BotSoc News

Georgia Botanical Society

Volume 86
Number 5
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2011

Brief Notes from the Botanical World

IN THIS ISSUE:

USPS Honors Botanist Asa Gray

Asa Gray (1810-1888) is one of four scientists honored by the US Postal Service in their 2011 American Scientists (Forever®) stamps. Gray, one of the nation's first professional botanists, advanced the specialized field of plant geography and became the principal American advocate of evolutionary theory in the mid-nineteenth century. The stamp art features illustrations of plants studied by Gray and the words "Shortia galacifolia" in Gray's handwriting.

Take the quiz!

Lisa Samuelson, Mike Hogan, and Tom Stokes of Auburn University's School of Forestry and Wildlife Sciences have developed an interactive web site featuring the trees of Alabama and the Southeast (https://fp.auburn.edu/sfws/samuelson/dendrology/index.html). You can test your tree identification skills by examining photos of leaves, flowers, and bark in dendrology quizzes for beginner, intermediate, and advanced skill levels.

Leafsnap

A revolutionary new electronic field guide that can identify a tree species by looking at a photograph of the leaf is now available – for free (http://leafsnap.com). Leafsnap requires you to use a smartphone (e.g., iPhone, iPad) to take and upload a photo of a leaf of the tree you wish to identify. The guide uses visual recognition software to analyze and compare the leaf's shape and features against an index of species curated by botanists at the Smithsonian Institution. You receive a ranking of most likely species, along with other characteristics to help confirm the tree's identity from photos in the guide. Scientists use the uploaded photo and the geographic coordinates of the tree's location to "map and monitor the ebb and flow of flora nationwide". Leafsnap currently includes the trees of New York City and Washington, D.C. but will eventually cover the trees of the entire continental United States.

Weakley's Flora Updated

A new version of Alan S. Weakley's *Flora of the Southern and Mid-Atlantic States* (May 2011) has coverage for the states of Alabama, Delaware, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, and the District of Columbia, and parts of Florida (northern and Panhandle counties), Louisiana (Florida Parishes), and New Jersey (Coastal Plain counties). Arrangement of families (and genera within families, increasingly) is phylogenetic. If you have a high-speed internet connection, you can download the flora as a PDF file http://www.herbarium.unc.edu/flora.htm. To purchase a hard-bound copy, contact Carol Ann McCormick at 919-962-6931.

Choices

No matter how sophisticated our field guides, a plant ID often ends with a simple choice between two traits ...

The Path Not Taken

Two traits diverged in a murky key,
And sorry I could not fathom both,
And know the sedge, long I stood
And pondered each as well as I could:
Were there stigmas two or three?

I went for three, just as fair,
And having perhaps the better claim
Because I threw my hands up in the air
For as except the little beak
They both to me looked just the same.

And both that morning equally lay
In mysteries of Haines and Gray
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I wondered if I should maybe pray.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two traits diverged in a murky key, and I –
I took the one less stupefied
And never will know the difference.

(with apologies to Robert Frost)

Thanks to Linda Chafin and Hal Massie for contributing to this article and special thanks to an anonymous member of the Connecticut Botanical Society's Sedge ID Project whose frustration with a dichotomous key was inspiration for "The Path Not Taken".

BotSoc News
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is October 1 for the November issue.

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Society News

President's Perspective

The long Georgia summer is slowly merging into a beautiful autumn. Fortunately, a fair amount of rain accompanied this year's temperature and humidity. The heat did not deter BotSoc members, though. As an example, the well-attended mid-July roadside botanizing trip, led by Rich and Anita Reaves, to the Waycross area was highly successful. In fact, it revealed some interesting rare finds including, among others, Florida orangegrass (*Ctenium floridanum*), and night flowering ruellia (*Ruellia noctiflora*). Although the route taken necessitated avoiding the burn area and firefighting efforts, there were still plenty of places to explore. Please stay tuned and read the official trip write-up in November's newsletter for all the tantalizing details.

From a personal standpoint, I was able to scratch off a bucket list item by visiting the Fakahatchee Strand Preserve State Park in south Florida and seeing the rare ghost orchid (*Dendrophylax lindenii*). Did I mention the hot summer? Many thanks go to park volunteer Saul Friess, park botanist Mike Owen and park manager Renee Rau for a memorable trip. By the way, the orchids were accommodating photography subjects. Also found were a couple of *Sabatia* species among the array of interesting plants. Even though the extended drought in that area has dried up the swamp and caused great stress on its inhabitants, the Fakahatchee is still a remarkable place.

Although summer is one of my four favorite seasons, the cooler temperatures of fall will be a welcomed relief. As we all know, fall is the realm of my beloved bane, Asteraceae. I noticed that Eddi Minche has scheduled a fine assortment of fall-flower-related trips, including a workshop, for the upcoming months. No longer will I have an excuse for an aster-deficient noosphere.

Fall is also prime time for gentians, of which Georgia has a wide variety of species. I always look forward to re-visiting areas around Track Rock Gap and Brasstown Bald looking for *Gentiana decora*, *Gentianella quinquefolia* and the rare *Gentianopsis crinita*.

PLEASE PLAN TO ATTEND THE ANNUAL MEETING (11:30 AM, October 1, 2011 at the Gwinnett Environmental and Heritage Center in Buford). See page 6 for details and directions.

From the good news department, Parrie Pinyan recently reported that her treatments are having a very positive effect. We will keep her in our thoughts and look forward to seeing her on the trail soon.

Have a wonderful autumn.

Jim Drake

James Powers took this month's photo of *Lonicera sempervirens* during the 2011 Pilgrimage. Also known as Carolina honeysuckle and sometimes thought of as a spring wildflower, this plant blooms profusely all summer and well into the fall in my back yard to the delight of hummingbirds.

Help Stop Threat to Sosebee Cove

We have a confirmed report of *Ranunculus ficaria* (now moved to *Ficaria verna*, but I learned to hate this one as *R. ficaria* so I stick with that), which goes by the common name of buttercup fig or lesser celandine, in Sosebee Cove in the Chattahoochee National Forest. This is a very aggressive species that could quickly overwhelm Sosebee Cove and potentially invade other botanically rich areas nearby such as the Coosa Bald Research Natural Area. This species emerges early and can blanket the ground and exclude native wildflowers. Several years ago, while conducting a survey along the Mad River in Ohio, I walked about a quarter mile of floodplain that was nothing but *R. ficaria* from toe of slope to river's edge (5 to 10 acres of botanical wasteland). We are going to work with the Chattahoochee NF to set up a workday sometime around the end of March or the first of April (very early by definition at the elevation and aspect of Sosebee Cove). You can get additional information on this species at http://www.nps.gov/plants/alien/fact/rafi1.htm. Please try and make plans to join me in the first attempt at eradication - we go in with high hopes, but this will likely be a multi-year effort.

Rich Reaves

Book Review

Lady's Slippers of the Eastern United States

Jim Drake's booklet, *Lady's Slippers of the Eastern United States,* precedes and is much shorter than his book on gentians that I reviewed in the July BotSoc News; however, the 24-page booklet is equally as informative as the longer work. There are many fewer species of lady's slippers than gentians, but there is a mystique to lady's slippers, and to orchids in general, that makes reading about them quite compelling.

Some orchids are relatively common, like downy rattlesnake-plantain (*Goodyera pubescens*), and for that matter pink lady's slippers (*Cypripedium acaule*), but still I always go out of my way to see them. Drake's booklet lists and discusses all of the lady's slippers in the eastern United States, which includes six species with three variations in one species for a total of eight different plants. Of these eight, four can be found in Georgia: pink lady's slippers and three variations of yellow lady's slippers.

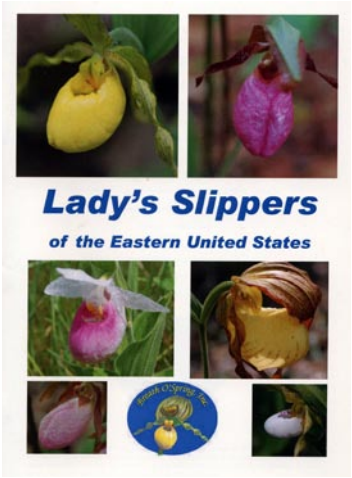
For each species, Drake gives full information and detailed photographs. His discussions here are not as carefully organized as in *Gentians of the Eastern United States*, but all of the information is there. For each species and variation, information about the physical characteristics of the plant, habitat, soil preferences and bloom time are provided along with other interesting facts.

For example, Drake notes that there is a white variation of pink lady's slippers as well as a species, white lady's slipper (*Cypripedium candidum*). From his booklet, I was able to understand the difference between the two. (The white *C. acaule* has the pouch with the slit down the middle while *C. candidum* has a hole near the top of the flower and has other features that separate it from the yellow lady's slippers that it resembles.)

This booklet also introduced me to one new lady's slipper, ram's head lady's slipper (*Cypripedium arietinum*). These plants grow from the northern Midwest, Minnesota and Wisconsin, east to New York and New England. These flowers have a slightly different physical appearance from other lady's slippers and have a deep purple coloration interspersed with white. They may require a trip north on my part.

The yellow lady's slippers are more familiar to Georgia BotSoc members since all but one of the four types grow in Georgia. Drake presents the taxonomic discussions about *Cypripedium parviflorum* and shows examples of the three variations.

Finally, I notice that two lady's slippers, white (*Cypripedium candidum*) and showy (*C. reginae*) do not grow in Georgia but do grow in neighboring states. White lady's slippers grow in north Alabama. Showy lady's slippers grow in Tennessee and North Carolina. It certainly makes me wonder if some don't occasionally sneak across the state line; there are lots of hiding places.



All in all, I was fascinated with this booklet. Trilliums and native orchids are two of my favorite types of wildflowers. Jim Drake provides a wealth of information and makes me want to go out in search of all eight lady's slippers that he discusses.

reviewed by Bob Linn

Drake, Jim. *Lady's Slippers of the Eastern United States*. Suwanee: Breath O' Spring, Inc., 2010. The booklet is available free to BotSoc members who buy *Gentians of the Eastern United States* ($24.99 plus shipping and sales tax, if sold in GA). A portion of the sales price is donated to to the Marie Mellinger Fund.

Addendum to Field Trip Report:

Taylor County Trilliums and Croomia, March 20, 2011

Croomia pauciflora were just emerging on the March 20, 2011 exploration of Dr. Mincey's estate on the Flint River in Taylor County. A few dedicated explorers returned to the site on May 4, 2011 to find a patch of greater than 50 stems - flowering and in fruit. Included here images taken during the May visit of Croomia flower (top) and fruit (below).

Ed McDowell, Bonaire

Erratum: The original trip report in the July 2011 BotSoc News failed to mention that Chris Inhulsen not only organized the March 20th Taylor County trip, he led the trip and he wrote the trip report.

An Unexpected Plant at the State Botanical Garden

Yellow corydalis (*Corydalis flavula*)

Hugh and Carol Nourse, long-time Georgia Botanical Society members and well known nature photographers, know the trails at the State Botanical Garden in Athens like the backs of their hands. So when, in mid-March of this year, they spied a strange looking plant growing in the Middle Oconee River floodplain, they were startled.

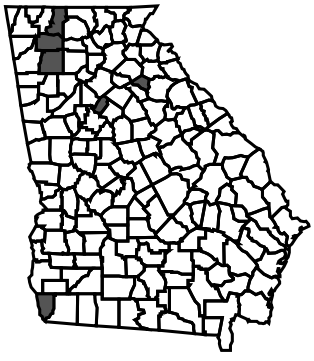
Hugh sent Linda Chafin, the Garden's Conservation Botanist and a BotSoc board member, an email describing the mystery plant and its yellow flowers: "It has three leaflets, each sliced into many segments. The yellow flower is small and two-lipped, only about ½ inch long." Linda replied: "Could it be *Corydalis flavula*??"

The next day, Hugh and Linda went plant-exploring, located the population, and confirmed that, yes, indeed, the mystery plant is *Corydalis flavula*! What an exciting find!

Hugh and Carol Nourse

Before the Nourses' find in Clarke County, yellow corydalis (*Corydalis flavula*) had been documented in four Georgia's counties (Bartow, Gordon, and Murray in northwest Georgia, and Seminole in southwest Georgia) with reports of a population in Rockdale County.

Corydalis flavula, also known as yellow corydalis, is very rare in Georgia – and is now flourishing in the State Botanical Garden's floodplain! Yellow corydalis is known throughout the eastern U.S. but is rare in states at the periphery of its range, including Georgia. The Georgia Department of Natural Resources ranks it as S1?, meaning that the species is probably critically imperiled in Georgia, but that there is not enough information to be sure. Before the Nourses' find in Clarke County, yellow corydalis had been documented in only four of Georgia's counties - Bartow, Gordon, and Murray in northwest Georgia, and Seminole in southwest Georgia - with reports of a population in Rockdale County. But the Garden's population is the first documented in the Piedmont.



Yellow corydalis is an annual in the bleeding-heart family. Readers who know squirrel-corn (*Dicentra canadensis*) and Dutchman's britches (*D. cucullaria*) would recognize the soft, blue-green leaves, dissected into many segments, and the spurred, bilaterally symmetrical flower. The flower of yellow corydalis has four petals, with two large outer petals enclosing two small inner petals, forming a tube that opens out into two lips. Nectar is produced in a rounded spur at the base of one of the larger petals, attracting the attention of long-tongued insects, especially bees and butterflies, who probe the spur for nectar. As they move from plant to plant, the insects move pollen from one flower to the next, ensuring cross-pollination.

The Garden's patch of yellow corydalis is big: at least 40 feet by 100 feet, almost wholly contained within a ten-acre area cleared of Chinese privet (*Ligustrum sinense*) for a U.S. Forest Service control experiment in 2006. Could this be a coincidence? "I have no doubt that the sudden appearance of this plant is related to the privet clearing," says Linda.

Discoveries

"How the seeds got here, we don't know. But the opened-up forest floor undoubtedly promoted their germination and the spread of the plants."

On hearing of the new species in the Chinese privet control areas, Jim Affolter, Director of Research at the Garden, said, "We have a new poster-child plant for our floodplain restoration project!" Garden staff plan to restore the Garden's floodplain forest, currently dominated by impenetrable thickets of Chinese privet, by removing the invasive shrubs and replacing them with native shrubs and herbs. This project will complement and extend the Forest Service research study that is comparing different eradication methods.

Yellow corydalis is always found in one of two situations: floodplains or areas underlain by mafic rock. As it happens, both these conditions are met in that part of the Botanical Garden. A streak of amphibolite runs downslope to the river, raising the pH of soils in the floodplain, now cleared of the death-grip of Chinese privet. Moist, circumneutral soils, an open understory, and observant volunteers - perfect conditions for the discovery of yellow corydalis.

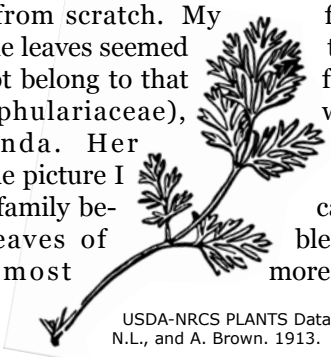
adapted from an article by Linda Chafin for "Garden News", the newsletter for the State Botanical Garden of Georgia, Volume 26/Number 3, 2011.

Hugh and Carol Nourse

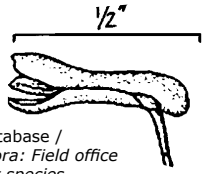
The Backstory

Sometimes it is interesting to see exactly how the discovery process works. Here are excerpts from Hugh and Carol's notes to Linda for her article:

For the past several years we have been walking 2 to 3 miles on the trails in the State Botanical Garden because it is so much more fun watching the passing of the seasons along the trails rather than on the streets near our home. During the winter months we search for the round lobed hepatica on the Orange Trail because we know it will be the first to bloom... One walk that is especially nice is the Orange Trail around to the Oconee River. We had avoided this path for several days because recent rains had turned the river trails into quagmires. But on Monday, March 14, we took this trail and were startled to see a yellow plant we had not seen before. It was dramatic to see the yellow pop up along the trail; we couldn't miss it. Carol thought it was just another European import. Still, Hugh wanted to find out what it was, so he found a small sample to take back home to try and identify (no camera with us at the time). I thought we had found it on the Orange Trail before the power line right of way, but it was actually in the area recently cleared of privet. In fact it was next to the sign discussing the experiment. It wilted badly on the way home because we did not have a baggie to store it in. When we got home I tried to identify it. It is often easier to identify a plant if you know the family rather than start from scratch. My first idea was that it looked like a bean because there seemed to be a banner and the leaves seemed to be in threes. A search through all of the beans made me see that the leaf did not belong to that family. Since the flower seemed two lipped, I also tried the scroph family (Scrophulariaceae), which yielded nothing. So I took a picture of the drying sample and sent it to Linda. Her first guess was *Corydalis flavula*, and she sent me a picture. The minute I saw the picture I knew that was the plant. I should have guessed bleeding heart family because of the structure of the leaves. I have always found the leaves of bleeding heart, Dutchman's breeches, and squirrel corn to be almost more striking than their flowers.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913.



USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species.*

Upcoming Field Trips

September 10 Saturday 10:00 AM Montezuma Bluffs Foray, Macon County

Description: A late summer hike to see ovate catchfly (*Silene ovata*) and rayless mock-goldenrod (*Brintonia discoidea*), and explore limestone bluffs and bottomlands along the Flint River.

Directions: From Macon, take I-75 south to exit 149, go south on GA Hwy 49 thru Marshallville, continue south ~5 mi, and just before Montezuma take a right at Crooks Landing boat ramp and wildlife observation sign (signage is inconspicuous; peach orchard fruit stand nearby). From southern GA, take I-75 exit 127, go west on GA Hwy 26 to Montezuma, take GA Hwy 49 north 1 mi to take boat ramp access road to left. **Meet at parking lot** about half way down steep hill on right (Crooks Landing Public Boat Ramp access road).

Walking: Moderate short walks, some bushwhacking, ~1 or 2 mi total.

Facilities: No facilities at site. Lodging and restaurants in Montezuma.

Bring: Hand lens, notebook, water, snacks, shoes with ankle support for wooded slopes and traipsing over vines. Bring picnic lunch or visit Yoder's Mennonite restaurant afterwards.

Leader: Tom Patrick 706-476-4541 (C) tom.patrick@dnr.state.ga.us

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September 17 Saturday 10:00 AM Asters, Asters, Asters ID Workshop at Berry College, Floyd County

Reservations required by Sept. 12
Please contact Richard or Teresa

Description: We will learn how to identify late summer flowers, with emphasis on the aster family (Asteraceae) or whatever is in bloom in September, using dissecting scopes and keys. After lunch, we will continue keying as long as folks want, possibly followed by a wildflower walk, if desired and weather permitting. **Reservations required.**

Directions: Take I-75 to exit 290 (GA 20). Follow GA 20 and US 411 to Rome. At first traffic light (GA Loop 1) turn right, go to US 27, turn right. At next traffic light, turn left into the main entrance to Berry College. Pass guard house, go ¾ way around the circle; turn right between Hermann Hall and the Plant Sciences Building. Take first left, park in lot on right anywhere not marked "F/S." Enter via back door on left side and follow BotSoc signs. **Meet in Room 147, Plant Sciences Bldg, Berry College.**

Facilities: Yes

Lunch: Bring to eat outside, weather permitting.

Bring: Radford's Flora of the Carolinas (if you have it).

Leader(s): Richard & Teresa Ware 706-232-3435 (H) 706-766-5143 (C) gabotany@comcast.net

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September 24 Saturday 10:00 AM Stamp Creek Road/Pine Log WMA, Bartow County

Description: This is a new trip location and is offered primarily to see and learn to ID fall composites, including several of those DYC's ("Dang" Yellow Composites). Several different species of native *Helianthus* and other fall bloomers grow along Stamp Creek Road between U. S. 411 and Georgia 20 in eastern Bartow County. Roadside *Spiranthes* orchids should be in bloom then also. Copies of the Weakley key for *Helianthus* will be provided to participants.

Directions: Take I-75 exit #293, US 411 north of Cartersville, and go northeast on 411 towards White for 2.2 mi. **Meet behind the Dollar General Store** on the left (north side) of 411, across from U.S. Post Office.

Lunch: Bring lunch, can eat in cars as there is no real hiking on this trip.

Walking: Very little, this is mostly easy roadside botanizing.

Facilities: Citgo, next to Dollar General store on 411. Plenty right at the next I-75 exit south of 411 at Georgia 20, which is also on the way out from the field trip. None along Stamp Creek Road.

Leaders: Charles Hunter 770-433-8117 (H) 770-843-8117 (C) 2csh@bellsouth.net; Richard Ware 706-232-3435 (H)

October 1 Saturday 11:30 AM Georgia Botancial Society Annual Meeting, Gwinnett County

Description: The Georgia Botanical Society Annual full membership meeting will be held in Classroom 032 of the Gwinnett Environmental and Heritage Center from 11:30 AM to 1:00 PM.

Directions: If traveling north on I-85, take exit 111. Stay in the rightmost of the two left turn lanes to turn left onto Lawrenceville-Suwanee Rd (GA 317). At 2nd traffic light (<0.1 mi), turn right onto Sawmill Rd, go 1.1 mi to light (road takes sharp left just before the light). Turn right onto Satellite Blvd, travel 2.3 mi to turn right onto Woodward Mill Rd at light. Travel 0.9 mi (road takes sharp left turn just after crossing over interstate bridge) to turn right into Gwinnett Environmental and Heritage Center. Parking is to the left of the building. **Meeting is in Classroom 032.** If traveling south on I-85, take exit 111 and turn right. Go <0.1 mi to traffic light to turn right onto Sawmill Rd. Follow directions above. Gwinnett Environmental and Heritage Center 2020 Clean Water Dr. Buford, Georgia 30519.

Bring: Lunch to eat outdoors after the meeting. Afterwards we will walk along one of the easy trails at the Center.

Upcoming Field Trips

October 10 Monday 10:00 AM Black Creek Natural Area, Taylor County

Description: This exploratory trip to a fairly new Natural Area in the sandhills of West Central Georgia will target sandhills golden-aster (*Pityopsis pinifolia*) and Pickering's dawnflower (*Stylisma pickeringii* var. *pickeringii*), both protected plants. We may also find sandhill specialties like Carolina pineland-cress (*Warea cuneifolia*). Fall is the best wildflower season in the sandhills, so many common species, especially members of the aster family, should be in flower. Along Black Creek, we'll enter the edge of a large bog containing many sweet pitcher plants (*Sarracenia rubra*). Black Creek Natural Area is managed with prescribed fire and we will be able to see the impact of recent fires on sandhill plants.

Directions: Take US 19 south to Butler. Pass through the town on US 19 to the light at the intersection of US 19 and GA 96. Turn right onto GA 96 and go ~2 mi until you see a large gray and white sign that reads 'Taylor County Industrial Park and Airport' at Industrial Road. Turn right onto Industrial Rd and immediately turn left onto a dirt road with a kiosk in front of you. Park at the kiosk. We will carpool from this site (Fall Line Sandhills Natural Area) to Black Creek Natural Area. If you are coming from the south, take US 19 north to the intersection with GA 96 and turn left and then use the directions above. Black Creek Natural Area has limited parking and deep sand roads. We will carpool from the Fall Line Sandhills Natural Area parking lot using the vehicles with highest clearance.

Facilities: None.

Walking: We'll be walking on old sand logging roads. Walking will be fairly easy, but the sand will be deep at times and it could be very hot. We may walk into the edge of a bog, which will be mucky. Total walking for the day shouldn't exceed 3 miles.

Bring: Lunch (we'll try to eat near the vehicles, but be prepared to carry your food. A picnic blanket or some other cover to sit on is recommended), hat, bug spray, hand lens, water and food. A little bit of curiosity wouldn't hurt.

Leader: Hal Massie 478-836-4907 (H) 478-957-6095 (C) day of hike, reception iffy massiefarm@aol.com

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October 22 Saturday 10:00 AM Ocmulgee Bottom Land, Houston County

Description: This will be our 2nd visit to this newest Natural Area in the stable of DNR managed/owned conservation areas. The 160 acre area consists of a wide power line ROW filled with many fall flowering plants and a typical coastal plain swamp bottomland bordering ~1 mi along Echeconnee Creek. Look at http://www.georgiawildlife.com/maps/hunting/region4 and select the topo for the Echeconnee Creek Tract from the Echeconnee Natural Area box. In the power line area we expect to see blue curls (*Trichostema dichotomum*), Georgia savory (*Clinopodium georgianum*), sand jointweed (*Polygonella articulate*), purple false foxglove (*Agalinis fasciculata*), and much more embedded in the sea of goldenrods. We will then venture into the low boggy area and look for the fragrant lady's tresses (*Spiranthes odorata*). We will return to the parking area and the shade for lunch. Optional trip, if there is interest, is a caravan to Oaky Woods (~6 mi) and poke around a couple of the prairies. There is certain to be some interesting plants in flower.

Directions: From I-75 south through Macon - do NOT take I-475 - but use I-75 exit 160A Warner Robins. Proceed south on Pio Nono Ave/US41/GA247 to continue south on GA247/US129 and turn left onto Feagin Rd (~2.5 mi past Macon Airport; if you cross the bridge over Echeconnee Creek, you have gone too far). Turn onto Feagin Rd then, in ~500 feet, onto St Clara Dr. Pass under the power lines and the entrance will be ~3000 ft on your right. From the south on GA247/US129, Feagin Road will be the 1st road on the right after crossing Echeconnee Creek. **Meet at the Echeconnee Natural Area**.

Facilities: None at site; a Flash Foods on GA247 just south of the Echeconnee Creek bridge.

Walking: Easy. May get feet wet in the bottomland swamp.

Bring: Lunch to eat at the site, camera, hand lens, binoculars, bug spray, and water.

Leader: Ed McDowell ed.mcdowell@cox.net 478.396.8901(C) Don't hesitate to call with questions.

Don't Forget the Georgia Botancial Society Annual Meeting

saturday october 1, 2011 11:30 am to 1:00 pm

Classroom 032

gwinnett environmental and heritage center

2020 clean water drive buford, georgia 30519

Upcoming Field Trips

October 29 Saturday 10:00 AM Fall Color / Tree ID Walk Brasstown Bald, Towns County

Description: At 4,784 feet, Brasstown Bald is Georgia's highest mountain. From its summit you can take in breathtaking views of four states. On a clear day, you may see as far south as Atlanta. In 1986, 11,823 acres within the Chattahoochee National Forest were designated by Congress as the Brasstown Wilderness. Since then, an additional 1,152 acres have been added. This is the southernmost habitat for many northern plant and animal species. The old wagon train road to Young Harris leads east then north into the fantastic "cloud forest" of northern hardwoods on the north side of the mountain. The huge, old yellow birch are festooned with old-man's beard lichen because of the continuous moisture from cloud condensation. As one ascends, the trees gradually get shorter. One soon enters a dwarfed red oak and white oak forest where the trees are very old and twisted. The top is a shrub bald with unique mountaintop species such as mountain ash. Additionally, we hope to see pin cherry, striped and mountain maple, and late wildflowers, such as gentians.

Directions: One of many different routes is to take US 19/GA 400 north from Atlanta and continue past Dahlonega on US 19 toward Blairsville. Go past Vogel State Park. DO NOT turn left on GA 180 just past the park but continue a few miles further to turn right on GA 180 east toward Brasstown Bald. Continue east on GA 180 and turn left (north) on GA 180 Spur to parking lot on the mountain. **Meet at end of parking lot** near where trail starts up to the summit. Parking fee required ($4).

Bring: Lunch to eat at top of mountain at visitor's center, water, $4 parking fee.

Walking: Trail to summit is 0.6 mi one way and steep (moderate to strenuous). We'll walk a short distance on Wagon Train Trail (easy to moderate). Total walking distance ~2 to 2.5 mi. A shuttle is usually available to take folks to the summit (for an additional fee). Those choosing this option with the Wagon Train Trail, will walk ~1.2 mi, mostly downhill.

Facilities: Yes, at meeting site and lunch site.

Leaders: Richard & Teresa Ware 706-232-3435 (H) 706-766-5143 (C) gabotany@comcast.net

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November 11 Friday 10:00 AM Appalachian Trail (AT) Walk, Unicoi Gap Loop, White County

Description: A chance for a walk along the AT in early fall. This outing is mostly hike but also part scavenger hunt. That last bit about scavenging refers to seeking out plants of interest -- blooms, seeds, fruit or color. Although I'm familiar with the route, I'm not as familiar with what plant life may lurk among the mature hardwood forests we'll travel through. Late to the party asters maybe, but what else? Come along and we'll see. If nothing else we can enjoy each others company and have a nice hike. The route begins at the Unicoi Gap trailhead. From there we'll head north on the AT to join the Rocky Trail. At that junction we'll slab around up and down on this pleasant forest trail to emerge at a gravel road that we'll travel briefly on to Indian Grave Gap. At this point we'll rejoin the AT and climb steeply up to Rocky Mountain where weather permitting we can have lunch with a jaw dropping view. Following this stop, we'll return to our starting point via the AT, a distance of ~5.5 mi total, with the out portion and return portion almost equal (+/- 2.7 mi each way). I predict that at the least we'll still have lingering color in the treetops, cooler temperatures and that the spectacular view from the top of Rocky will be worth the climb. This hike has some steep portions, both up and down, especially the return portion along the AT. Our pace will be leisurely and we'll take breaks as needed.

Directions: From the Chattahoochee River bridge in Helen, travel ~9.5 mi north on GA 75 to Unicoi Gap, a large gravelled parking lot on the right (east) side of the highway. This gap is marked with a rectangular green hiker sign as well as a sign "Unicoi Gap". **Meet in parking lot.**

Bring: Raingear, water, lunch.

Facilities: None beyond Helen,GA

Leader: Eddi Minche 678-313-2582 (C), reception iffy day of hike eddmin@gmail.com

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COMING IN THE NOVEMBER BOTSOC NEWS:

November 19	Saturday	Tree ID Walk with Richard Ware
December 3	Saturday	BotSoc Holiday Party at Jim Drake's house

Field Trip Report

Cloudland Canyon State Park

April 10, 2011

Dade County

The day started hazy and cool at ever-popular Cloudland Canyon State Park. A relatively small group gathered at the overlook parking lot to begin the 1,000 ft descent into the deep gorge located in Georgia's far northwest corner. Cloudland Canyon has a geologically unique sandstone cap over limestone outcrop. These geologic characteristics coupled with frequent rainfall events and the dampness from Sitton's Gulch Creek and waterfalls provides ideal habitat for plentiful and rare wildflowers. Rich Reaves led the walk that began at the overlook trail, continued to the upper and lower waterfalls, and took the 2.5 mile Sitton's Gulch Trail that parallels Sitton's Gulch Creek.

The forested overlook trail traverses the upper edge of the canyon beneath Virginia pine (*Pinus virginiana*), flowering dogwood (*Cornus florida*), wild black cherry (*Prunus serotina*), and American holly (*Ilex opaca*). At this higher elevation, the wildflowers were sparsely scattered and sometimes hard to spot. The group did observe several common bluets (*Houstonia caerulea*) interspersed amongst common blue violets (*Viola sororia*) and solitary pussytoes (*Antennaria solitaria*).

We then took the stairs down to the lower and upper waterfalls passing several wet seep and rock face habitats sprinkled with jack-in-the pulpits (*Arisaema tryphyllum*), maidenhair ferns (*Adiantum pedatum*), rue anemone (*Thalictrum thalictroides*), and wood violets (*Viola palmata*). As we descended, halberd violets (*V. hastata*), sweet white violets (*V. blanda*), jack-in-the-pulpit, doll's eyes (*Actea pachypoda*), foam flower (*Tiarella cordifolia*), star chickweed (*Stellaria pubera*) and umbrella leaf magnolia (*Magnolia tripetala*) became more plentiful and began to blanket the landscape.

Both the upper and lower falls were at full pool after abundant spring rains. The banks along the trail to the lower falls were covered in Solomon's plume (*Maianthemum racemosum*) and the wildflowers were particularly prolific. It was along this trail where the group spotted the first sulcate trillium (*Trillium sulcatum*) of the trip. Jack-in-the-pulpit and yellow mandarin (*Prosartes lanuginosa*) were abundant, along with the rare spotted mandarin (*P. maculata*) - a flower rarely seen in Georgia and one of the many highlights of the day.

The group took a quick lunch break next to the waterfalls before beginning Sitton's Gulch Trail. By mid-day the temperatures had warmed to the upper-70's and the elevated humidity contributed to balmy afternoon conditions. At the beginning of the trail the group stopped to admire blue cohosh (*Caulophyllum thalictroides*), Carolina spring beauty (*Claytonia caroliniana*), and long-spurred violets (*Viola rostrata*). Overall, we observed seven species of violets along the walk - all in full bloom and in some areas completely covering the forest floor. A truly beautiful sight.

As we continued along Sitton's Gulch Trail, purple toadshade trillium (*Trillium cuneatum*) and decumbent trillium (*T. decumbens*) became predominate on the forest floor. Their bright green, mottled foliage and dark purple-maroon flowers were easy to spot amongst the leaf litter; in some areas the toadshades were over six inches high. The sweet shrub (*Calycanthus floridanus*), large-flower bellwort (*Uvularia grandiflora*), and oak leaf hydrangea (*Hydrangea quercifolia*) were also observed and in full bloom. Towards the bottom of the canyon the group saw several crested-dwarf irises (*Iris cristata*), another highlight of the day. Rich had pointed out iris foliage at higher elevations and thought the flower might be past peak; however, the spectacular purple blooms were hard to miss along the trail in the lower canyon. We also walked through a large patch of May apples (*Podophyllum peltatum*). Most were past blooming, but the group did spot a few of the large white flowers that curiously hang under the large, peltate leaves.

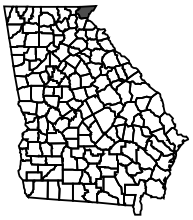
At the bottom on the canyon, the terrain became relatively flat and the conditions were much drier and hotter. Wild geranium (*Geranium maculatum*), blue phlox (*Phlox divaricata*), fernleaf phacelia (*Phacelia bipinnatifida*) and stonecrop (*Sedum ternatum*) were quite prevalent. Here the group took a side loop from the main trail in search of the coveted dwarf larkspur (*Delphinium tricorne*). After some rummaging around, Anita Reaves cleverly spotted both a purple and white individual. Curiously, range-wide, the white variation is not as common as the purple, but in Georgia the purple variety is much less common. The group enjoyed a quick photo opportunity.

By mid-afternoon the group reached the lower parking lot and the end of the trail. Before caravanning back to the top, Rich led one last side trip down a heavily-vegetated trail adjacent to the parking lot. The trail wound back towards a cave where cold air wafted out and cooled the hot and sweaty group. Rich was hoping to find a blooming bladdernut bush (*Staphylea trifolia*), but unfortunately the plant was past bloom. However, the group enjoyed the cool conditions and observed both a roosting and flying bat, both believed to be the tri-colored bat (*Perimyotis subflavus*; formerly known as *Pipistrellus subflavus*, the Eastern pipistrelle).

Cloudland Canyon once again did not disappoint. The day was jam-packed with a large variety of flowers that became more abundant and beautiful while descending the 1,000+ feet. The main highlights included the rare spotted mandarin, the sulcate trillium, the crested-dwarf iris and the larkspur. Many thanks to Rich Reaves for orchestrating and leading a well-informed walk. I look forward to next year's trip.

Sara Kent, Atlanta

Field Trip Report

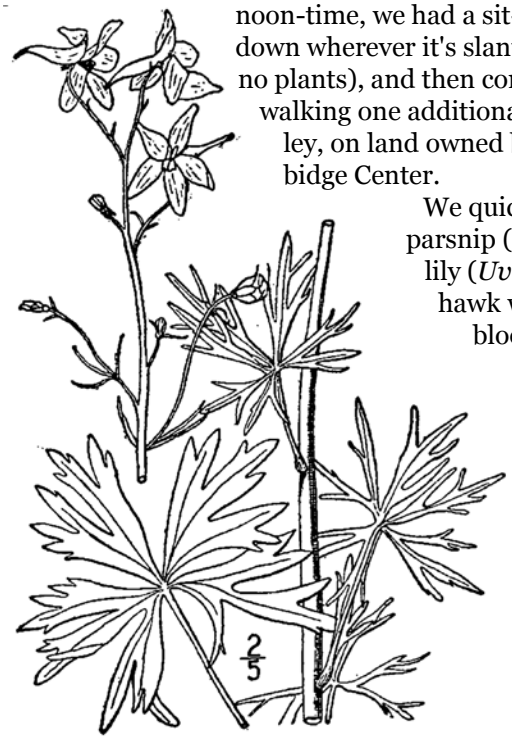

Rabun County

Grassy Ridge, Till Ridge Cove & the Hambidge Center

April 23, 2011

Fifteen Bot Soccers met in Dillard, Georgia on a chilly but dry morning in late April. We carpooled to Patterson Gap (c. 3500 feet), off Betty's Creek Road in northern Rabun County. From there we walked along Grassy Trail in a westerly direction, reaching beautiful Till Ridge Cove in about a mile. The walk was co-led by Linda Chafin and Brooks Franklin. Fortunately, Brooks lives in the area beyond Betty's Creek Valley. By fortunately, I mean that Brooks was able to scout the trail the day before. Had he not done so, we would have encountered a large number of trees blown across the trail by storms earlier in the week, and would have been forced to find an alternate hike for the morning. As it turned out, on Saturday morning Brooks and myself met early at the gap, and his 18-inch chain saw made short order of hardwood trunks, branches and limbs. The walk was on!

Following our return to the parking area at noon-time, we had a sit-down lunch (i.e. sit down wherever it's slanted right and there are no plants), and then completed the day by walking one additional trail back in the valley, on land owned by the nearby Hambidge Center.


dwarf larkspur (*Delphinium tricorne*)

We quickly picked up meadow parsnip (*Thaspium* sp.), strawlily (*Uvularia sessilifolia*), hawk weed (*Hieracium* sp.), bloodroot (*Sanguinaria canadensis*) in fruit, Solomon's plume (*Maianthemum racemosum*), and meadow rue (*Thalictrum dioicum*). False hellebore (*Veratrum viride*) started appearing in numbers, with its highly poisonous roots and lettuce-like leaves. Carolina rhododendron (*Rhododendron carolinianum*) was a nice surprise, which Linda used as a teaching point in distinguishing it from our more common species of rhododendron, as well as from the abundant mountain laurel.

Still early in the walk we encountered buffalo nut (*Pyrularia pubera*), a funky-looking parasite living off roots of nearby hardwoods. Round-leaved violet (*Viola rotundifolia*) and shining club moss (*Huperzia lucidula*) led soon to our first specimen of mountain sweet pepperbush (*Clethra acuminata*), always an exciting woody plant. Then we studied rue anemone (*Thalictrum thalictroides*), a monoecious plant related to the previously spotted dioecious meadow rue.

Solomon's seal (*Polygonatum biflorum*), featherbells (*Stenanthium gramineum*), spikenard (*Aralia racemosa*), and tassel rue (*Trautvetteria caroliniensis*) brought us to the climactic turnaround point at Till Ridge Cove. The usual several hundred large-flowered trillium (*Trillium grandiflorum*) at this cove were post-peak but still a sight to behold. Showy orchis (*Galearis spectabilis*) was found in several locations here. Blue cohosh (*Caulophyllum thalictroides*) was pre-peak, and yellow mandarin was a good find in the cove, as was Clinton's lily (*Clintonia umbellulata*). But to top it all off, Linda located a single pre-flowered specimen of larkspur (*Delphinium* sp.), about 12 feet off the trail down a steep incline. After some civil dialogue the species came out to be dwarf larkspur (*D. tricorne*) rather than tall larkspur (*D. exaltatum*). This is a rare find south of the NC border, and we qualified for that designation by about four miles!

We were indebted to Linda not only for the *Delphinium*, but for all her gold-standard botanical knowledge and peripatetic energy. Brooks, too, is an entertaining woodsman/farmer, an adept "chainsaw-man" and a gracious host (including post-walk refreshments back at his house).

Joel Hitt, Lawrenceville

Illustration of dwarf larkspur from USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913.

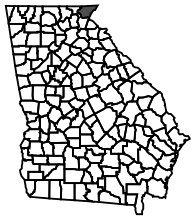
Field Trip Report

Rabun Bald by way of Alex Gap

May 7, 2011

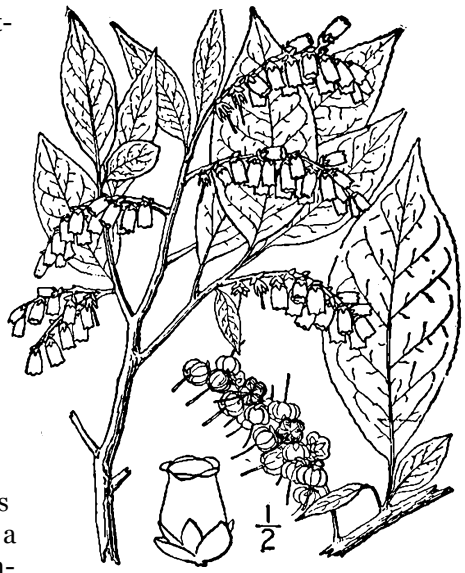
A small but eager group met our leader, Ben Cash, in Alex Gap on the west flank of Flint Knob on a beautiful sunny May morning. As many of you know, Ben specializes in hiking Georgia's highest elevation knobs and peaks and knows the flora of those communities well. Avoiding the notoriously steep ascent of Rabun Bald on the Three Forks Trail, Ben led us on a mostly moderate hike to Georgia's second highest mountaintop on the little-used Alex Gap trail and a short portion of the Bartram Trail. These trails make a wonderful approach to Rabun Bald, taking hikers on a roller coaster up and over two knobs. No sooner are you tired of walking uphill than you crest a knob and head back downhill. Rest stops, disguised as botanical moments, were frequent and offered breathtaking views of the surrounding ridges and valleys. Along the trail, we saw a number of orchids, some flowering, some vegetative: pink ladies-slipper (*Cypripedium acaule*), downy rattlesnake plantain (*Goodyera repens*), and showy orchis (*Galearis spectabilis*). Flowering trilliums were also abundant, especially Catesby's trillium (*Trillium catesbaei*) and the white-flowering form of wake-robin (*T. erectum*). The top of Flint Knob featured a large patch of flowering black chokeberry (*Aronia melanocarpa*), seen in Georgia only at higher elevations. On the second knob we encountered a surprisingly large specimen of serviceberry (*Amelanchier arborea*) with a 15 inch diameter and its crown well up in the canopy. Wild sarsaparilla (*Aralia nudicaulis*), just coming into bloom, was also flourishing and, according to Ben, present in greater numbers than previous years. Rock harlequin (*Capnoides sempervirens*), another high elevation species, was just emerging from the leaf litter and was a long way from flowering.

The final stretch to the top of the mountain (0.9 miles on the Bartram Trail) leads through a high elevation montane oak forest with picturesque stunted and gnarled oaks. Here we were treated to a striped maple (*Acer pennsylvanicum*) with two trunks which are 11 and 7.6 inches in diameter – quite large for what is usually a mid- or understory plant. Nearing the top of Rabun Bald, we saw a number of other Georgia high-elevation specialties. Mountain fetterbush (*Eubotryus recurva* or *Leucothoe recurva*) greeted us on the final ridge up to the top of the mountain. This interesting heath family shrub, with distinctive one-sided flowering racemes, is a southern Appalachian endemic found only in heath balds, high elevation ridge forests, and montane granitic domes. In Georgia it occurs only in Rabun County and is on Georgia DNR's Special Concern Plant List. Minnie bush (*Menzizia pilosa*) is abundant along the trail but often just blends in with the short, dense growth of sweet azaleas (*Rhododendron arborescens*). Although the latter was not flowering, Ben pointed out how the crushed foliage smells sweetly like the flowers do.



Rabun County

On the top of the mountain, we saw bristly locust (*Robinia hispida*), growing around the base of the tower, along with dwarf grey willow (*Salix humilis*) and American mountain-ash (*Sorbus americana*), a common northern species which reaches its southern extent on only a few north Georgia mountaintops and is listed in Georgia as Special Concern. From the tower platform, we had a 360-degree view of wave upon wave of blue ridges rippling across Georgia, South Carolina, and North Carolina.



Mountain fetterbush (*Eubotryus recurva)*

As we returned to our cars, two members of our group, Jane and Wardine, both new to the Botanical Society and part-time residents of Sky Valley, offered to take us on a side trip in Sky Valley. At the end of a long and winding road, they stopped at a small, seepy cove deep in the mountains. Here we saw lots of Vasey's trilliums (*Trillium vaseyi*) and – surprise! – dozens of vegetative columbo (*Frasera caroliniensis*) and seven or eight putty root orchids (*Aplectrum hyemale*) in flower! Welcome to Bot Soc, Jane and Wardine, and thanks for the special, end-of-the-day treat! Thanks also to Ben Cash for a great day in the mountains!

Linda Chafin, Athens

Illustration of mountain fetterbush from USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913.

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