

# Native Plant News

Newsletter of the N. C. Native Plant Society

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AUG. - SEPT. 2008

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# NCNPS Fall Trip

October 10-12, 2008

### Lake Waccamaw and Myrtle Head Savannah

he cool, tea-colored waters at first appear similar to other lakes in the area, but Lake Waccamaw is one of the most unique bodies of water in the world. You will find here species of animals found nowhere else on the planet, rare plants and endangered animals.

At Lake Waccamaw, you can view one of the greatest geological mysteries of the eastern United States—the phenomenon of Carolina bays. Limestone bluffs along the north shore neutralize Lake Waccamaw's water, making the lake different from any other Carolina Bay. Nearby, you can catch a glimpse of a botanical wonder—the Green Swamp.

yrtle Head Savanna is a healthy example of one of the most endangered natural communities in the Southeast, a wet longleaf pine savanna. The preserve harbors the largest known population of Cooley's meadowrue, a federally listed endangered plant species and one of the rarest plants in eastern North America. Cooley's meadowrue grows in moist savannas and requires some form of disturbance, such as fire, to maintain its open habitat. Without disturbance, other plant species often outcompete Cooley's meadowrue for limited nutrients and sunlight. Fire suppression and silvicultural and agricultural activities are primarily responsible for the plant's decline.

The savanna harbors many other rare species, including wireleaf dropseed, a grass known from only about twenty locations in North and South Carolina and Georgia. The preserve is



Lake Waccamaw



Myrtle Head Savannah Preserve

also home to small populations of other globally rare plants, including Carolina grass-of-Parnassus and pineland plantain, each known from about twenty sites in North Carolina, South Carolina, and Florida.

Trip details: pages 3 and 20.

### President's letter

### Tom Harville

#### On Paulownia

I would like to address this tree from my personal, North Carolina native, perspective.

The widely accepted definition of a native plant is one that was here before the Colonists arrived.

I am old, or young, enough to remember when my folks took me to Asheville after the "amazing" road up the mountain just past Old Fort, was constructed. The agonizing grade to the top of the ridge was now "such a breeze." One thing I don't remember is my mother or my father, who were both avid gardeners, commenting about the beautiful purple blooms that exist there today from Paulownia. They weren't there. So I suppose that all those Paulownia that are there now came from seeds that were waiting in the soil since the continents split?

But let's fast forward to 1993 when I came back home to NC from a stint in the USAF. We built a house in Carv and my side yard was a red clay road cut. I noticed that after a year in the house, there was a strange tree growing, just at the top edge of this bank. I was fascinated at the size of the leaves and the growth rate. In a few years' time the tree was way over my head and I noticed the purple blooms dropping on the ground. It was also about this time that I started to understand the impact of invasive species on our native plants and environment. I started to research and discovered that this tree was a Paulownia. That same year, I cut off four (4) wheel barrow loads of seed pods. That was all I could reach with my extension lopper. I reasoned that it was not a good thing to have a tree that produced that many seeds. But, being lazy, I ground up the pods in my chipper shredder and shot them off down the hill. By the next year, I had discovered that I really did not want this tree in my yard; I don't care how beautiful it was when it bloomed, so I cut it down. For the next three years I cut off and grubbed out sprouts all around the stump. About a year later, I got some seedlings down the bank where I shot the ground up seed pods. I pulled them up!

Now I have read that some growers and retail businesses consider Paulownia a native because it was here when the world was one continent. I have also heard

claims that the trees we have today are clones and thus are sterile—never reproducing offspring, but there is no information proving this to be true. From what I've seen, a cloned tree is not necessarily a sterile tree, and a tree grown in sterile conditions does not keep it from producing seeds, especially in the vicinity of other Paulownia trees. So where did this tree in my vard come from? Where did the other Paulownia that came up in my neighborhood come from? Where did the Paulownia come from that is coming up in the rip rap that line the artificial ponds in the front of our neighborhood? Where do the Paulownia that are all along US 421 from Siler City to Greensboro come from? Where did the Paulownia along I-40 above Black Mountain come from? I don't know for sure what I do know is that I do not want them taking over any more of the countryside of this state.

Kudzu was touted a savior for the farmer and now some tout Paulownia as a great economic resource. My personal opinion is that we better take a long hard look at what it is doing and will do to our native environment if we don't control it now.



www.duke.edu/~cwcook/trees/pato.html



www.duke.edu/~cwcook/trees/ pato.html

http://www.cnr.vt.edu/ DENDRO/DENDROLOGY/ syllabus/factsheet.cfm?ID=145



# Lake Waccamaw and Myrtle Head Savannah details

### Weekend schedule

We plan to botanize at Lake Waccamaw State Park on Saturday and at the Nature Conservancy's Myrtle Head Savannah Sunday morning.

What to bring: water, snacks, sunscreen/hat, sturdy walking shoes, insect repellent, field guides, binoculars, rain jacket, and enthusiasm!

Bring your lunch for Saturday and Sunday. Bring snacks to share for Friday night.

### Friday, October 10, 2008

Arrive at Whiteville, NC

5:00 – 7:30 - Dinner on your own

7:00 – 8:00 – Meet & Greet at Best Western, in and around lobby area. BRING SNACKS TO SHARE

8:00—9:00 Janice Allen, Coastal Land Trust on The Flora of Lake Waccamaw and Myrtle Head Savannah

#### Saturday, October 11, 2008

8:30 am – Meet at Best Western parking lot
9:00 —4:30 – Tour and botanize at Lake Waccamaw
Group will divide: (1) guided walk
along shore and (2) 12 to botanize from
canoes.
Groups will switch after lunch in picnic

6:00 – 7:00 – Dinner on your own at **Dale's Seafood**7:30 – 8:30 – Presentation and Discussion with Rob
Evans, Plant Conservation Program
Best Western meeting room

### Sunday, October 7, 2007

8:30 am – Meet at Best Western parking lot 9:00 – 1:00 – Botanize at the Myrtle Head Savannah 3:00 - Depart for home

### **Motel Accommodations in the Whiteville Area**

We have a block of rooms at the

Best Western Inn 503 North JK Powell Boulevard Whiteville, NC Phone: 910-642-2378 The rate is \$90 plus tax per room per evening. Cheaper rates on web but must pay in full in advance. You must make reservations before September 9th for the block of rooms being held.

#### Other Motels in the area

Holiday Inn Express 910-641-0644 \$135 plus tax per night

Holiday Motel (Old, NOT Holiday Inn, last choice of locals)
2119 James B. White Highway North

Whiteville NC 28474 \$74.00 per night

Lakeshore Bed and Breakfast end of Bella Cools Road Ted and Phyllis Russ 910-646-3748 on lake great for sunsets a few miles from visitors center

#### Camping

Primitive camping at Lake Waccamaw State Park near Picnic area. Nice toilets but no showers. Tent camping only.

\$9 per night per tent. Individuals are first come, first served. No pop tops or RVs.

Registration Form on page 20

### NCNPS News

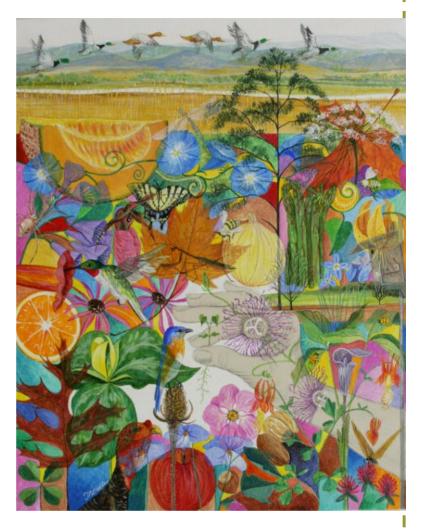
## Who We Are...

# Introducing Trena McNabb

am an artist living by Muddy Creek in Bethania, NC. I am converting about an acre of sewer easement on our property to a wildflower meadow as well as the woods to a garden with lots of shade plants and trillium paths running all around. I became interested in wildflowers because I found Trillium cuneatum at an old house I bought in Winston-Salem years ago. Each time I moved, I took some with me. I started buying them when I found them for sale. When I visited the Emily Allen garden one spring, I met members of the NC Plant Society, Triad Chapter, who invited me to join and I am glad I did! I have learned and gained so much from the generosity of the members.

Many of my paintings are large-scale for corporate or public spaces. My smaller and more personal paintings incorporate the human element and nature: wildlife, wildflowers, landscapes or other natural objects are represented as images which overlap and connect to create a kaleidoscope of colors. It could be described as painted, transparent montage.

For more information about my work go to www.tmcnabb.com.



Seedling. Trena McNabb

### More NCNPS News

### **An Invitation**

The Friends of the Plant Conservation Program Foundation will hold its inaugural meeting on the afternoon of October 29th in Raleigh. There will be a speaker of note, a presentation on the state of plants and the PCP in North Carolina by Rob Evans, PCP Director, and the election of officers.

- 1. Put the date on your calendar now: Oct. 29
- 2. RSVP to: Rob.Evans@ncmail.net
- 3. Watch for more details as we get closer to the event.

Also be sure to let Rob know if you would like to help sponsor the event or join the Foundation.

rom Jean Woods, Charlotte Chapter:

We are now part of the Bi Lo Booster Plus Program.

To participate, print the Bi-Lo Booster file that is on our vahoo group, or cut out one of the cards below. The next time you are in Bi-Lo, have the clerk scan the card along with your Bi-Lo card. You only have to do this once. We will receive 1% of our purchases made during the 2008-2009 school year. Once your card is scanned, your purchases at any Bi-Lo store will count.

Even through the amount will not begin to accumulate until September, you can go ahead and have your. card scanned now. Feel free to give the other cards to family and friends. You can print out as many as you can give to others.

We are participating in BI-LO's boostersplus fund-raising program this year. We can earn money for NORTH CAROLINA NATIVE PLANT SOCIETY by simply shopping at any BI-LO with our BONUSCARD. Just give one of the enrollment cards below to the cashier along with your BONUSCARD to be scanned within your grocery order. This one-time scan will enroll you for NORTH CAROLINA NATIVE PLANT SOCIETY until May 31 and we will receive one percent of your purchases. Give the extra enrollment cards to family and friends so they can help us raise money as well.



- 1. Give this enrollment card to the cashier with your BONUSCARD one time during the school year to enroll.

  One percent of your purchases will be donated to your
- designated group through May 31.
- 3. Call 800-768-4438 if you have any questions

NORTH CAROLINA NATIVE PLANT SOCIETY





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NORTH CAROLINA NATIVE PLANT SOCIETY





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NORTH CAROLINA NATIVE PLANT SOCIETY



# Can you help find Butternut trees in NC?



am a Forest Service tree breeder and conservation geneticist working at the USDA Forest Service Hardwood Tree Improvement and Regeneration Center in West Lafayette, IN. The Forest Service has become increasingly concerned that butternut canker has led to a serious population decline for butternut (Juglans cinerea). Regeneration for this species has been extremely poor. As a conse-

quence, a program to collect and preserve a sample of the butternut germplasm has been started. This year we hope to obtain seeds from as many butternuts as possible. We (myself and a small group of Forest Service scientists) are looking for any and all trees, not just trees that look healthy or have good form because the goal is to sample the genetic diversity of the species as broadly as possible.

The first step in our project is to simply identify living trees. That part has been a challenge in the eastern U.S. for two reasons; first, there are simply not a lot of butternuts left. The second challenge is that the most commonly encountered "butternuts" are actually hybrids between butternut and heartnut (a.k.a. Japanese walnut, Juglans ailantifolia), a species introduced in the 1860s. Hybrids were widely planted as yard trees on farms and in small towns across the species' range. We also find the hybrids in church yards and cemeteries. Hybrids are starting to invade the forest because seed collectors pick them up as "butternut" seeds. We have a DNA-based test that allows us to separate hybrids from true butternuts. There are morphological traits that can be used to separate butternuts from hybrids, but they are tricky. I can send more information on this if you want to see it.



Our long-term goals are

- Conservation of as much of the genetic diversity of the species as we can obtain.
- 2. Production of seed orchards of disease resistant butternut that would be locally adapted (one per state) and genetically diverse. We have some excellent candidate resistant butternuts that we will use as a source of genes for this phase.

We need local germplasm to carry out these objectives.

So here is what we are asking people to do. If you know the location of butternut trees in your area, please send me a note of where the tree or trees are, if possible with gps coordinates, otherwise with section, range, township, etc. If the tree is on private property, identify the landowner if possible. If the trees are in the forest, they are probably butternuts rather than hybrids. If the trees were planted or in a heavily human-impacted area such as a reclamation site or a park, they are probably hybrids, which we can't use. If you are interested, we have a testing lab here and I can send a protocol for submitting samples. The testing is done under a program funded by us and the Nature Conservancy.

Next; a second goal is to propagate the trees. Again, we are interested in any and all trees, not just healthy ones or trees with nice form. Most of the trees people find now will be sick and on their way out. The easiest way for us to preserve their genetics is to obtain seeds this fall (if any). Having the tree locations will give us a shot at seeds over the next few years. If you or the landowner might be able to pick some seeds up, that is great. The amount of staff time I can dedicate to travel for harvesting seeds is limited, and I have to cover the entire range of the species. Anyway, if there are no seeds or the seeds can't be easily obtained, the hard way is to propagate them with grafts. We graft trees every winter. If you can find butternuts, and we can arrange to get the scion wood, we will graft them for long-term maintenance.

Thank you very much for taking the time to read this long letter.

Yours sincerely, Keith Woeste USDA Forest Service Indiana

<u>If you know the location of butternut trees,</u> please notify Tom Harville:

tomhar@bellsouth.net

## Milli Blaha: Teacher, Naturalist, Inspiration



**Brevard** - Mildred Caroline Millie Labahn Blaha died Wednesday, July 2, 2008, at her residence.

A native of Blue Island, Ill., she was the daughter of the late Frederick and Hedwig Labahn. She

is also preceded in death by her husband, George W. Blaha, who died in 1988.

Millie Blaha touched many lives through her weekly column Nature Notebook, which appeared in the Transylvania Times newspaper for 17 years; through her monthly column, Nature Walk, which appeared in Hendersonville's Prime Times newspaper; through her six years of teaching nature classes and nature photography in the Continuing Education program at Blue Ridge Community College; through her many color slide presentations, which focused on the world of nature and conservation; through her weekly appearances with John Sarpy's Green Thumbs program on radio station WSQL; through her volunteer work, which resulted in the Jackson Park Wetlands in Henderson County and the Mud Creek Wetlands being placed on the North Carolina Registry of Natural Areas; and through her work which resulted in the beginning of the Herbarium at the Carl Sandburg Home National Historic Site. A dozen Botanical, Nature Societies and the Nature Conservancy have honored her with Life Memberships.

Memorials may be made to the Transylvania County Library, the Transylvania Community Hospital, the North Carolina Chapter of The Nature Conservancy, 4700 University Drive, Suite 290, Durham, NC 27707, or The First United Methodist Church, 325 N. Broad Street, Brevard, NC 28712.

What a pleasure it was for me to meet Milli Blaha a few years ago while I was President of the North Carolina Native Plant Society.

Milli and I hold the Society record for the most turtle-like walk. We walked one-quarter mile to Pearson Falls and back in six hours on a Spring Society walk April 14, 2002! It was a most splendid walk. As Milli and I admired a wildflower vision on a rock ledge near the creek, an older man walked up to us and said what a great place this would be for a house. In unison, Milli and I blurted out: "NO!" We surprised each other with our adamant response, but it christened us soul sisters in our love for the beauties of nature.

Milli and I were phone friends well before we met in person at her retirement home in College Walk Retirement Community in Brevard, NC. Milli gave presentations on her nature studies for about sixty years. She wrote a nature column for the local newspaper and taught local floral courses at Blue Ridge Community College. At the Spring 2002 meeting in Brevard we were fortunate to have a double header of presentations by Milli: her Friday talk was on Shortia and her Saturday talk was on trillium. Over the years Milli developed about 30 programs that she presented in the community and nature centers in the mountain area.

On my first visit with Milli, she invited me to attend a town hearing in Flat Rock regarding the Sandburg site with her, where I ended up giving a short statement about protecting the viewshed. At the meeting Milli introduced me to the superintendent of the National Park site, Connie Backlund. Connie shared with me that in the late 1990s, Milli and her friends Karin Heiman, Anne Ulinski, and Tom Ferguson prepared the first botanical inventory of the Carl Sandburg Home Historic site in Flat Rock.

Milli and her husband took over 30,000 slides of nature and wildflowers. Milli's studies and pictures of a green salamander and eggs in a downed tree cavity are mentioned on the web and are part of the record in the NC Museum of Natural Science.

In googling Milli to write these words, I found several other interesting references. I just talked with Bill Clabough of the Foothills Land Conservancy in Tennessee to follow-up on an article, which mentioned Milli's donation of 18 acres in Pittman Center near Gatlinburg with her friend Rose Brunner. The combined 50-acre site is now being donated to the town of Pittman Center for a Nature Park with minimal footprint.

Another article announced an Appalachian Spring Celebration at the Cradle of Forestry historic site. "Let's Look at Spring" with Milli Blaha summarizes Milli's passion and life work: "This color slide program will look at Springtime and what makes Spring possible. Featured are close-ups of some of the wildflowers, which may be seen blooming in western North Carolina at this time of year. For 50 years, Millie Blaha has presented color slide programs about the world of nature. Millie's programs inspire others to not only appreciate and understand the world of nature, but also to conserve and encourage the preservation of endangered species." Thank you, Milli, and happy journey.

Alice Zawadzki

# Triad Chapter

The Triad Chapter made a day trip to Tater Hill Preserve in Watauga County on August 2, 2008. For a day scheduled to be in the 90s in Greensboro, the morning temperature here was cool. We stepped gingerly around the bog at the base of the "hill," finding a number of interesting plants, including some miniscule sundews (*Drosera rotundifolia*)

Lynda Waldrep's driving skills and the road worthiness of George's vehicle were put to the test on the climb to the top of Tater Hill, an 800 acre nature preserve. Huge rocks, steep slopes, and a driving rain were no obstacles for Lynda, who packed nine of us into her car for the wild two mile drive up the mountain. At the end of the "road," we spilled out onto the top of the world, with a thundershower passing quickly by. Once the storm was clear, we set off through a cool, foggy mountain top forest, headed for the large grassy bald at the top.



Part of the group stops to identify a plant.

Along the way, we were delighted with an unexpected diversity of plants, given the severity of the drought the past couple of years, and hundreds of butterflies.

Carolina harebells, Campanuladivaricata



Larkspur Delphinium exaltatum With pipevine swallowtails



Michaux's saxifrage, Saxifraga michauxii



Wood lily, Lilium philadelphicum



David
McAdoo, Stan
Gilliam, Mark
Rose—still
smiling after
the ride down
the hill!



# Cullowhee Conference Scholarship Recipients



NCNPS members, and four scholarship recipients, at the 2008 Cullowhee Conference.

The only requirement we have for our scholarship recipients is that they submit an article for our newsletter describing their experiences. The report of our 2008 recipients follows.

hree student interns and one beginning professional from the NC Botanical Gardens attended the 2008 Cullowhee Conference on field trip scholarships given by the NC Native Plant Society. Monica Foley and Ben Scandella had their first Cullowhee experience this year. Monica is a student intern at Coker Arboretum and Ben is an intern for the Natural Areas Department of the Botanical Gardens. JC Poythress and Charlie Tomberlin are both returning guests to the conference. JC is a student intern for the Horticulture Department at the Botanical Gardens and Charlie has a permanent position within the Horticulture Department.

Monica commented that the conference was a valuable experience to her as she is beginning her career. As a first time employee in the field of horticulture, Monica has worked hard to overcome the steep learning curve of caring for plants, remembering their names, and understanding their characteristics. The lectures not only provided useful information applicable to her job at the Arboretum, but also sparked new interests in other aspects of native

plants. The friendly atmosphere at Cullowhee made it easy to tap into the great wealth of knowledge of conference attendees and she made many friends.

Ben's most valuable experience at the conference was the talent show that occurs on the last night. When he first heard there was an opportunity to perform, he began brainstorming for ideas for a skit. After many hours of writing and fine tuning, he and four others were ready to perform as the Green Guerrillas, a special task force devoted to eradicating invasive exotics. The skit drew lots of laughs and took a well-deserved first place.

Having attended the conference last year, JC already had an idea of what to expect. Last year he was amazed to find so many people who love plants as much as he does all in one spot. This year's conference was just as amazing. It isn't often that a person can find others who can listen to lectures about plants all day and stay up to the wee hours of the morning still talking about them. JC gained the most not from the conference lectures or fields trips, but from the personal interactions with the other guests. Even after having only been twice, JC has already realized that each Cullowhee experience brings new friends that last beyond the last day of the conference.

Photo courtesy of Bill and Jennifer Cure

### A Summer Adventure of Pitcher Plants David McAdoo

ome of you know me as the resident "orchid nut." Believe it or not sometimes when I go roaming to look for orchids I am not always lucky enough to find

them. Recently I have decided that an alternative prize when I go hiking is carnivorous plants.

As many of you probably know, there are three pitcher plant species (Sarracenia) and a couple of natural hybrids that grow in North Carolina, and they are pretty easy to find. This summer I had the opportunity to visit some areas that have species not found in North Carolina. The Gulf coast of Alabama and Mississippi are legendary pitcher plant habitats. My wife and I visited some of the bogs in those states in route to her home in Louisiana. She humors me when we go to visit my mother-in-law by letting me take the long way to her home and stop at some of these areas.

The most astounding spot that I saw on this trip was one that I had gone to several years ago. That time



1. Sarracenia alata field

the area had a prescribed burn a couple of weeks prior to our visit, and all that we saw was burnt stubble. This time the plants were in fantastic form, and we saw thousands of Sarracenia alata. I had seen this species before in several different areas but never so massive a collection.

Photo 1 gives a small look at the extent of the plant colony. I don't know how to estimate area, but the photo shows less than 10% of the plants. Although there were some Thread Leaf Sundews (Dorosa filiformus) scattered throughout, the bulk of the plants were pure S. alata with many color shades (Photo 2 & 3). If you ever go to the Gulf coast, this area is about 30 miles north of Biloxi, MS at the crossroads of Hwy 15 and Hwy 26. It is by far the most extensive concentration of pitcher plants that I have ever seen and well worth the visit. Driving north out of Biloxi on Hwy 15 leads you past several other small roadside bogs. If you stop at them, you will find numerous carnivorous plants including the Parrot Pitcher Plant (Sarracenia psittacina) seen in Photo 4.







3. Sarracenia alata

4. Sarracenia psittacina

### Summer Adventure continued.....

The second area that we visited is a new Nature Conservancy site that a friend told me about. It is called Splinter Hill Bog, and there is a page on TNC's web site that gives driving directions to it. It is located about 40 miles north of Mobile, AL and is easily reached by driving a couple of miles off Interstate 65. This bog has a massive display of White Topped Pitcher Plants (Sarracenia leucophylla) which in my opinion are the most beautiful of our native pitcher plant species (Photo 5). One of the funny things that I saw while exploring this bog was a frog who was trying to rob a plant of its insects (Photo 6). This bog has five species of Sarracenia and two different natural hybrids that I found. One of the species is a newly recognized separation from the Northern Pitcher Plant (Sarracenia purpurea) and is being called Sarracenia rosea. These plants had the most unusual color forms that I have ever seen (Photo 7).

What I was excited to see at Splinter Hill were the natural hybrids between several of the Sarracenia species. One was *Sarracenia Xexornata* which is a cross between *S. alata* and *S. rosea* (Photo 8). It is only found in Alabama and Mississippi. The other, which is really beautiful, was a cross between *S. leucophylla* and *S. rosea* called *Sarracenia Xmitchelliana* (Photos 9). This hybrid has been reported from Alabama, Florida, Georgia, and Mississippi.

The final area that we stopped at is one that I have gone to before. As you drive west from Mobile on Interstate 10, the area south of the road is loaded with pitcher plants that you can see from your car. Leave the Interstate at the first exit after you cross into Mississippi and turn back east on US 90 to get to the best spots. The area has all the species that I have been discussing along with a hybrid that I had not seen elsewhere. The plant is called *Sarracenia X areolata* (Photo 10). It is a hybrid between *S. alata* and *S. leucophylla* and is restricted to Alabama and Mississippi.

Just to let you know that I am not passing up other beautiful wild flowers in my travels, there is one more sight that I saw on the way to Louisiana that I would like to share. When it is present the American Lotus (*Nelumbo lutea*) seems to take over ponds in Louisiana. Photos 11 & 12 show some of the beauty when that happens. These are large plants and flowers, and the show is magnificent!

Believe it or not I did not see any orchids on this trip. In spite of that I still had fun exploring for pitcher plants and other wild flowers that I found along the way. I hope that you get an opportunity to visit these areas some day.



Sarracenia leucophylla



6. Pitcher plant and frog



7. Sarracenia rosea

### Summer Adventure continued.....







8. Sarracenia X exornata

9. Sarracenia Xmitchelliana

10. Sarracennia Xaereolata



11. American Lotus pond

12. Nelumbo lutea

All photos and text by David McAdoo.



## Protecting North Carolina's Native Plants

Rob Evans

id you know that North Carolina's native plants, no matter how rare or endangered, have no legal protection? The Plant Conservation Act of 1979, sets no limits on a landowner's rights to develop his or her property; mowing down or destroying the last population of a rare species is perfectly legal. While maintaining windowsill pots of Venus Fly Traps and gardens full of rescued, regionally native, and rare plants is becoming more popular, these activities do not necessarily bring us closer to achieving the mission of protecting North Carolina's native plants in their native habitats for future generations. Although North Carolinians are blessed to have many public lands including parks, gamelands, and forests, none of these were established specifically for native plants and their conservation. Consequently, other goals and management objectives take precedence sometimes to the detriment of native plants and their habitats. We cannot take plant conservation for granted. A system of conservation lands designed to protect the full array of native plants in their natural habitats across North Carolina is needed.

In the mid 1990's, such an effort began with the purchase of a few acres of "mountain bog" habitat in the mountains. Arranged by Cecil Frost, this purchase by the Plant Conservation Program indirectly created a land acquisition program specifically for plants. Over the last several years a fledgling program of land acquisition and management has continued to develop. Thanks to the support of the Plant Conservation Program Board, NCDA & CS's Plant Industry Division, and funding from the Natural Heritage Trust Fund, we have slowly but surely added to a growing statewide system of Plant Conservation Preserves and begun to manage these sites.

Each existing or proposed Preserve is designed with a particular rare species and habitat in mind and the overriding goal of each Preserve is to protect this target species and habitat; other possible uses of the Preserves are secondary. In many cases, the numbers of the target species are extremely low and incidental loss of individuals can be a grave concern. For this reason, there has been little public notification about Preserve locations and we expect that visitation to Preserves will continue to be limited by permit only.

In upcoming newsletters we will try to update NPS members on Plant Conservation Preserves, and the

Plant Conservation Program's attempt to inventory, manage, and expand this system.

#### Eno Diabase Sill - Durham:

Planning for this Preserve began in 2003 with the recognition that the Smooth Coneflower (Echinacea laevigata), was in severe decline statewide and those left in Durham county were precariously persisting along infrequently mowed roadsides. The main coneflower population consisted of 30 or so flowering stems and a nearby subpopulation consisted of only a handful of non-flowering rosettes. In addition, the Smooth Coneflower was an indicator of a unique and diverse assemblage of rare species that were being lost to development and lack of appropriate management. Hoary Puccoon, Wild Blue Indigo, Earle's Blazing Star, and Tall Larkspur are a few of the rarities that led to the claim that the land targeted for initial Preserve acquisition harbored more rare species than any other site in the Piedmont.

After successful meetings and agreements with landowners, efforts to restore habitat began in earnest. Today, after several prescribed fires, extensive hand clearing of brush and invasive species, the main Coneflower population has grown to over 1,100 flowering stems and the subpopulation has flowered for the first time on record. It also appears that several other rare species have substantially increased on managed portions of the Preserve. Prairie Dock (Silphium terebinthinaceum) and Earle's Blazing Star (Liatris squarrulosa) are notable examples, while Glade Wild Quinine (Parthenium auriculatum) and Hoary Puccon (Lithospermum cansescens) are also thriving under our protection and management program. Native grasses and legumes are increasing, Wild turkey have become regular visitors, and neighbors report hearing the calls of Bobwhite Quail for the first time in years.

However, much work remains. We have seen that simply setting land aside is not enough. Managing the Preserve is an ongoing need and challenge. The need to manage the species and habitats through thinning, prescribed burning, invasive species removal, and other activities, and develop a more aggressive education campaign will not go away. In addition, we hope to add a few more key parcels to the Preserve, with the consent of willing landowners and availability of funding.

If you would like to find out more about the Eno Diabase Sill Preserve or find out how you can volunteer to help, please contact the Plant Conservation Program. http://www.ncagr.com/plantindustry/plant/plantconserve/index.htm

### The Southeast's Most Unwanted Plant?

ave you ever wondered what the world's worst weed was? To be honest, I never gave it much thought until Cogon grass (*Imperata cylindrica*) was found in South Carolina. Many experts think cogon grass is one of the world's worst weeds; it is rated 7th worst weed in the world. This plant could mean bad news for North Carolina landowners. This aggressive grass has covered over one billion acres worldwide and over 500,000 acres across the Southeast. As of today, cogon grass has been found in Alabama, Florida, Georgia, Louisiana, Texas, Virginia, and most recently in South Carolina. Cogon grass has been found in 6 counties in South Carolina including Pickens, Aiken, Anderson, Hampton, Beaufort, and Charleston. So far none has been reported in North Carolina.

Cogon grass was introduced for forage, before people realized that is not palatable to wildlife and livestock. Cogon grass will form dense mats will out compete planted seedlings and native plants creating monocultures unsuitable for forestry, wildlife, or cattle.

While cogon grass can not be legally sold in the USA, a cultivar of cogon grass is excepted. This cultivar is known by many common names including: japgrass, Japanese bloodgrass, "Red Baron" blood grass or speargrass. While it is listed as a federally noxious weed, the cultivar of cogon grass with its reddish foliage may be sold as an ornamental grass in certain states. South Carolina and Alabama have outlawed the sale of the bloodgrass variety, but it is legally sold in North Carolina, Georgia, and Florida. One South Carolina infestation of cogon grass was an ornamental plant purchased in NC and planted in South Carolina. An unsuspecting landowner may be in for a surprise if he plants Japanese bloodgrass. If the red color disappears, this aggressive weed will rapidly spread and take over orchards, fallow land, pastures, and forestland by forming a dense mat of thatch.

Cogon grass creates numerous problems for landowners and could impact land value if left uncontrolled. Cogon grass is fire-adapted and generates hot, fast fires. Hot wildfires can kill mature trees, seedlings, and native plants. A landowner who wants to prescribe burn his property must use extra caution while planning a burn.

One challenge for a landowner with an infestation of cogon grass is that the plant is easily spread by creeping hizomes and seeds. Commonly cogon grass is spread by

heavy equipment moving through an infested area. The seeds and rhizomes will "hitch" rides on equipment, such as mowers, road graders, skidders, and road maintenance equipment that spread plant parts and seed into an uninfected area. If you suspect that you have cogon grass on your property, avoid the area until you have had a chance to consult with your local extension agent. Seeds can stick to clothing and be spread.



Another problem is the control of Cogon Grass. The rhizome, an underground stem, makes cogon grass very difficult to control. While the above ground portion can be easily eliminated, the creeping rhizomes must be killed or re-sprouting will occur. The rhizome is capable of rooting at each node and producing a new plant. The rhizomes form a dense mat in the upper 6 to 8 inches of soil and can comprise 80% of the total plant mass. Clemson extension agents will coordinate with land owners on control efforts.

Cogon grass has some distinctive characteristics that aid in identification. Cogon grass is rarely found as single plant and often forms circular patches. This opportunistic plant thrives in full sunlight and is a rapid invader of recently-disturbed soil. A seed head can produce 3000 seeds, but seeds must land on bare soil to germinate. Since cogon grass will not tolerate repeated cultivation, reduced tillage practices may allow it to spread to agricultural lands. Other characteristics include sharp-pointed rhizomes that can pierce the roots of other plants or unprotected human feet. For information, one of the best websites is: www.cogongrass.org.

With vigilance, North Carolina land owners can keep cogon grass from taking hold. Learn to identify cogon grass. If you do find it, contact your local extension agent and make them aware of the potential harm of this plant. Together we can make a difference.

Mary Morrison, S. C. Native Plant Society

# Update on Methuselah

By RANDOLPH E. SCHMID, AP Science Writer, Jun 12, 3:42 PM ET

WASHINGTON - Just over three years old and about four-feet tall, Methuselah is growing well. "It's lovely," Dr. Sarah Sallon said of the date palm, whose parents may have provided food for the besieged Jews at Masada some 2,000 years ago.

The little tree was sprouted in 2005 from a seed recovered from Masada, where rebelling Jews committed suicide rather than surrender to Roman attackers.

Radiocarbon dating of seed fragments clinging to its root, as well as other seeds found with it that didn't sprout, indicate they were about 2,000 years old — the oldest seed known to have been sprouted and grown.

Sallon, director of the Louis L. Borick Natural Medicine Research Center at Hadassah Medical Organization in Israel, updates the saga of Methuselah in Friday's edition of the journal Science.

One thing they don't know yet is whether it's a boy or girl. Date palms differ by sex, but experts can't tell the difference until the tree is six or seven years old, Sallon said.

She hopes there's a chance to use it to restore the extinct Judean date palm, once prized not only for its fruit but also for medicinal uses.

The researchers have had a look at the plant's DNA, however, and found it shares just over half its genes with modern date cultivars.

"Part of our project is to preserve ancient knowledge of how plants were used," Sallon said in a telephone interview. "To domesticate them so we have a ready source of raw material."

Her Middle Eastern Medicinal Plant Project is working to conserve and reintroduce plants to the region where they once lived.

"Many species are endangered and becoming extinct. Raising the dead is very difficult, so it's better to pre



Ancient date seeds from Masada are seen in this undated handout photograph, made available in London on June 12, 2008. Israeli researchers who grew a sapling from a date seed found at the ancient fortress Masada said on Thursday the seed was about 2,000 years old and may help restore a species of biblical trees.

serve them before they become extinct," she said.

The oldest documented seed to be grown previously was a 1,300-year-old lotus, Sallon said.

Contribute articles, photos, questions, comments!

**Native Plant News** 

Deadline for next issue:

September 15, 2008

Send information to:

Katherine Schlosser, editor 1402 Bearhollow Rd., Greensboro, NC 27410

kathys@ncwildflower.org

### Beach vitex removal in action.....

Misty Buchanan sent the following memo from Dale Suiter to those involved in a project to remove beach vitex from the North Carolina coast. She thought you might enjoy seeing how the project is progressing. Thank you Misty, and Dale!

#### First, a little history:

Beach Vitex (Vitex rotundifolia) is a woody shrub native to the Pacific Rim. In the 1980s, Beach Vitex was imported by the North Carolina University Arboretum for use as a beach stabilization plant in the southeastern US, and it was planted for erosion control on South Carolina beaches in the early 1990s. By the mid-1990s, plant specialists began to notice Beach Vitex spreading on state beaches where it was crowding out native species like Sea Oats. Beach Vitex does not appear to trap wind blown sand as efficiently as these native species. Volunteers have observed lower dune profiles on sections of dune where Beach Vitex has crowded out native vegetation.

In 2003, after discovering thick mats of Beach Vitex descending down the base of sand dunes, volunteers with the South Carolina United Turtle Enthusiasts (SCUTE) expressed concerns about the possible impacts of the plant on loggerhead sea turtle nesting habitat and behavior. (To learn more about sea turtles, visit the SC Department of Natural Resources Marine Turtle Program.)

Beach vitex is now spreading rapidly and poses a threat to native plants and animals. Beach Vitex appears to be spreading from original plantings on or near North and South Carolina beaches by both vegetative growth and by seeds. The Carolinas Beach Vitex Task Force is leading an interagency effort to address the issue. Although not yet officially classified as an invasive species, Beach Vitex is causing major concern

http://www.northinlet.sc.edu/resource/plant information.htm



Vitex rotundifolia

#### From Dale Suiter to others on the Task Force

Hello Folks:

Here are just a few updates on what's going on with the Beach Vitex Eradication Project in North Carolina.

Letters announcing the grant / Making contact with town governments We sent letters to each beach town with beach vitex in early June. Letters were mailed to each mayor and town manager and in some cases the public works or parks and recreation director. Since that time, we have had contact (by phone or in person) with every town except Atlantic Beach (they have

three sites) and Salter Path (they have two sites). We will contact these two town managers soon. So far, every town that we've talked to is interested in participating in the grant to eradicate beach vitex.

The northern beach towns (Ocracoke to the Virginia line) have not been contacted at this point, but we plan to do this soon (tentatively planned for August).

#### **Ordinances**

Here is a brief summary of beaches south of Cape Lookout and their ordinance situation. As you can see, there are only a few left and we're working hard on getting those passed. Ordnances don't really apply to the state parks, Camp Lejeune and nature preserves such as

Lee/Hutaff and Masonboro Islands, therefore, you will see a "N/A" beside their names. Kudos to those towns who have ordinances on the books. We appreciate your work and the work of those who are currently working on ordinances. We hope to have an additional four to six ordinances passed in the next month or so.

### **Permission letters**

We have contacted several town managers and asked for their assistance with compiling the names and mailing addresses of each property where beach vitex occurs. Since many of these homes have absentee landowners, it's not practical to just send a letter to the address where vitex occurs. As we gather that information, we will send two copies of the permission letter.

### Beach vitex eradication continued...

One for the owner to keep and one for them to sign and return in an enclosed, self-addressed, stamped envelope. If any of you have a good administrative person or volunteer that could help with this, I wouldn't turn down the assistance, especially if you are located near Raleigh.

#### Surveys

We are in the process of systematically revisiting each address where beach vitex has been recorded. As we visit the sites, we are trying to prioritize sites for removal and then determine if it is something small that we can do ourselves (and save money) or if it's too large for us and therefore, something that we will need to contract out.

I contacted Jon Altman, biologist with Cape Lookout National Seashore. He and other biologists there spend a lot of time on the beach looking for sea turtle crawls, shorebirds and seabeach amaranth. He's keeping an eye out for beach vitex, but hasn't found any so far. I'm comfortable with his approach and will consider Cape Lookout surveyed until I hear something different.

Cape Hatteras National Seashore...I've left a message with Britta Muiznieks, a park biologist and hope to talk with her in the next few days about beach vitex.

I have also contacted Kris Fair, a biologist with Pea Island National Wildlife Refuge and asked her to keep an eye out for beach vitex on refuge beaches and other property.

### **Upcoming surveys:**

Topsail Island
Bogue Banks
Currituck County (Corolla, etc.)
Dare County (Nags Head, Kill Devil Hills, etc.)

If you would like to join me and / or Melanie in the field for survey work (now through August) or eradication work (late August through November), please let us know. Keep in mind that just because of the driving time involved to get to some of these sites, I generally try to spent at least one night if not two or three. I feel that this is just the most efficient use of my time.

### **Eradication Work**

So far, Bald Head Island, Figure Eight, Caswell Beach, Oak Island, Topsail Beach and North Topsail Beach have been working on various eradication projects. Some towns have nearly eradicated all beach vitex, while others are at some intermediate level of eradication. NCDOT eradicated one site on their right of way in Manns Harbor, Dare County.

As for all other sites that haven't been treated, we hope to begin treating beach vitex plants in August and this work will continue through the fall, with hopes that the plants will die over the winter. At present, Melanie and I will probably try to tackle some of the smaller sites (one to a few plants) with help from town government staff (with permission of the towns and property owners, of course) and we are looking at various options for contracting out the bigger sites to landscape contractors or letting town staff do the work themselves. Once dead, we will work with the owners to decide if we will remove the tops of the plants or not and whether to replant the dunes with native grasses or not.

#### Research

Dr. Rob Richardson and his grad student Sarah True at NCSU are conducting research on different methods of beach vitex eradication. We look forward to benefitting from their research as our work progresses.

We sincerely appreciate all the work that each of you have put into this project. We simply could not have come this far without your help. If you are ever wondering what we are up to or if you have any specific questions about how things are progressing, please feel free to contact me or Melanie Doyle. Also, we are always looking for volunteers to help make this work go more smoothly and efficiently.

Thanks again!
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## On Line Research Hints

There have been recommendations for two on-line research sites. The first is from Bobby Ward (I have used the site myself – you can lose yourself in it, in a good way, reading old documents and books). The second was recommended by Mark Rose.

1. Since 2005, the North Carolina Academy of Science and the University of North Carolina at Chapel Hill Library have partnered in digitizing the *Journal of the North Carolina Academy of Science* (previously titled the *Journal of the Elisha Mitchell Scientific Society*). The first seventy volumes, covering the years 1884 to 1954, are now accessible on the Internet. The contents of the remaining volumes will go online as they are scanned and should be complete by early 2009. The most current volume, however, will become available only after the next volume begins. Readers have free access to the journal at

http://www.lib.unc.edu/dc/jncas/?CISOROOT=/jncas

2. As a side note *Rhodora* is also available this same way at: http://www.botanicus.org/Bibliography.aspx? Bibld=b13022520 It is a great source of reference for all of us.

Thanks to Bobby, Tom, and Mark.

For a nice introduction to using native plants in the landscape, visit the N.C. State University website, Going Native: Urban landscaping for Wildlife with Native Plants. Click on "video" and you will see our own Tom Harville interviewed.

http://www.ncsu.edu/goingnative/whygo/index.html



Lewis David Von Schweinitz from Elisha Mitchell Scientific Society journal, 1885-86 (Volume 3)



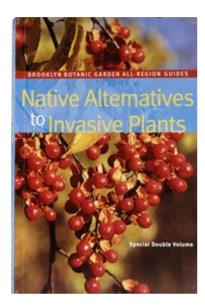
"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired in value."

- Theodore Roosevelt

# Off the Shelf....books worth a read

### Native Alternatives to Invasive Plants

by C. Colston Burrell. 2006. Brooklyn Botanic Garden Handbook # 185, Brooklyn, NY. 239 pages.



The Brooklyn Botanic Garden's handbook series has a reputation for packing a lot of information into a few pages, and Handbook #185, Native Alternatives to Invasive Plants, is no exception. This double volume, written by well-known horticulturist and writer C. Colston Burrell, is organized by plant type into sections on trees, shrubs, vines, herbaceous plants, and grasses. Within a section, invasive plants are listed alphabetically by scientific name, followed by one or more native alternatives. Each entry gives the native range of the suggested alternative, the hardiness range, attributes of the alternative (such as growth form, flower and fruit characteristics, or fall color), preferred soil/moisture/exposure tips, and other related native plants that could also be used.

Responsible gardeners, horticulturists, and landscape designers know that finding native alternatives to invasive species is no easy task: there is rarely a direct match of all desired characteristics between an invasive cultivated plant and a native species. So the gardener has to think carefully about just what attributes are wanted.

For the most serious transgressors, Burrell offers several detailed alternatives; pesky English Ivy (Hedera helix)

rates four choices, and Purple Loosestrife (Lythrum salicaria), that scourge of wetlands, a record five.

In the introductory pages, Burrell stresses the importance of using regional native plants to replace invasive species: you wouldn't want to create another invasive problem by planting a West-coast native here in North Carolina, unless that native has been proven conclusively to be non-invasive. For example, to replace the invasive Japanese Spirea (Spiraea japonica), Burrell suggests that eastern gardeners use Shiny-leaf Meadowsweet (Spiraea betulifolia) or Common Meadowsweet (Spiraea alba); western gardeners are offered Mountain Spirea (Spiraea densiflora). Other eastern suggestions, with only the native range given, include New Jersey Tea (Ceanothus americanus), Bush Honeysuckle (Diervilla lonicera), Witch Alder (Fothergilla gardenii), and Virginia Sweetspire (Itea virginica). The reader is also referred to the Brooklyn Botanic Garden's website for even more possibilities (www.bbg.org/nativealternatives).

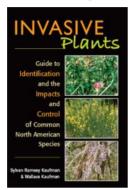
An appendix lists invasive plants by scientific name and gives the states where each plant is known to be invasive, thus guiding the local gardener in which plants to avoid. This easy-to-use reference is an excellent addition to any gardener's collection.

Lisa Lofland Gould August 2, 2008

## Off the Shelf....books worth a read

Invasive Plants: Guide to Identification and the Impacts and Control of Common North American Species

by Sylvan Ramsey Kaufman and Wallace Kaufman. 2007. Stackpole Books, Mechanicsburg, PA. 458 pp.



t last, a North American field guide to invasive species! With so many newcomers creeping and leaping over the landscape, it is very helpful to find a book devoted to helping us identify and learn about the impacts of invasive, non-native plants.

The Kaufmans' book describes 175 invasive species. Each description gives identifying characteristics and how to differentiate the invasive plant from native relatives, and is accompanied by several color photographs that illustrate the plant's flowers, fruits, growth habit, or other distinguishing features. While the photographs vary considerably in quality—from excellent to downright mediocre (the photos came from a variety of sources)—I found it very useful to get multiple views of each species.

In addition to identification information, each entry describes the habitat where the plant is found, along with the range of its spread within North America. The authors discuss the impact of the species on North American ecosystems and agricultural areas, and also note its use by wildlife, toxic effects on wildlife or livestock, and similar information. I found particularly interesting the discussion on how each plant arrived in North America. Did you know that we can thank Benjamin Franklin for introducing the Chinese Tallow Tree (Triadica sebifera [formerly Sapium sebifera]), for its use in making candles and soap? Or that Common Burdock (Arctium minus) was brought to North America for medicinal purposes, and by 1700 was already a weed in New England? Japanese Stilt Grass (Microstegium vimineum) and Cogongrass (Imperata cylindrica) sneaked in with Asian dishware (they were used as packing material), edible Salsify

(Tragopogon spp.) was brought in by European immigrants in the 1900s, Mile-a-minute Vine (Persicaria perfoliata) first arrived in ship ballast, other species came in accidentally with crop seeds or soil or sheep's wool, and as we are too well aware, many more were introduced deliberately for agricultural or ornamental uses. There seems to be no end to the ways that introduced plants can get here, which means that the authors will need to do an updated version of this book every five years or so, to keep adding new arrivals (and species newly recognized as invasive).

Management of invasive species is not overlooked: each entry has specific information on mechanical and chemical control, and references for more detailed information—many available online—are given for each species. There is also a brief introductory chapter on control issues, and other introductory chapters, a bit perfunctory for my taste, on the issues surrounding invasive species.

Invasive Plants is organized by plant type, initially divided into terrestrial and aquatic species, and within those categories by growth form (tree, shrub, vine, herbaceous, grasses & sedges, and ferns), then by leaf type (evergreen or deciduous), and then by leaf arrangement (opposite/whorled or alternate), and sometimes further categories. The resulting arrangement is very choppy, making it difficult to quickly find a category of plants. The book would have benefitted greatly from bleed tabs and/or top-of-each-page identifiers that tell the reader what section s/he is in. Within a particular section, the plants are arranged alphabetically by scientific name, which also contributes to the choppiness: I would have found it much more useful, for identification purposes, to arrange the plants by family within a section (to have all the members of the pea family together, for example, or all the composites).

Shortcomings (and the steep price: \$39.95) notwithstanding, this book is full of useful data, and my hat is off to the authors for pulling together, in an attractive and helpful way, so much information.

Lisa Lofland Gould August 2, 2008

# Registration Form: October 10-12, 2008 Lake Waccamaw and Myrtle Head Savannah

Name (s	s)	
Address	5:	
Email: _	Telephone:	
Field tr	ip registration and fees:	
	Registration fee: NCNPS members \$20.00 (\$10 limited income)	\$
	Registration fee: non NCNPS member \$30	\$
Extra o	ptions:	
	Individual NC NPS 1-year membership: \$25.00 (\$15.00 limited income)	\$
	For additional membership options and fee schedule visit www.ncwildflower.c	org.
	NCNPS T-Shirt \$15.00	\$
	Circle Size: s, M, L, XL, XXL	
	Circle Color: Cranberry, Green, Lt. Blue, Tan, Yellow; scoop neck, Pink & Lilac	
Total E	inclosed:	\$
Registration deadline: October 1, 2008		
Please make checks payable to NC Native Plant Society  Hugh Partridge, Treasurer		
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