

44TH ANNUAL SPRING WILDFLOWER PILGRIMAGE

APRIL 5-7, 2013

AUGUSTA, RICHMOND COUNTY, GEORGIA
AND ADJACENT AREAS IN GA & SC

The Quality Inn & Suites in Augusta is our headquarters for the 2013 pilgrimage. From this Fall Line location between the Piedmont and the Coastal Plain, we will journey to granite outcrops, Carolina bays, and a longleaf pine – scrub oak preserve in a sand hills ecosystem.

Our pre-pilgrimage field trips on Friday include an expanded choice of activities. Check the schedule below.

PILGRIMAGE SCHEDULE

FRIDAY, APRIL 5

8:30 am—4:30 pm	All day field trip to Yuchi WMA led by John Jensen and Mincey Moffett
10:00 am—4:30 pm	Canoe field trip with Jerry Hightower
10:00 am—2:00 pm	Half day field trip to Heggie's Rock led by Malcom Hodges
1:00 pm—4:30 pm	Half day field trip to Craig's Pond with Linda Lee
2:00 pm—4:00 pm	Workshop on Effect of Minerals/Heavy Metals on Plants with Stacy Bennett
5:00 pm—7:00 pm	Registration & Welcome Social in the Convention Center Room (Quality Inn)
7:00 pm—9:15 pm	Evening presentations (Jenny Cruse-Sanders and Jon Ambrose)
9:15 pm—9:45 pm	Book signing

SATURDAY, APRIL 6

7:30 am—8:15 am	Early registration at the Quality Inn
8:30 am	Morning and all day field trips assemble at the Quality Inn
1:00 pm	Afternoon field trips assemble at the Quality Inn
4:30 pm—5:00 pm	Field trips return to Quality Inn
5:30 pm—6:30 pm	Mini social in the Convention Center Room (Quality Inn)
6:30 pm—7:45 pm	Banquet dinner in the Convention Center Room (Quality Inn)
8:00 pm—9:15 pm	Evening presentation (Rebecca Sharitz)

SUNDAY, APRIL 7

8:30 am	Field trips assemble at Quality Inn unless otherwise noted.
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All trips assemble at the Quality Inn at 8:30 am (morning) and 1:00 pm (afternoon) unless otherwise noted.

Background

Augusta, our host city, is along the Savannah River and on the Fall Line that cuts across Georgia from Columbus in the West, through Macon and on to Augusta. From Augusta we can travel north and east to the Piedmont, west and south to the Sandhills to see typical natural communities that are influenced by the soils, geology and climate features of these areas.

Fort Gordon (trip 6) and Henderson Heritage Preserve, northwest of Aiken (trip 12), are home to the rosemary balds that feature the giant rosemary plants (*Ceratiola erucoides*) and longleaf pine habitats. North of Augusta in the Piedmont Plateau we find the famous Heggie's Rock, a Nature Conservancy Preserve. Take trips 3, 7 or 20 to see this excellent example of a flatrock granite outcrop.

Burk's Mountain (trips 13 and 22) exhibits serpentine rock that contain high mineral levels of magnesium, manganese and aluminum which influence the types of plants that grow there. The schedule includes a workshop (trip 5) on the effect of heavy metals and minerals on plants.

Stevens Creek Heritage Preserve (trips 11 and 16) has more calcareous soils and harbors a spectacular basic-mesic forest. This forest dominates the steep, north facing bluffs that are adjacent to the creek and extends into the ravines that dissect the bluffs. Most Piedmont species are present including some that are unusual or rare.

From a geological perspective, the most spectacular bedrock exposure featured on our pilgrimage is Berzelia Rock (trips 9 and 15). Although surrounded by Fall Line sandhills, this formation is made of flint kaolin; it resembles Altamaha Grit outcroppings, but it is not the same formation. It has chunks of grayish flint embedded in a kaolin-like, silica matrix instead of quartz-like grit pebbles, and it harbors significantly different vegetation. This may be a feature found only in Georgia and only at this site.

Carolina Bays are elliptical, oval or asymmetrical in shape, with their long axis oriented in a southeast direction. These wetlands are located in the Coastal Plains in Georgia as well as in North and South Carolina. They are shallow depressions formed in sandy coastal soil and vary in depth from a few feet to about 20 feet. Some are spring-fed. They range in size from several hundred feet to nearly 5 miles in length. The origin of these bays is still a mystery today, but for our pilgrimage, it is enough to know that they are a wildflower paradise.

Ecologically the bays are important for several reasons. They are wetland habitats that provide refuge and watering areas for wildlife and nesting sites for a wide variety of birds and mammals. Some Carolina bays have areas of marsh or shrub bogs while others, with more or less permanent water, have cypress forests. Carolina bays may contain several discrete natural environments within their borders. There is a total of three trips (4, 8, 21) to two different Carolina Bays on the pilgrimage, so be sure to experience one of them.

Other habitats represent river bluffs (trips 10, 18 and 23) harboring early spring flora, river swamps and Carolina bays. The Augusta region offers a variety of interesting botanical sites. On a trip 14 to the city of Aiken, we will tour oak tree plantings, private gardens featuring native plants, and see a restored sandhill.

Most trips are half-days to allow you to sample the wide variety of natural communities in the Augusta area. We also offer at least one all day trip each day.

Evening programs

Our evening programs are meant to help you understand the diverse habitats we'll see on field trips. Be sure to attend both evenings. We have two speakers on Friday evening and one on Saturday. Our Friday night program opens with a look at the Atlanta Botanical Garden's conservation programs to protect and restore the habitat of threatened plant communities throughout the southeast. Then we'll learn about the natural communities of Georgia and DNR programs and work they are doing in the area of invasive species.

The evening will end with a book sale and signing for The Natural Communities of Georgia by Leslie Edwards, L.Kay Kirkman and Jon Ambrose with photography by Carol and Hugh Nourse, published by the University of Georgia Press. Bring checks or cash for the book sale; no credit cards accepted.

Programs to Conserve Native Plants at Atlanta Botanical Garden

The primary focus of the conservation program began with the monitoring, restoration and conservation of unique, species-rich bog communities. Since its inception, this program has expanded to include work with 124 native plant species (22 are federally protected) throughout the Coastal Plain and southern Appalachian Mountains. Jenny will discuss how innovative habitat restorations for plants and their pollinators, horticultural methods, and partnerships have led to many successes.

Jenny Cruse-Sanders is Director of Research and Conservation at the Atlanta Botanical Garden . She has an MS in Botany from University of Georgia and a PhD in Conservation Genetics, Botany Department, UGA.

Natural Plant Communities And DNR Programs That Conserve Them

Jon will discuss the programs Georgia DNR has in place to conserve natural resources and talk about the emphasis DNR is placing on invasive species control. He will also speak about the natural plant communities in the Augusta region.

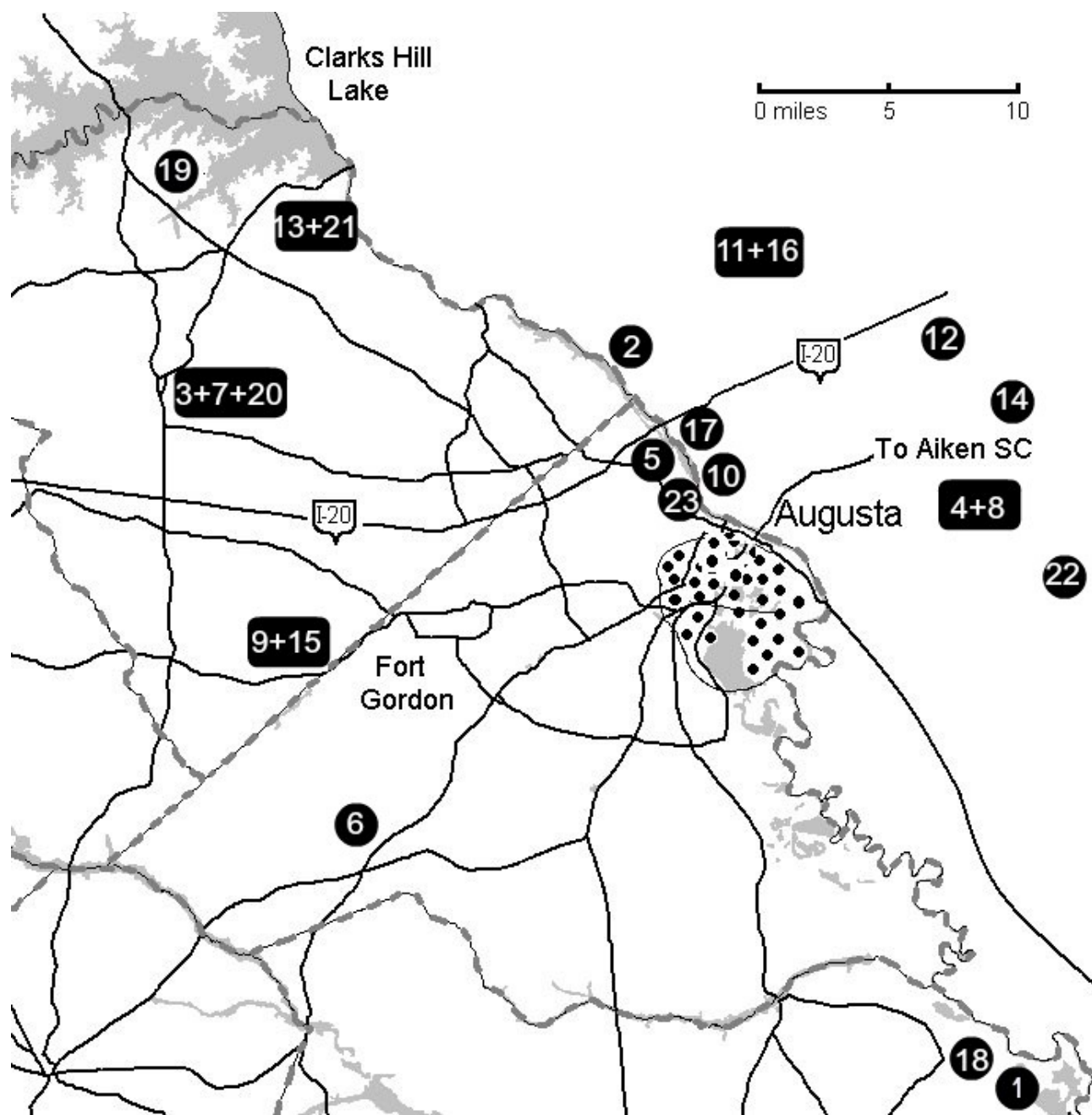
Jon Ambrose is the assistant chief in the Nongame Conservation Section, Wildlife Resources Division of the Georgia Department of Natural Resources (DNR). He has an M.S.degree in Ecology from the University of Tennessee and Ph.D. in Ecology from the University of Georgia.

An Ecological Perspective on Carolina Bays

Carolina bays are really many different communities. Professor Sharitz will discuss the types of plant communities found in Carolina bays and how vegetation changes depending on the wet or dry conditions of the bays. Much of the plant diversity in any given year resides in the seedbank, a seedbank that is amazingly diverse. The seeds can be quite long-lived (50+ years), waiting for just the right conditions they need to spring to life. Other factors include whether or not there is connection with the regional ground water, the potential for restoration of drained bays, and some of the issues associated with protection (or lack thereof) of isolated wetlands. She will also discuss the importance of fire in the maintenance of natural vegetation in this type of bay.

Rebecca Sharitz is Professor Emeritus, University of Georgia, Plant Biology and Senior Researcher at Savannah River Ecology Lab (SREL). In 2010 she received the National Wetlands Award for Science Research from the Environmental Law Institute.

MAP of field trips



Trip 1: Yuchi WMA

- Date:** Friday, all day (meet the leaders at the Yuchi check station at 9:30 am)
- Location:** Southeast of Augusta. From Waynesboro take HWY 80 east 8 miles to Shell Bluff Community; turn right on HWY 23; travel 7 miles south; turn left on Ebenezer Church Rd.; go 1 mile to Check Station on right.
- Conditions:** Easy except for one difficult part at the steephead seepage drain; muck or waterproof boots advisable.
- Description:** General sandhills botanizing with steephead - the only one in Georgia - floodplain, and milkvetch stops. May stop at Plant Vogtle to see *Astragalus michauxii*.
- Leaders:** John Jensen is senior wildlife biologist with Georgia DNR and Mincy Moffett is a Georgia DNR botanist.

Trip 2: Canoe/Kayak Trip

- Date:** Friday, 10:00 am to 4:30 pm (meet at Savannah Rapid Pavilion)
- Location:** Savannah Rapid Pavilion—Take I-20 to the Washington Road exit. Head east on Washington. Turn north onto Stephen's Creek Road (the first stoplight immediately east of I-20). Stephen's Creek will turn left just after a Marriott Courtyard. Follow it for about 3 miles. It will cross the River Watch Parkway. Turn Right onto Evans to Locks Road to the Savannah Rapids Pavilion. Drop the boats off as far down hill as you can near the gated, gravel road that leads to the river & park in the paved lot. GPS: N 33 deg 32.987' W 082 deg 02.
- Conditions:** Easy 6/7 mile stretch suitable for beginners who must have basic canoeing or kayaking skills and ability to swim. Canoe rental is available, see page 4.
- Description:** Paddle leisurely along the Augusta Canal, past a waterfall, Warren Lake & Lake Olmsted, the Sibley Cotton Mill and the Granite Flour Mill, takeout point. Bring a lunch for picnic along the river, sunscreen, hat, rain jacket, water. Have a day pack, dry bag/plastic bag & cord to secure items inside boat. Camera, binoculars optional.
- Leader:** Jerry Hightower 770-206-0338, cell; jerryhightower@hotmail.com
Note: this trip is limited to 26 people.

Trip 3: Heggie's Rock

- Date:** Friday, 10:00 am to 2:00 pm (meet in hotel parking lot)
- Location:** Northwest of Augusta
- Conditions:** Easy on open granite flat rock habitat .
- Description:** Large pristine granite outcrop known for a big population of endemics. We will see two endangered species, the poolsprite and the mat-forming quillwort in the dish gardens, and the rare glade windflower. Heggie's has a rich assemblage of lichens which the leader will point out and be happy to answer questions.
- Leader:** Malcolm Hodges is a land manager with an interest in birds and lichens. He works as the Director of Stewardship for TNC in Georgia.
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Trip 4: Craig's Pond

- Date:** Friday, 1:00 pm to 4:30 pm (meet leader on site at 1 pm)
- Location:** ChemNuclear Parking Lot, 740 Osborn Rd., Barnwell, S.C. 29812
- Conditions:** Moderate trail and boardwalk. Dirt roads could be wet.
- Description:** One of the largest herbaceous depression meadow Carolina bays in S.C. Species observed may include *Sagittaria isoetiformis*, *Croton elliotii*, *Echinodorus tenellus*, *Ludwigia spathulata*, *Rhexia aristosa* and others, heavily dependent on winter rainfall.
- Leader:** Linda Lee has a Masters in plant biology from UGA, is a research professional at SREL, and a wildflower photographer. Her photos have appeared in the S.C. plant atlas and other publications.
- Note: this trip is limited to 20 people.

Trip 5: Plant/Mineral Workshop

- Date:** Friday, 2:00-4:00 pm
- Location:** Convention Center Room at the Quality Inn Hotel
- Conditions:** Easy, classroom
- Description:** Participants will learn how a tolerance for heavy metals will allow a rare plant to adapt to a local serpentine site. Opportunity to examine, discuss and identify collections of Georgia rocks and soils containing minerals and/or heavy metals that affect plant growth. Use of live plants to demonstrate how various mineral deficiencies can affect root growth and subsequent plant viability.
- Leader:** Stacy T. Bennetts, Ph.D. is an Associate Professor of Botany and Biology, Georgia Regents University, Augusta. She specializes in plant responses to heavy metals.
- Note: this workshop is limited to 20 people.

Trip 6: The Sandhills of Fort Gordon

- Date:** Saturday, all day
- Location:** West of Augusta
- Conditions:** Moderate to easy jaunts from cars.
- Description:** Several habitats including rosemary balds, mesic transition areas with the peculiar conjurer's nut (*Nestronia umbellula*), Atlantic white-cedar swamps, and vistas of wiregrass and longleaf pine.
- Special Requirements:** all drivers must show valid drivers license, vehicle registration and proof of insurance. All participants must have valid I. D.
- Leaders:** Dallas Grimes, Biologist and Nora Griffin, Ecologist; both work at Fort Gordon.
- Note: this trip is limited to 25 people **and we need about 5 vehicles with 4 wheel drive (to use for carpooling).**
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Trip 7: Heggie's Rock Preserve

- Date:** Saturday morning, half day
- Location:** See Trip 3 for description
- Leader:** Judith Gordon is a Professor (Emerita), Georgia Regents University, Augusta . Walter Kubilius has a PhD in Geology and works at Savannah River Site.
- Note: this trip is limited to 40 people.

Trip 8: Lower Craig's Pond

- Date:** Saturday morning, half day (meet leader on site at 9:00 am)
- Location:** See Trip 4 for description
- Leader:** Harry Shealy is a professor at the University of S.C. – Aiken, Dept of Biology and Geology.
- Note: this trip is limited to 20 people.

Trip 9: Berzelia Rock

- Date:** Saturday morning, half day
- Location:** West of Augusta
- Conditions:** Moderate due to no trails and rocky hillsides, but walking short distances.
- Description:** Flora of a peculiar rock type known as flint kaolin; rocky blackjack oak savanna with colorful lichens and shrubby hypericums; perhaps the only site in Georgia for the Georgia leadplant or indigo-bush (*Amorpha georgiana*).
- Leader:** Tom Patrick is a botanist with Georgia DNR. His specialties include rare plant surveys, trilliums, orchids and managing botanically significant natural areas.

Trip 10: Savannah River Bluffs Heritage Preserve

- Date:** Saturday morning, half day
- Location:** North of Augusta, in South Carolina
- Conditions:** Moderate to easy on flat hiking trails; approximately 1-2 miles.
- Description:** Expect to see early spring wildflowers including relict trillium (*Trillium reliquum*) and buckeye (*Aesculus* spp.).
- Leader:** Ed McDowell is past President of BotSoc, GNPS, and a field trip leader for the Spring Wildflower Pilgrimage in the Great Smoky Mountains.

Trip 11: Stevens Creek

- Date:** Saturday morning, half day
- Location:** North of Augusta in Aiken County, SC
- Conditions:** Moderate to easy, about 2 miles on a hilly hiking trail.
- Description:** Abundant spring wildflowers like the southern nodding trillium (*Trillium rugelii*), lanceleaf trillium (*T.lancifolium*), shooting star (*Dodecatheon meadia*) and spring beauty (*Claytonia virginica*). There are also uncommon woody plants due to soil with a more basic pH than in other Piedmont sites.
- Leader:** Linda Chafin is Conservation Botanist at The State Botanical Garden in Athens and author of the Field Guide to the Rare Plants of Georgia.
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Trip 12: Henderson Heritage Preserve

- Date:** Saturday morning, half day
- Location:** Northwest of Aiken, SC
- Conditions:** Moderate, short walks in sandy soils and numerous short walks near cars
- Description:** Fall Line sandhill flora, including the rare bog spicebush (*Lindera subcoriacea*), many plants found on rosemary (*Ceratiola eruroides*) balds and other sandhill rarities and a complete review of scrub oaks and common associates.
- Leaders:** Bob McCartney is a partner in Woodlanders Nursery in Aiken, SC and one of the premier nurserymen of the southeast. Mincy Moffett is a Georgia DNR botanist.
- Note: this trip is limited to 15 people.

Trip 13: Burk's Mountain

- Date:** Saturday morning, half day
- Location:** Northwest of Augusta
- Conditions:** Moderate, some right-of-way hiking, no trails
- Description:** Peculiar serpentine outcrops, extensive longleaf pine habitat, opportunity to visit unique landscapes for Piedmont flora, many disjunct plants, Georgia breadroot.
- Leader:** Jim Allison is a retired Georgia DNR botanist and discoverer/describer of several plants new to both Georgia and Alabama.

Trip 14: City of Aiken, SC

- Date:** Saturday afternoon, half day
- Location:** Designated site in Aiken, SC
- Conditions:** Moderate
- Description:** Tour of oak tree plantings in Aiken, one or two private gardens featuring native plants, and a visit to Bob McCartney's personal restored sandhill in Aiken County which features all dwarf pawpaws known for their luxuriant showy flowers.
- Leaders:** Bob McCartney/Mincy Moffett
- Note: this trip is limited to 15 people.

Trip 15: Berzelia Rock

- Date:** Saturday afternoon, half day
- Location:** See Trip 9 for description
- Leader:** Julie Duncan is a botanist and native plant advocate.

Trip 16: Stevens Creek

- Date:** Saturday afternoon, half day (meet leader at site at 1:30 pm)
- Location:** See Trip 11 for description
- Leader:** Linda Chafin
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Trip 17: August Shoals Canoe/Kayak

- Date:** Saturday afternoon, half day (start time is 1:00 pm; meet leader at location)
- Location:** Meeting point to be advised at registration.
- Conditions:** Canoers must be experienced; if water is too high, the canoe trip will be cancelled, and this will be walk along the shoals.
- Description:** Participants may see *Justicia americana*, *Podostemom ceratophyllum*, *Cabomba caroliniana*, *Potemegeton illinoensis*, *Hymenocallis coronaria* (not blooming), and invasive water plants.
- Leader:** Donna J. Wear, Professor of Biology, Georgia Regents University, Augusta. She is an ecologist involved in research on urban ecology, shoals spider lily (*Hymenocallis coronaria*), stream mercury containment and Gopher Tortoise habitat.
- Note: this trip is limited to 8 canoes/kayaks (16 people). Canoe rental is available, see page 4.

Trip 18: Shell Bluff Wildflowers, Burke County

- Date:** Saturday afternoon, half day
- Location:** Meet at the Shell Bluffs store at the junction of Hwy 80 and 56 Spur at 1:30 for carpool to bluffs.
- Conditions:** 2 miles walking distance, mostly moderate difficulty
- Description:** Participants will explore about 1 mile of rich hardwood habitat, some with large trees along the Savannah River. Lanceleaf trillium (*Trillium lancifolium*), southern spotted trillium (*T. maculatum*), green violet (*Hybanthus concolor*), Canada ginger (*Asarum canadense*), mock orange (*Philadelphus inodorus*) beneath tall Shumard oaks festooned with Spanish moss exemplify the unusual flora.
- Leader:** Tom Patrick is a botanist with Georgia DNR.

Trip 19: Mylonite Ridge, Clark Hills WMA

- Date:** Sunday, all day (will end by 3 pm)
- Location:** North of Augusta
- Conditions:** Note: Getting to parking area involves travel on dirt roads that are not suitable for low slung cars.
- Description:** This rocky ridge of metamorphic rock is not only spectacular for its rock formations but the north-facing slope has an unusual assemblage of lily-type plants: fly poison, feather bells, and ruffled-petal hellebore. The fly poison should be starting to bloom although the others will be vegetative. Red columbine and atamasco lily should be blooming on the ridge where we will see hairy lip fern and wood fern. Cucumber tree flowers and beech drops may also be visible, depending on the weather.
- Leaders:** Judith Gordon and Julie Duncan

Trip 20: Heggie's Rock Preserve

- Date:** Sunday morning, half day
- Location:** See Trip 3 for description
- Leader:** Jim Allison
- Note: this trip is limited to 20 people.

Trip 21: Burk's Mountain

- Date:** Sunday morning, half day
- Location:** See Trip 13 for description
- Leader:** Tom Patrick
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Trip 22: Ditch Pond Heritage Preserve/WMA

- Date:** Sunday morning, meet leader at site at 9:30 am
- Location:** Aiken County, SC
- Conditions:** Walking conditions, easy to moderate ~ about 2 miles, could be muddy.
- Description:** This site contains a Carolina Bay documented in 1973. The 25 acre bay has remained in its natural state. Eight rare plant species of concern have been found on the property. They include blue maidencane, Robbin's spikerush, creeping St. John's wort, piedmont water milfoil, awned meadow beauty, slender arrowhead, Florida bladderwort and piedmont bladderwort.
- Leader:** Kathy Boyle works for South Carolina DNR.

Trip 23: Savannah River Bluffs (Georgia)

- Date:** Sunday morning, meet leader at site at 9:00 am
- Location:** To be advised at registration.
- Leader:** Hamp Simkins is a long time resident of the Augusta area with family ties. He is an Environmental Consultant who now lives in Beaufort, S.C. Contact for day of trip only: 843-252-1616 (cell).

BotSoc Pilgrimage T-shirts

All profits from the sales of these t-shirts are designated for the Marie Mellinger Field Botany Research Grant Fund. This is a special "limited edition" shirt. Be sure to place your order by the deadline of March 8, 2013. T-shirts are produced based only on the orders received. If you want to receive your shirt prior to the Pilgrimage or will be unable to attend the Pilgrimage, there is a shipping charge of 5.00 for the first shirt and \$1.50 for each additional.

Prices and sizes are as follows:

Short sleeve T shirt (unisex and women's cut available)

sizes S, M, L, XL are \$14.00

size XXL is \$16.00

size XXXL is \$17.00

Long sleeve T shirt

sizes S, M, L, XL are \$16.00

size XXL is \$18.00

size XXXL is \$19.00

Sweatshirt

sizes S, M, L, XL are \$18.00

size XXL is \$20.00

size XXXL is \$21.00



Order your t-shirts on the registration form.

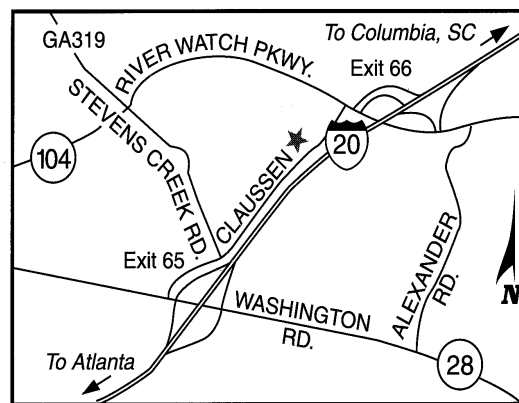
General Pilgrimage Information

Location:

Quality Inn & Suites
1052 Claussen Rd.
Augusta, GA 30907
Tel: (706) 737-5550 and (800) 424-6423, qualityinnaugusta.com
(706) 738-7473 (Sleep Inn, sleepinnaugusta.com)

Directions:

The Quality Inn & Suites and the Sleep Inn are located just off I-20 between Washington Road and the last exit before entering South Carolina; it is called River Watch Parkway.



Lodging:

We have reserved 50 rooms at the Quality Inn and Suites and 10 rooms at its sister hotel, the Sleep Inn, located next door. The Sleep Inn offers all interior guest rooms if you prefer a room off a hallway, and you can easily walk between both properties. All rooms are non-smoking, contain a full size kitchen and have complimentary internet access.

Both properties offer a deluxe continental breakfast (including hard cooked eggs, pancakes, waffles, sausage, biscuits and gravy in addition to cereal, fruits, and various breads and bagels). Breakfast is served from 6am to 10 am, even on the weekend.

Please book your room reservations as soon as possible and before March 8, 2013 to secure these special Georgia Botanical Society rates. BotSoc will receive a rebate on our rental of the Convention Center Room based on the number of rooms we occupy. This facility is the room where we will hold all our evening programs right at the hotel.

The room rates per night are:

Quality Inn & Suites	Sleep Inn
Doubles (2 Queen beds) - \$55.00	Doubles - \$65.00
Kings (1 King bed) - \$50.00	Kings - \$55.00

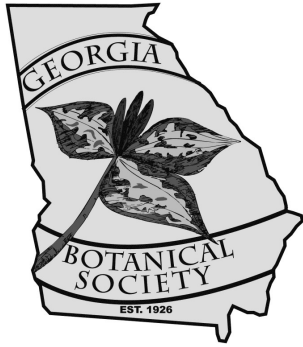
These rates are also available for Thurs night April 4th. However they are **not** available for Sunday evening Apr 7 as it is the beginning of Masters Week in Augusta. There is a special rate at the Sleep Inn for \$90 on Sunday evening April 7th. Deal directly with the hotel for reservations and cancellations.

General Information:

Please be sure to register for the Pilgrimage as soon as possible after you arrive. We may have important information regarding your field trips. You will also receive your name tag and any t-shirts ordered at this point.

Please carpool as much as possible on all field trips. We always try to limit the number of cars we bring to sensitive locations. If you have made arrangements to go with different carpools for morning and afternoon trips, be sure you can get to the rendezvous spot in time for the afternoon trip. BotSoc cannot arrange shuttles if you are stranded.

On all field trips please bring water, sunscreen, hat, lunch or snacks, rain gear or jacket as appropriate for weather, camera, hand lens, field guide.



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