBER 19, 2014

____ I/we will bring a food item for the Friday evening social (enough for ~4 people—large amounts not necessary).

**Please make check payable to: NC Native Plant Society and mail to:
Terry Ball, Treasurer, 716 Kemp Road W, Greensboro NC 27410**

*Confirmation of registration, directions to meeting sites, and other details
will be sent on receipt of registration, via email.*

We have reserved a block of rooms at the EconoLodge Hotel in Pilot Mountain, 711 S. Key Street, Pilot Mountain NC 27041; telephone 336-368-2237.

http://www.econolodge.com/hotel-pilot_mountain-north_carolina-NC580

*Group rate of \$52.99+ tax/night for non-smokers, \$79.99+ tax/night for smokers, which is available until
September 19, 2014.*

Participants must make their own reservations.

And please don't forget to bring SEEDS for the Saturday night exchange!

Questions? Email Patrick Mecimore at patrickmecimore@yahoo.com
or call (704) 929-1944



North Carolina Native Plant Society

C/O Julie Higgin

176 Huntington LN

Mooresville, NC 28117

We're
Wild
About
Natives!



Rhexia cubensis (West Indian Meadowbeauty)

Cary Paynter