



SCAN Newsletter, March 2007 (3)

Hi Folks,

You are hearing from your vice-president, as Jules was unable to attend. He needed to earn a living on the day of our trip to Great Pee Dee Heritage Preserve. We had an excellent day for both the trip experience and the great weather. Many thanks go to Gordon Murphy for planning and extensively scouting this trip. To top off the trip, our charter member, Sara Lee Simons, invited us to her nearby cabin for a post trip get together and snacks. She knows how we like to eat and talk!

Before we had left the gathering point, we had one of the most interesting finds of the day. Mike Turner turned over an old truck bucket-seat to find a gorgeous marbled salamander underneath it; he was the most photographed critter of the day. The sad note was how much trash folks had dumped here, though much of it predated the heritage preserve.

Our first stop was the Johannes Kolb Archaeological Site. This gave us access to a bluff overlooking a manmade oxbow lake. The water was down far enough that the flood plain could be examined also. The botanists had a grand time. If you want to explore the historical aspects of this site, you may participate in the annual dig in mid March. SCAN members are on the mailing list for the notification of this event. Most likely, your notice arrived during our SCAN fieldtrip, as mine did. Anyway, the archaeological site was a nice grassy area with little leaf cover this time of year. It felt very good in the sun while the morning was still chilly. We lingered quite a while.

From there we explored along the major access road all the way to the river. The wintering birds were taking full advantage of the area, plus many interesting aquatic insects were in the woodland puddles. Some frogs were keeping them company. Surprisingly, there was very little sign of deer. This is squirrel season in South Carolina, so we shared the area with squirrel hunters and their dogs. Rarely did our paths cross except as they were returning to their vehicles. We met several friendly dogs. The squirrels wisely were nowhere to be seen. The red maples were in early fruit and the redbuds were showing lots of color. At least some vacciniums and some small herbaceous plants were already in flower. Spring is coming!

After we all finally made it back to our cars, and checked the salamander one last time, we headed over to Sara Lee's cabin. We thank her for her hospitality. Next, our stomachs led us to a small BBQ place across from the Darlington Raceway, where we all stuffed ourselves on BBQ. Thanks also goes to Mike Turner for assisting Gordon in checking out the site, and to Chris Manuse for chauffeuring folks back from the river and selecting the BBQ restaurant.

Plan to join us next month when we tiptoe into Georgia to help explore a new addition to the Heggie's Rock site. New places are always an interesting challenge.

Lynn Smith (subbing for Jules Fraytet)

Heggie's Rock
Columbia County, GA
March 24, 2007 10:30 AM
(Jerry Bright)

Heggie's Rock is managed by The Nature Conservancy (TNC) of Georgia, Wayne Grooms suggested this site, which is located about 20 miles the other side from Augusta. SCAN last visited the site on 03/28/92.

The following was extracted from TNC's website:

<http://www.nature.org/wherewework/northamerica/states/Georgia/preserves/art6696.html>

"Nestled in a forest of pines and hardwoods, this outcrop of coarse-grained granite towers nearly 70 feet over the surrounding area. Known as Heggie's Rock for the last 150 years, this monolith is one of the most striking examples of granite flatrock in Georgia. Without the support of soil, plant life has evolved over centuries to withstand the natural cycles of downpours and searing heat. Many ecological processes, including primary succession, adaptation, and competition, are at work here, making Heggie's Rock a natural laboratory for research and education."

"The outcrop has a variety of habitats ranging from dry rock faces to wet seepage areas, or 'dish gardens'. Within these delicate gardens the crimson-hued stonecrop plant adds vibrant color to the shallow rock pools. Two endangered plants also thrive in these basins; the tiny pool sprite, and the mat-forming quillwort, which grows in only one pool on the rock. The dwarf granite stonecrop, listed as threatened in Georgia, survives here, and the rare glade windflower was discovered on the preserve a few years ago. Other plants include cactus, wild azalea, Confederate daisies, reindeer moss, goldenrod, and broomstraw."

"Weathered cedar trees draped in Spanish moss add to the site's beauty. Spanish moss is not common this far north, and is rarely found on rock outcrops. Lichens and moss dominate the south face, while patches of trees and vegetation occupy the more gradual slopes. Twelve of the 18 plant species endemic to granite flatrock occur at Heggie's Rock."

"A Creek along one boundary of the preserve harbors beaver and otter; eastern white-tailed deer, turkeys, and lizards all inhabit the area. Many rare and endemic spiders and insects occupy this site, some known only from Heggie's Rock." **"Heggie's Rock is arguably the finest known Piedmont granite outcrop. The biodiversity at this site is unrivaled."**

TNC acquired an additional 30 acres located adjacent to TNC's Heggie's Rock Preserve in Columbia County. The undeveloped wooded site contains an abundance of wildlife, granite outcrops, valuable wetlands, streams, and aquatic habitat within the floodplain of Little Kiokee Creek, a tributary of the Savannah River. SCAN has been invited to explore the new acquisition. TNC will benefit from our flora/fauna list and we are privileged to be able to go into the new area that has not been available to the public.

SCAN members visited Heggie's Rock in 1992 and identified 115 species.

Directions to Heggie's Rock, Judy Gordon

From I-20 going WEST from Augusta: exit at Appling, Harlem and go NORTH (to the right), on Rt 221, about 2 ½ miles toward Appling, to where Rt 232 (Columbia Road) comes in from the right (EAST). There is a gas station on the right side. Turn right onto Columbia Road and drive about 1 to 2 miles to the first crossroad, which is Louisville. Turn left (NORTH) onto Louisville and drive about 2 miles to where an unmarked dirt road comes in from the right. We will park there and then hike to the rock, about a ½ mile. **There are no signs depicting directions or information about 'Heggie's Rock'.** Judy drives a tan Toyota pick-up. She will be there about 10:15 am, so folks can look for her truck and so know where to park. She also has a TNC stand-up sign. Pat and I should be there before 10:00 am, so you can look for our Honda minivan. Bring water, lunch, insect repellent, and sunscreen. There are no facilities or restrooms, so you may want to stop at the gas station beforehand. I imagine we will be eating on the trail. (Judy is a faculty member at Augusta College.)

SCAN's April Fieldtrip (4-28-07), early announcement, Jan Ceigler & Lyle Campbell

Jackson's Place – The Marvin Jackson Property consists of some 600 acres on the Tyger River Flood Plain near the community of Switzer, SC (Spartanburg County, Northern Region). It includes two ponds, some old-field habitat, pine plantation, and old growth forest, but the major attraction is an impoundment area. There are close to 300 acres of boggy ground and shallow impoundments bordering the Tyger River. There are numerous wood duck boxes, stands of cat tail, swamp iris, and arrowhead in the wetlands. Great blue heron have nested there the last two years, and prothonotary warbler sing on habitat. Woodcock are commonly found, and there is a great diversity of herpefauna and insets. The western edge of the wetland impoundments is a fairly steep, thicket-covered bluff which rises perhaps 100 feet to a xeric hill-top. Consequently, the property contains a wide variety of habitats and microhabitats ready for SCAN scrutiny. A full report, and a map, of Jackson's Place will appear in SCAN's April newsletter.

South Carolina Association of Naturalists. Jules Fraytet, President; Lynn Smith, Vice president; Ben Gregory, Secretary; Greg Mancini, Treasurer; Tom Jones & Mary G. Douglass-Jones, Flora/Fauna Database Managers; Dee Hope, Historian. Regional Directors: Jan Ceigler (north), Mike Turner (south), Gordon Murphy (east), Eva & Sam Pratt (west), Jerry & Pat Bright (central). Newsletter published monthly (scan_editor_brg@bellsouth.net). Yearly membership is \$12. Send check to SCAN, c/o Greg Mancini, PO Box 5651, Columbia, SC 29250-5651. Fieldtrips open to newcomers over age 15. (www.scnaturalist.org) SCAN is a nonprofit 501(c)(3) in the state of South Carolina.

President's Fieldtrip, Rock Hill Bio-Blitz, York County, March 30-31, 2007 (Steve Fields, info)

Steve Fields and fellow staff of the Culture & Heritage Museums (CHM) will host Bio-Blitz IV on March 30-31. Once again, the event will occur at the future location of the Stans Museum of Life and the Environment on a Friday and Saturday. Camping is optional at the site on Friday night, and the CHM will provide free meals for Friday dinner and Saturday breakfast. This bio-blitz will probably be the last chance to conduct broad scale surveys at the future museum location. All SCAN members are invited. Winthrop students (in Geology 410, SC Natural History) will attend; Dr. Irene Boland and Steve Fields, a Ph.D. candidate, teach this class. Other volunteers will attend. Mark your calendars for a weekend filled with plant surveying, insect collecting, cover board tipping, bird watching, mammal trapping, and whatever you would like to collect. Friday: arrival time 2 pm, dinner 6 pm. Saturday: 5 am snacks, 7 am breakfast, 4:30 pm end. **Directions:** From I-77, take SC exit 83 and go west on Sutton Rd. for about two blocks. Turn left onto Grady Hope Rd. and proceed through a little neighborhood. Take the left fork onto the dirt road and you will see both an open gate and the brown CHM sign. Proceed down the dirt road past the small power line right-of-way AND past the larger power line right-of-way. Continue up the hill to the campsite. **If you intend to participate, please notify Steve Fields to help him plan food quantity. (803-329-2121, ext 110, stevefields@chmuseums.org)**

Little Mountain, SC, Exploration Fieldtrip, 4-7-07, Jules Fraytet

We will meet at 10:00 am. Little Mountain (LM) is a small town located near Newberry and Chapin in Newberry County. Claudia Houck conveyed info to me about the mountain. She has been working with Buddy Johnson, the mayor of Little Mountain, and landscaping part of the town for her master's program at Clemson University. Buddy is very interested in documenting what species are on this mountain, and has invited SCAN to conduct a biological inventory. We will be exploring a large undeveloped track of land on the mountain. Located between 630 to 825 feet above sea level, LM is the highest point of land between Greenville and Charleston. This site has some interesting geological history. LM is thought to have formed in the early Paleozoic and to have been part of an offshore island arc. Additionally, LM is part of the Carolina slate belt and is highly mineralized. Buddy has been working with a state geologist to document its soil and rock types, and will probably bring samples of the rock types to the fieldtrip. This area is just above the fall line. The presence or absence of plant species is generally dependent on soil and rock types. Additionally, plants species frequently determine animal biodiversity. Mountain laurel and blue gentian occur on the mountain, as does the northern cricket frog. Lynn Smith told me that Rudy Mancke visited the site some years ago and was impressed. The largest meteorite ever found in SC came from the slopes of LM in 1844.

Directions: We will meet at the Mount Zion AME Church parking lot in Little Mountain (LM). LM is located about 1 mile south of I-26 at exit 85, which is approximately 26 miles northwest of Columbia. We will then walk about one block to the start of the Rocky Branch trailhead. Parking is not permitted at the trailhead, nor is any space available to do so. From exit 85 on I-26 take SC 202 (Pomaria Street) south to LM, then turn left on Main Street, which is also US 76 (there is a caution light at this intersection), then take the first right which is Mountain Street. Stay on Mountain Street for approximately four blocks and the Mount Zion AME Church is on the left; meet in the Mount Zion AME Church parking lot. For further information, contact Jules at jlfray@ix.netcom.com, or Claudia at claudih@CLEMSON.EDU, or Buddy Johnson at olj@bellsouth.net. Buddy's cell is 803-348-6500.

Scientific name for SCAN members, *Scannus inquisitus*, Gordon Murphy

During a recent conversation among Gordon, Mike Turner, and Ben Gregory, Gordon hatched the following scientific name for a new species: *Scannus inquisitus* Gordon 2007; common name, SCAN member. The type specimen was discovered on the Great Pee Dee River and is yellow-headed, red-rumped, and blue breasted. The specimen is also known as Mike Turner (in a photo, not shown), who was wearing his garb as observed on river on 3-18-07; other color morphs have been observed. *S.inquinitus* is an uncommon species that migrates throughout South Carolina in search of undisturbed habitats. They forage mainly on environmental knowledge and have been know to flock together in groups of 15 to 20 once a month. (As editor, I condensed several emails for this note, but this is vintage Gordon Murphy -- which is much enjoyed.)

Genetics of wollemi pines, *Wollemia nobilis* (Araucariaceae), Linda Lee

Analysis of over 800 points on the genome (13 allozyme loci, ~800 AFLP, 20 SSR) in a subset of adults and 70 seedlings revealed no genetic variation at all. All plants were homozygous at all loci. Investigators concluded some extremely low level of genetic variation probably does exist, but was undetected. Even so, they stated, "To our knowledge this is the most extreme lack of genetic variation known in plants." (Peakall et al 2003)

Although their findings do NOT indicate the entire species is a single genetic individual (clones produced by asexual reproduction), that would not be impossible. Some speculate wollemi pine is capable of clonal reproduction. However, seedlings are present in the wild. Even in clones, there is normally some genetic variation (heterozygosity) within individuals; it is just that with wollemi pines, all the clones share exactly the same pattern. Therefore, the lack of variation in *W.nobilis* is more likely the result of very low population size maintained over many generations (genetic drift). Given that *W.nobilis* plants are known to live at least 400-500 years (and some speculate much longer), one would think its population size must have been quite small for quite some time.

Unfortunately, the unprecedented lack of genetic variation also means that the evolutionary potential of this species to adapt to a changing environment is probably practically nil. Novel mutations are generally rare. Natural selection does not have much to work with here. Seedlings are just like their parents, because there are no alternative alleles. (There is no point in shuffling a deck that contains only aces.) Most likely, *W.nobilis* will continue to either survive in its present form, or disappear. Info source / further reading: Peakall R, Ebert D, Scott LJ, Meagher PF, Offord CA (2003) Comparative genetic study confirms exceptionally low genetic variation in the ancient and endangered relictual conifer, *Wollemia nobilis* (Araucariaceae). *Molecular Ecology*, 12, 2331–2343.

2006 Fieldtrip Attendee Data, Ben Gregory

Three individuals attended all 11 fieldtrips in 2006: Lynn Smith, Mary Garland Douglass, and Tom Jones. The total number of SCAN member attendees for all 11 trips was 197; minimum number was 12; average number was 18; maximum number was 27. Members per trip: Wannamaker Preserve 22; Goodale State Park, Savage Bay, 12; Bonneau Ferry 18; Sharpton's Prairie 19; Craig's Pond 19; Pee Dee National Wildlife Refuge 14; Coon Branch 27; Rock Hill Blackjack Heritage Preserve 18; Phinizy Swamp & Henderson Heritage Preserve 17; Cowpens National Battlefield 17; Poinsett State Park 14. We averaged 2 visitors per trip, whose numbers are not detailed in the 'above' statistics.

Peachtree Rock, Plant Specific Walk, 3-31-07, Wayne Grooms (info)

The Midlands Chapter of the South Carolina Native Plant Society (SCNPS) will conduct a plant-specific walk at Peachtree Rock and discuss the pros and cons of the recent 75-acre cutting of slash pine. Wayne is the preserve manager of Peachtree Rock. Additionally, an all-out membership drive will be held on April 14 at Congaree Bluffs Heritage Preserve. Dr. Bert Pittman and Dr. John Nelson will lead walks; food, burgers, and the like for a lunch at a covered picnic area. Please visit SCNPS website for details (www.scnps.org).