



Big Dukes Pond WMA Field Trip

Bot Soccers showed they were up for a real adventure in visiting this 1800-acre Carolina Bay, the day after Hurricane Hermine dumped 6 inches of rain in Jenkins County, GA, where it is located. A Carolina Bay is a depression wetland, usually fed only by rainwater. They have mystified people since aerial photography revealed that there are thousands across the Coastal Plain, from Georgia to Delaware, and they all share the same elliptical egg-shape, oriented on a northwest to southeast axis. Theories about their formation range from meteor collisions - a theory that has real support - to underwater fish spawning pools - this one is a little crazier. Generally it is accepted that Carolina Bays began as regular depressions, no matter what the origination, and were excavated by prevailing winds across a sandy landscape.

A Carolina Bay is named for the evergreen "bay-leaf" vegetation within, not for the fact that it is a wetland. Truthfully, the plant communities of Carolina Bays are highly variable dependent on hydrology, depth, size, and fire ecology. A few contain open water lakes, some are impenetrable pocosins (shrubby wetlands), some have cypress-gum forest, while others have marshes or savanna. Big Dukes Pond has good examples of pond cypress swamp, pond cypress savanna, slash pine-mixed hardwoods, and bay swamp. The margin of the wetland is a high sand rim, with xeric longleaf pine-oak scrub sandhills vegetation.



Fruits of snowbell (*Styrax grandifolius*); photo by Debo Boddiford

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President's Perspective



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I don't know about you, but the high temperatures of summer have lasted way too long. I had a busy September with several field trips. Much as I enjoyed each one of the trips, I would have appreciated cooler temperatures for all of them. One of my non-BotSoc trips was to the Atlanta Botanical Garden featuring 20 works of art using blown glass by Dale Chihuly beautifully situated throughout the garden. If you have not already seen this, I highly recommend it.

The cypress trees in the center of Big Dukes Pond near the wood stork rookery seemed enormous and may be the biggest I've ever seen. Lisa Kruse also showed us one of the sites she is monitoring for the state-listed *Oxypolis canbyi* (Canby's dropwort). It is good to see the many ways BotSoc members apply their knowledge and interest in plants to conservation and community-based projects. It is also good to see people outside of BotSoc expressing an interest in native plants and natural habitats. The City Manager for Dublin has asked for advice on how to promote a wildflower meadow in an old African-American cemetery instead of regular mowing. If you are willing and able to help or provide advice for him, please contact me.

For years, I have avoided tackling grasses, sedges and rushes as being too hard, but I decided it is time I stopped being such a coward. Richard Carter's sedge workshop weekend was extremely helpful, providing a combination of field and lab identification. This was the first time I had done very much with a dissecting microscope, and I was truly awed by just how beautiful the tiny structures were and surprised that their microscopic distinctive shapes made it just as easy to identify using a taxonomic key as identifying other plants using macroscopic characteristics. I can now confidently encourage others to learn the grasses.

One of my next challenges as a forest steward is to start some understory restoration projects, and Walter Bland's workshop on creating meadows was a great way to start. Two tips were especially useful: finding a relatively undisturbed local site to help decide what species to plant and assessing the site by comparing the ration of desirable to undesirable species in order to decide what actions to take. Many of us are involved in projects that involve protecting, improving, or creating habitats using native plants in lots of situations from small urban plots to expanses of relatively natural communities, from local cemeteries or nature centers to the Appalachian Trail. I find it empowering to go to workshops that help me learn how to use the knowledge I have about plants and plant communities in caring for the environment.

Heather Brasell

Georgia Botanical Society's 2017 Pilgrimage

Make your plans now to join us in Chattanooga, TN for the 2017 Spring Pilgrimage scheduled for Friday, April 7 through Sunday, April 9, 2017! Field trips are being planned that focus on regional and local natural sites within various mountain and plateau environments in northern Georgia and eastern Tennessee. The field trip planning team is hard at work defining a robust schedule of over 25 field trips to sites in the local area or within a reasonable drive time from the city. Some sites may be familiar to you and others may be new. Field trips will be led by BotSoc members as well as native plant specialists from Tennessee. In addition, venues have been obtained for a Friday night social and a Saturday banquet in south Chattanooga. The banquet will be held in the Roosevelt Ballroom of the historic Chattanooga Choo Choo Hotel. There is much more information to come with details of the plans that are being finalized and pilgrimage registration procedures that are being developed.

We are pleased to inform you that we have secured blocks of rooms at three hotels in Lookout Valley west of the city just off I-24 at exit 174 with a total of 85 rooms that are available at discounted group rates. The hotels are ready to process reservations now. Following is a list of the hotels and some details for registration purposes.

Clarion Inn Lookout Mountain - 50 rooms @ \$89.99 per night + tax
Address: 3641 Cummings Hwy, Chattanooga, TN 37419
Reservations phone number : [423-821-5500](tel:423-821-5500)
Rooms are double occupancy with either one king or two queen sized beds
Mention group name "Georgia Botanical Society" to get the BotSoc rate
Reservations must be made before February 6, 2017 to receive the BotSoc rate

Country Inn and Suites Lookout Mountain – 25 rooms @ \$89 per night + tax
Address: 3725 Modern Industries Parkway , Chattanooga, TN 37419
Reservations Phone Number: [423-825-6100](tel:423-825-6100)
Rooms are double occupancy with two queen beds
Mention "Georgia Botanical Society" to get the BotSoc group rate
Reservations must be made before March 4, 2017 to receive the BotSoc rate

Fairfield Inn and Suites Lookout Mountain – 10 rooms @ \$119 per night + tax
Address: 40 Starview Lane, Chattanooga, TN 37419
Online booking for BotSoc members is available via this [link](#)
Reservations Phone Number: [423-664-4222](tel:423-664-4222)
Mention group code "GBS" to get the BotSoc rate
Reservations must be made before March 17, 2017 to receive the BotSoc rate

All three hotels offer free parking, WI/FI and breakfast. Reservations may be scheduled for dates up to 3 days before and/or 3 days after the 2017 Pilgrimage at the above rates, subject to availability. This is to allow for early arrivals and some extra time for BotSoc members who wish to explore the Chattanooga area.

We suggest that you book your hotel reservations early to insure that you obtain your preferred hotel and to avoid the expiration dates for booking at the group rates after the first of the year. There is no risk to do so. You will be asked for credit card information to hold the booking; however, you will not be charged until you check out. Cancellations will be honored for changes in plans, with sufficient notice. Book now with the pilgrimage hotels to take advantage of substantial savings. If you experience any issues with your booking, please contact Mitchell Kent via email (mkent423@gmail.com) or phone (423-580-8380). We look forward to seeing you there!



Big Duke Pond WMA Field Trip (cont'd)

Lisa Kruse led the hike and was questioning her sanity in bringing folks to a potentially flooded swamp but sharing this special wilderness was worth a little anxiety. The weather prior to the hurricane however was so dry that Big Dukes slurped the rain like a gift of milk to a starved kitten, leaving no standing water. We enjoyed a beautiful hike.

The Georgia Department of Natural Resources, Wildlife Resources Division (GA DNR) is responsible for management of Big Dukes Pond Wildlife Management Area, which is about 1,692 acres and encompasses most of the Carolina bay. The start of the walk was through the shallower side of the bay to see old-growth cypress savanna. A true savanna is a grassland with scattered trees stuck in it. The savanna at Big Dukes is dominated by Walter's sedge (*Carex striata*), with horned beak-sedge (*Rhynchospora corniculata*), blue sedge (*Carex glauca*), maidencane (*Panicum hemitomon*), and giant silver plume grass (*Saccharum giganteum*) also abundant. We saw several other cool grasses such as wrinkled joint-grass (*Coleorachis rugosa*), love grass (*Eragrostis* sp.) and witch grasses (*Dichanthelium* sp.). The trees are pond cypress (*Taxodium distichum*), swamp tupelo (*Nyssa biflora*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), and lots and lots of pine—too many. Big Dukes Pond has been impacted in the past by intensive timber management, ditching and draining of the bay, and fire suppression. These have contributed to unnaturally high levels of pine in the cypress savanna.

We visited a 10-acre, small-scale cypress-savanna restoration project funded by US Fish and Wildlife Service for GA DNR, and coordinated by Lisa. Lisa considers it a band-aid measure until true ecological restoration can be implemented, but removal of pine has opened up the canopy to recreate the savanna vegetation structure. This area is home to federally endangered *Oxypolis canbyi* (Canby's dropwort), which we saw in fruit. Herbaceous species such as Canby's dropwort depend on an open canopy to thrive in the savanna. We also saw myrtle-leaf St. John's-wort



Hypericum myrtifolium; photo by Debo Boddiford

(*Hypericum myrtifolium*), rosy camphor-weed (*Pluchea rosea*), narrow-leaf swamp loosestrife (*Ludwigia linearis*), pale meadow-beauty (*Rhexia mariana*) and myrtle-leaf holly (*Ilex myrtifolia*), not herbaceous but beautiful with striking fruit, orange on its way to red later in the season.

Big Duke Pond WMA Field Trip (cont'd)

For a drastic contrast with the savanna, we then trekked into a deep portion of the bay. In an unfragmented landscape, deep areas would not burn as frequently as shallower areas, resulting in a forested wetland. The forest we visited was cypress-gum forest, and a few of the trees were ancient with gigantic knees and gaping buttresses. The forest is dark and mossy, and the spongy peat made walking cumbersome. In the deepest portion, even the cypress have a hard time taking root, and we entered into a magical opening surrounded by old cypress hung in carpets of Spanish moss (*Tillandsia usneoides*), with sunlight trickling onto the fuchsia, crepe-myrtle like flowers of swamp loosestrife (*Decodon verticillatus*), and catching flickering wings of copious butterflies. The spring-time water depth here lures alligators, which encourage nesting of the endangered wood stork. Alligators prey on egg-predators like raccoons, and wood-storks key into their presence to protect their young. This spot at Big Dukes is a stable wood-stork rookery, supporting around 100 nests every spring. Lucky for us water was only persistent in a few gator wallows, so we kept on the alert but enjoyed wandering the rookery and observing plants. Here we saw marsh St. John's-wort (*Hypericum walteri*), shining fetterbush (*Lyonia lucida*), European heliotrope (*Heliotropium europaeum*), button-bush (*Cephalanthus occidentalis*) and false nettle (*Boehmeria cylindrica*). Lisa's 6-year old son Steven caught a dwarf salamander (*Eurycea quadradigitata*).



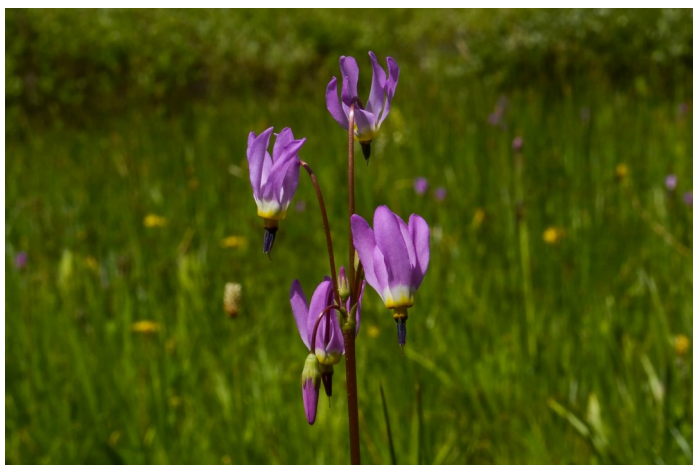
Cypress rookery; photo by Debo Boddiford

We finished out the day with an exciting find on the sand rim of the bay: a fruiting bigleaf snowbell (*Styrax grandifolius*), fascinating for the range of habitats which it inhabits from mesic slope forest to the edge of the driest sandhill. All were satisfied and a little smug that we had braved the post-hurricane chaos to descend into the peaceful wilderness of Big Dukes Pond.

Wyoming trip

The first week of July 2016, a group of 16 BotSoccers traveled to the Snowy Range in southcentral Wyoming to botanize in the Medicine Bow National Forest. Beginning with July 2, here is a brief account.

Folks who came in early spent the early part of the day enjoying the bounty of flowers available along Highway 130, starting on the plains (about 7,400 feet elevation) and going up to the pass (a tad below 11,000 feet elevation). As roadside botanizing goes, this drive is as good as any (including the Smokies) and it did not disappoint – multiple species of paintbrush (*Castilleja linariifolia*, *C. angustifolia* var. *dubia*, and *C. sulphurea*), numerous composites (multiple genera – trust me, quite a few), glacier lily (*Erythronium grandiflorum*), marsh marigold (*Caltha leptosepala*), globe flower (*Trollius albiflorus*), shooting star (*Dodecatheon pulchellum*), Colorado columbine (*Aquilegia coerulea*), and much more.



Left: Darkthroat shooting star, *Dodecatheon pulchellum*, in a fen beside the Snowy Range Scenic Highway
Right: Alpine forget-me-not, *Eritrichium nanum*, Lakes Trail, Snowy Range

In the mid-afternoon, after most folks had arrived, we went up to the Libby Flats Overlook, where in addition to the spectacular cushion plants and other wildflowers – featuring alpine forget-me-not (*Eritrichium nanum*), moss campion (*Silene acaule*), and old man of the mountain (*Hymenoxys grandiflora*) - the folks who had not previously experienced Wyoming got a couple of lessons on elevation. 1) the weather quickly changed from warm and sunny to borderline cold and windy with rain and hail (only pea sized, but still stung) and 2) in the haste to dash back to the vehicles the lack of oxygen became very apparent. Neither injuries nor hypothermia resulted, so it just turned into a good story.



Libby Flats. Medicine Bow National Forest

Wyoming (cont'd)

The area at Snowy Mountain Lodge cabins provided a nice display, including a flower at the edge of Libby Creek that we did not encounter anywhere else: monkeyflower (*Mimulus tilingii*). Mule deer were very common around the cabins, including a doe with a newborn fawn. Other wildlife we were treated to in the mountains included moose, yellow-bellied marmot, chipmunks, and many bird species. On the plains we added pronghorn and prairie dogs.



Calochortus gunnisonii

Sunday we spent time on the Corner Mountain Trail and on the Laramie River Trail – a couple of lower elevation excursions to allow folks to adjust to the elevation, we were 0.5-mile above the highest elevation in Georgia at our lowest out there. Floristic highlights included spotted coral root (*Corallorhiza maculata*), green-flowered wintergreen (*Pyrola chlorantha*), Wyoming paintbrush, monument plant (*Frasera speciosa*), little sunflowers (*Helianthella quinquenervis* and *H. uniflora*), bitterroot (*Lewisia rediviva*), narrowleaf paintbrush, and Gunnison's sego lily (*Calochortus gunnisonii*). While we were too late for the flowers, we did see leaves and fruits of eastern fairy slipper (*Calypso bulbosa* var. *americana*). We also visited a large and quite nice fen with numerous shooting stars around its edge.



The Snowy Range, reflected in a tarn along the Lakes Trail.

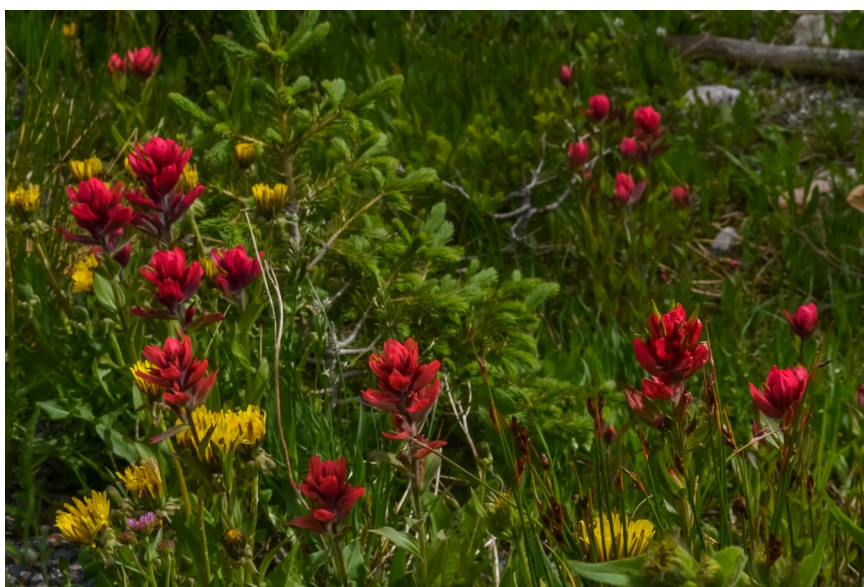
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Wyoming (cont'd)

On July 4, we went “grasswhacking” on Libby Flats, beginning on an unpaved Forest Service road and moving to dispersed cross country wandering. We had a bevy of subalpine tundra plants similar to those occurring along the nature trail at the overlook, including moss campion, alpine forget-me-not, native clovers (*Trifolium dasycarpum* and *T. parryi*), old man of the mountain, and the ever lovely pygmy bitterroot (*Lewisia pygmaea*) – in its full range of colors from white to deep pink-purple. We crossed an incredible field of alpine fleabanes that was carpeted in flowers pretty much as far as we could see. We turned back at an area where there were curious mounds of loose aggregate deposited by glaciers. This walk got high marks from everyone.

Tuesday was a light day of additional roadside botanizing – this time from the pass down the west side of the Snowies and out on the plains toward Saratoga. We kicked off with rosy paintbrush (*Castilleja rhexiifolia*), which was spectacular. Farther down the mountain, elephant head (*Pedicularis groenlandica*), white bog orchid (*Platanthera dilatata*), and western red paintbrush (*Castilleja miniata*) were in nice bloom.

At the Forest Service visitor center, mule’s ear (*Wyethia amplexicaulis*) was very nice and a pavilion proved an excellent spot for our picnic lunch. Out on the plains we found nice showy milkweed (*Asclepias speciosa*), Palmer’s penstemon (*Penstemon palmeri*), and Nuttall’s sego lily (*Calochortus nuttallii*). After ice cream in Saratoga, we returned.



Castilleja rhexiifolia along the Snowy Range Scenic Byway



Bull moose



Pedicularis groenlandica and *Platanthera dilatata*

Wyoming (cont'd)

Wednesday we walked the Glacier Lakes Trail. East and West Glacier Lakes were created by the last glacier in the Snowies and they get enough snowfall to persist. I saw the glacier when I was an undergrad, but it has since ceased to be. We had to negotiate snow in places, but we got through. Bog laurel (*Kalmia microphylla*) was our highlight new flower and seeing four *Arnica* species along the trail was quite nice. The views were spectacular. From the highpoint on the trail, we could see to where we had hiked on Libby Flats two days earlier.

Thursday we started at the Rocky Mountain Herbarium at the University of Wyoming. Ernie Nelson was a fantastic host and provided us with a wealth of information on the herbarium. He had several specimens of note out for display, including the first specimen collected for the herbarium and the oldest collected specimen that was obtained via trade. After the herbarium, we took in the UW Geology Museum, enjoying displays of fossil plants and animals. After lunch at the Student Union, we headed east for a change, to make quick visits to the Happy Jack Recreation Area and then to the Vedauwoo Recreation area. At Happy Jack, we were pleased to find western monkshood (*Aconitum columbianum*) and small white Penstemon (*Penstemon laricifolius*) in bloom. Vedauwoo provided the always spectacular rocks, plus several species of pine and the lovely shrub cliffbush (*Jamesia americana*). This day ended with a traditional BotSoc meal at a Mexican restaurant.



Above left: Fivepetal cliffbush, *Jamesia americana*, Vedauwoo Recreation Area on Pole Mountain; Above right: Ernie Nelson, curator of the Rocky Mountain Herbarium at the University of Wyoming; Below: The group in front of the Snowy Range.



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Wyoming (cont'd)

Friday was our last day and we went out with a bang - The Lakes Trail. The combination of flowers (glacier lily, Colorado columbine, globe flower, and marsh marigold among others), the views of the Medicine Bow escarpment, and the lakes along the escarpment were great. Parry's primrose (*Primula parryi*) was the only new flower, but most of our new floral friends were there, with columbines and glacier lilies putting on an amazing display. We encountered an old subalpine fir (*Abies lasiocarpa*) that was a good 2 feet in diameter and maybe a 20 feet tall – we expect this tree to be several hundred years old given the climate at about 10,900 feet.

I polled the group for favorite flowers and spots. The general consensus was that Libby Flats and the Lakes Trail were the “best” spots. The Glacier Lakes Trail got some votes and the tarn on the Lakes Trail got votes for favorite “thing”.

Favorite flowers included bitterroot (*Lewisia rediviva*), pygmy bitterroot (*Lewisia pygmaea*), paintbrushes (*Castilleja* spp. – we saw six species, with rosy getting specific votes), glacier lilies, sky pilots (*Polemonium viscosum*), Palmer's penstemon and monument plant.

An interesting favorite was any plant emerging through the melting snowpack – creating a hole through the snow. The gnarly weathered trunks, snags, and downed logs that added character also got a vote.



Above: Pygmy bitterroot or alpine lewisia (*Lewisia pygmaea*) at Libby Flats, Medicine Bow National Forest



Left: Sky pilot (*Polemonium viscosum*), Libby Flats

Another vote was for the July 4th patriotic red-white-blue display of bluebells, mountain candytuft, and whippoorwill clover (*Mertensia viridis*, *Noccaea montana*, *Trifolium dasyphyllum*) on Libby Flats.

Upcoming Field Trips

<p>Oct 29 10:00 AM</p>	<p>Pines/Hemlock Family Plant ID Workshop</p> <p>This workshop will cover how to recognize common Georgia pines and hemlock. Field ID, rather than keys, will be the means of identification for this introductory series, and the workshop will emphasize common names plus the scientific names.</p> <p>Registration is limited to 7 Georgia BotSoc members (and 7 GNPS members). Email the trip</p>	<p>Location: Tallulah Gorge (Rabun County); directions to be provided by trip leader upon registration.</p> <p>Bring: Water, snacks, camera, lunch, bug spray and notebook.</p>	<p>Leslie Edwards edwa1616 @bellsouth.net</p>
<p>Nov 11 10:00 AM</p> <p>Note: This is a Friday</p>	<p>Fall Color on Pine Mountain</p> <p>This trip will be a driving and walking tour of FDR State Park, with an emphasis on fall foliage color. Pine Mountain is home to the largest population of Georgia oak (<i>Quercus georgiana</i>) as well as large populations of Alabama cherry, <i>Prunus alabamensis</i>. We will also see large old-growth montane longleaf pines (<i>Pinus palustris</i>) and shortleaf pines (<i>P. echinata</i>). Hopefully, we will be able to stop for a brief visit to an historical stand of longleaf planted by FDR.</p>	<p>Directions: Take I-85 south to I-185 and continue south. At Exit 42, turn south on US 27. Stay on US 27 South through the town of Pine Mountain and past Callaway Gardens. At the top of Pine Mountain, turn left onto GA 190. Go about three miles and turn right into the lower parking lot of the Park HQ.</p> <p>Facilities: Only at the park HQ.</p> <p>Difficulty: Walking portions of this trip will be short and easy but trails are rocky.</p> <p>Bring: Lunch, snacks, & water. We will try to eat at Dowdell's Knob, the highest point on Pine Mountain. Picnic tables are available at the Knob.</p>	<p>Hal Massie massiefarm @aol.com 478-957-6095</p>
<p>Dec 3 10:00 AM</p>	<p>Holiday Party—Panola Mountain State Park</p> <p>We hope you will join us for the BotSoc Winter party on December 3rd at Panola Mountain State Park.</p> <p>Socializing will start around 10 am and we will plan a short hike after lunch.</p> <p>Bring potluck items and native plant seeds to share.</p>	<p>Further information will be emailed to members—please save the date and plan to join us!</p>	<p>Heather Brasell heather.brasell @gmail.com</p>

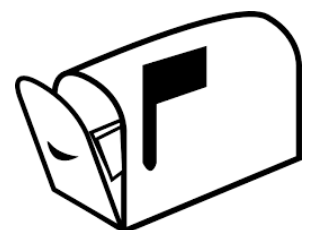
Don't forget to renew your membership! BotSoc memberships run from January through December.

You can renew online at http://www.gabotsoc.org/?page_id=2

From that page you can use the online form and PayPal **or** you can download and print a PDF form to use for mailing.

If you have questions about your membership status, please email Membership

Chair Jo Anne Romfh joannromfh@aol.com



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