



Coosawattee Bluffs Field Trip

Report by Tom Govus

Forty three - I said forty three! - enthusiastic BotSoccers arrived on a fine, early spring morning to participate in a hike to an exceptional wildflower area on the bluffs of the Coosawattee River just below the re-regulation dam on Carters Lake in Murray County. This is a piece of private land and we were fortunate that the land owner not only gave us permission, but also brought family members to join in for the outing. This property was part of what is known as Carter's Quarter, an important historical site in northwest Georgia and on the National Register of Historic Places (Carter's Lake and Cartersville are both named for the family that has farmed in this part of southeast Murray County since the early 1800s). Walter Bland, who currently oversees the property, was very generous in allowing the Georgia Botanical Society to visit this property, and later provided a tour of his Rock Spring Farm which also has significant botanical habitats.

As we began to approach the bluffs along an old woods road into the river floodplain, we began to get a hint of the marvelous calcareous habitat ahead of us. Large patches of *Corydalis flavula* (yellow fumewort) and *Trillium luteum* (yellow trillium) were evident and both are not plants one typically encounters. Other calciphiles were close behind including *Polemonium reptans* (Jacob's ladder) and *Cardamine dissecta* (dissected toothwort) both Georgia Special Concern species. Later patches of *Frasera caroliniensis* (American columbo), another unusual and infrequent member of the Gentian family, could be seen upslope.

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Yellow fumewort
(*Corydalis flavula*)

© Richard & Teresa Ware

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National Public Lands Day

By Maureen Donohue



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Twenty years ago several federal agencies, facing ever increasing budget cuts and staff reductions, introduced a program to the public that asked people to help public land managers by donating one day of volunteer work. In 1994, there were 3 sites and 700 hundred volunteers. The event was judged a success and now it is an annual tradition held on the last Saturday of September. Last year more than 175,000 volunteers celebrated the event at 2,237 public land sites in all 50 states, the District of Columbia, Guam and Puerto Rico.

The program has expanded to include state and local public lands as well as national. This year BotSoc will have a field trip at Panola Mountain State Park to participate in the event. At Panola, the project is a meadow restoration, now in its third year. We will be planting traditional meadow flowers and grasses which Panola Mountain staff will provide. Joining us will be the park's friends group and volunteers as well as members of Georgia DNR, Boy Scouts, corporate groups, families and the general public.

We will work until mid-afternoon with a break for lunch. Then Phil Delestrez, Resource Manager for Panola Mountain and Hard Labor Creek State Parks, will take us on a brief walk up Panola Mountain itself, a pristine 100-acre outcrop and its rare untouched ecosystem. The mountain is not open to the general public except for scheduled guided tours. Our walk will be a special trip for BotSoc members only.

I hope as many of you as possible will attend this field trip and wear some BotSoc attire (such as your favorite pilgrimage t-shirt, a BotSoc cap or logo patch). It will show the other participants that BotSoc people support public lands.

Field trip details will be available on the web site, in the September newsletter, and in the weekly email as soon as they are available. If one or two other sites suitable for our participation in other parts of the state become available, we will include that information too.

If you have any questions about participating in this program, please contact Maureen Donohue at marinadono67@gmail.com or 770-990-7756.



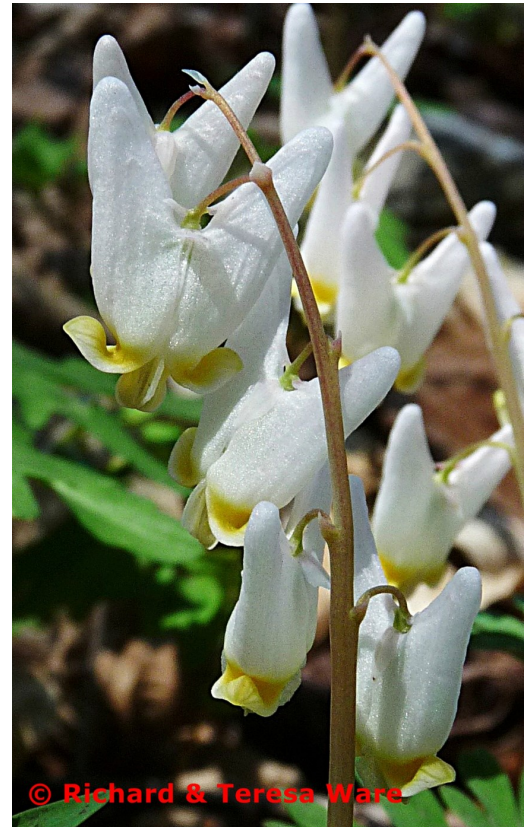
National Public Lands Day

Coosawattee Bluffs Field Trip (cont'd)

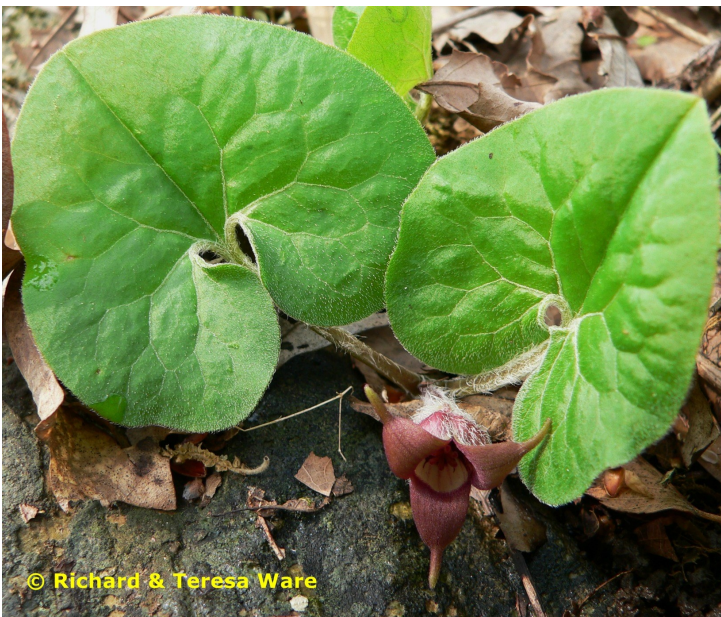
But the best was yet to come as exposures of Conasauga limestone became evident and more natural forest conditions began to prevail. The first outcrop was a lovely moss covered rock with *Dodecatheon media* (eastern shooting star – now considered a *Primula*), *Delphinium tricornis* (dwarf larkspur), *Amsonia tabernaemontana* (blue-stars) and *Cystopteris protrusa* (lowland bladder fern). Not your everyday plant assemblage.

The wildflower show only got better as we reached where the steep limestone bluff joined the river floodplain. Never in life have I seen such a cover of Dutchman's breeches (*Dicentra cucullaria*) and in full bloom. If one was collecting data for a vegetation plot (which I often do) you would have to assign the coverage at something approaching eighty percent. Mixed in with this on the floodplain were lovely patches of *Trillium decumbens* (decumbent trillium), *Trillium rugelii* (Southern nodding trillium), and the very uncommon *Hydrophyllum macrophyllum* (largeleaf waterleaf), another Georgia Special Concern species.

The site was so interesting and attractive that I felt compelled to bring my wife back for a visit the following weekend and take additional pictures. And low and behold, as we were walking in she says, "Well, here is goldenseal" (*Hydrastis canadensis*), another rare species and unreported for the site, quite a coup for Jean Govus.



Dicentra cucullaria



Asarum reflexum

When photos of what we all believed to be *Asarum canadense* (common wild ginger) were posted on Facebook, they were quickly identified by Alan Weakley and Dwayne Estes as *Asarum reflexum* Bicknell, a more narrow concept within the broader circumscription of wild ginger – and sometimes treated as a variety. Apparently most of the wild ginger found in Georgia (except in areas of Rabun County) is *Asarum reflexum*.

Coosawattee Bluffs Field Trip (cont'd)

There were many more interesting and showy wildflowers here, too many to enumerate, and this is one of the showier and more interesting botanical sites in northwest Georgia. Special thanks to Richard Ware for leading the trip, and to Walter Bland for letting us visit his property.

Comments from trip leader, Richard Ware: After lunch we walked the Hidden Pond Trail at the Carter's Lake Rereg Dam Rec. Area. For details on some of the many interesting wildflowers found on this trail see Mike Christison's write-up of the April 27th Fort Mountain / Carter's Lake field trip on page 7 of this newsletter.

Afterward we caravanned to Rock Springs Farm, Walter Bland's historic family home for a visit to one of his limestone rock outcrops. Here we saw a few specialties of that habitat such as *Pellaea atropurpurea* (purple cliff-brake), *Minuartia patula* (lime-barren sandwort), and *Leavenworthia uniflora* (Michaux's gladecress).

Thanks to Walter, his cousins Brad and Liza Hill, and Beck Horne for permission to access Coosawattee Bluffs and for attending the field trip.

Society News - Memorials and Donations

In the last year, the Georgia Botanical Society received the following memorial or honorary gifts:

Elizabeth M. Fox: In honor of Jennifer Ceska, Conservation Coordinator, State Botanical Garden of Georgia.

Frank and Eileen French: In memory of Kathryn (Jonny) Howell.

Eleanor Lehner: In memory of our son, Bob, 1/12/2011.

Patty Lowe: On behalf of the members of the Wild Edibles Club.

Kathy Stege: In honor of Hugh Nourse – his steadfast enthusiasm for the State Botanical Garden.

Sharon Worsham: In memory of Stanley M. Worsham, my father who taught me to love nature and died at age 97 still gardening and fishing.

Our Donor members for this year are:

Bonnie Arbuckle, Nancy L. Barber, Sam and Laura Breyfogle, Linda Chafin, Ellen and Dan Corrie, Ron and Susan Determann, David Farrier, Dr. John and Edna Garst, Shepherd and Sarah Howell, Patty Lowe, Hugh and Carol Nourse, Tom Painter and Carla Roncoli, John and JoAnne Romfh, and Kathy Stege.

We also would like to thank the 55 members who contributed in support of the Marie Mellinger fund, to support *Tipularia*, and/or to defray newsletter costs.

BotSoc also welcomes two new Life Members: Hildegard Hall and Sue Harmon.

Ongoing Efforts to Eliminate *Ficaria verna* from Sosebee Cove

By Richard Reaves

A few years back, a rather pernicious weed was identified in the Sosebee Cove Natural Area in the Chattahoochee National Forest. *Ficaria verna* (common names include lesser celandine and fig buttercup), which is highly aggressive and outcompetes native spring ephemerals, was spotted in the upper part of the cove.

At Sosebee Cove, the weed is taking space that would otherwise be occupied by trout lilies (*Erythronium umbilicatum*), slender toothwort (*Cardamine angustata*), Carolina spring beauty (*Claytonia caroliniana*), Dutchman's breeches (*Dicentra cucullaria*), and squirrel corn (*Dicentra canadensis*).

While this species is very difficult to control, at the time of the discovery we thought the plant was just becoming established and the prospects for successful control were good. What makes *Ficaria verna* so difficult to control is the presence of underground tubers. You must get all of the tubers, as each one will form a new plant if left behind.



Typical infestation (not Sosebee Cove)

Photo by Janie Marlow



Photo by Rich Reaves

In 2012, BotSoc worked with National Forest Service biologist Jim Wentworth to set up a "weed pull" in Sosebee Cove as a first effort to eliminate this weed. There was no expectation that this effort would eliminate the species in the cove. We knew going in that multiple control efforts would be necessary to exhaust the persistent supply of propagules in the soil.

What we learned was that the infestation was somewhat worse than we originally thought. The plants were established well enough that they were spreading downslope from the presumed point of origin.

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Ongoing Efforts to Eliminate *Ficaria verna* (cont'd)

An unavoidable consequence of our control efforts was that there was some fairly extensive trampling of the hillside. We decided to wait for two years before continuing the control efforts to minimize the potential for inadvertent damage to the cove. So, in early 2014, we again coordinated with biologist Jim Wentworth to set up a second control effort. To further minimize the potential for damage to non-target species, we scheduled the 2014 control earlier in the year than the 2012 effort. *Ficaria verna* gets started early in the year to win the competition for light, so it is above ground before the native species in Sosebee Cove.

A small group of BotSoc members showed up at Sosebee Cove and we were immediately pleased to see that the extent of the infestation was substantially less than in 2012. It still extended down the hill, but there were far fewer plants. We took a top down and bottom up approach to implement this pull and met in the middle.

We finished our day with less than two bags of plant material for disposal. Member Janie Marlow, who helped with the pull, received permission to take some of the material to prepare herbarium specimens and to submit for genetic analysis. There are five varieties of this species and the genetic analysis would let us know which one we were dealing with. The remainder of our spoils were taken away for appropriate destruction/disposal.

Because the tubers and any seeds are capable of being transported in dirt attached to the bottom of shoes or clothes, everyone was advised to decontaminate their gear before going to any other natural areas or trails.

We still are not done. While we appear to be winning the battles, the war is not over. I have made subsequent trips to Sosebee Cove and have noticed the distinctive leaves of this pest remain. We will keep coordinating with the national Forest Service to continue these efforts annually as we move forward. Because the extent of the problem is being reduced, it looks as if we can do what we need to do on a yearly basis now. If you would like to help, look for a volunteer field trip in mid-to late-March next year.



BotSoc members work on the infestation in 2014

Photo by Rich Reaves

Fort Mountain State Park and Carter's Lake

Text and Photos by Mike Christison

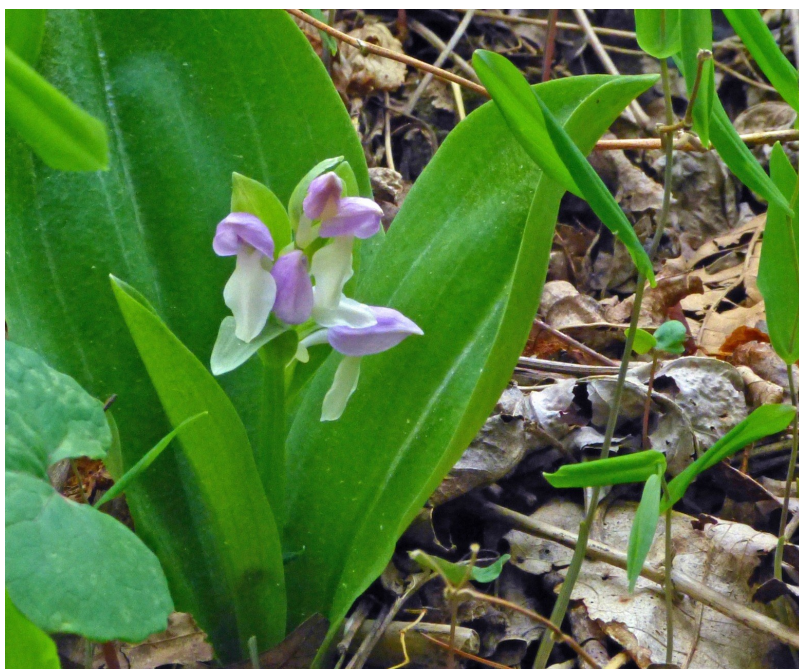
An enthusiastic group of BotSocers, including a Tennessee contingent, showed up in the parking lot at Fort Mountain State Park, ready to explore the deciduous forests of one of Georgia's premier mountain state parks. The trip leader, Richard Ware, had promised us no insurmountable peaks to climb, but we were wary as we started the climb up from the parking lot. Our attention soon turned to plants, however, as we started to look for wildflowers on the plant list Richard had provided. We quickly found two trilliums: Catesby's trillium (*Trillium catesbaei*), and toadshade trillium (*Trillium cuneatum*).

Next came one of the rarities of the day, spotted mandarin (*Prosartes maculata*). These members of the Lily family were spotted in great numbers, proving the maxim "rare but locally abundant." Its tiny, numerous, purplish spots make it easy to distinguish from its more common cousin, yellow mandarin (*Prosartes lanuginosum*), which was also evident this day.

The sharp eyes of Diane Ochoa discovered the surprise of the morning, showy orchis (*Galearis spectabilis*) in spectacular bloom; its overlapping purple petals and sepals over a white lip made a colorful contrast to the green leaves in the background.



Spotted mandarin (*Prosartes maculata*)



Showy orchis (*Galearis spectabilis*)

As the trail continued along the slope of this woods punctuated with large scarlet oaks, we noticed hundreds of mayapple (*Podophyllum peltatum*) covering the hillsides above the trail. We saw the leaves, but no blooms, of our native Lily-of-the-valley (*Convallaria majuscula*). Soon, we came across another delight: pink lady slippers (*Cypripedium acaule*) in almost full bloom, and the find kept our photographers busy.

As we climbed the final steep slope, thoughts turned to the lunch awaiting us in the park picnic area.

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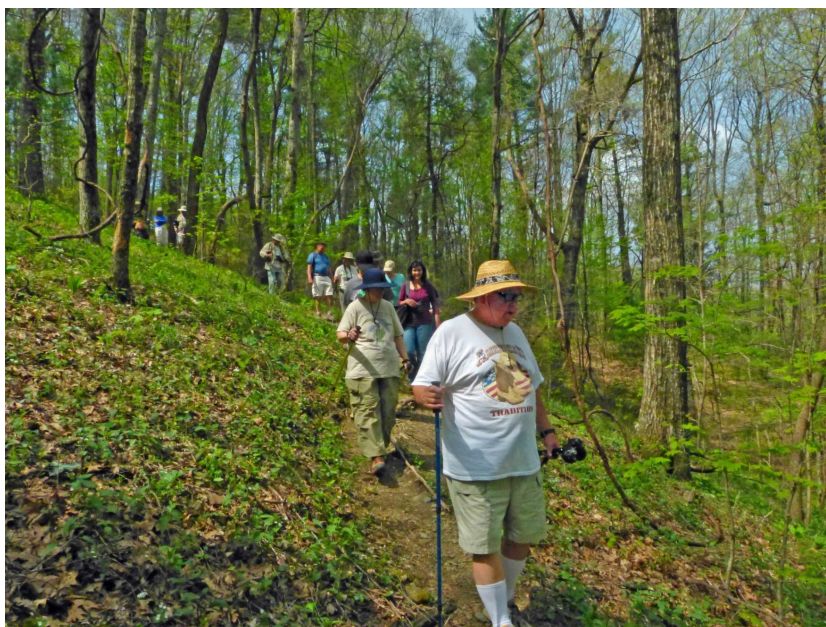
Field Trip—April 27, 2014

While eating, we all noticed the bright orange of flame azalea (*Rhododendron calendulaceum*) and the pinkish mountain azalea (*Rhododendron canescens*) near our picnic tables. After lunch, we made the short drive to Carter's Lake for a walk on the Hidden Pond Trail. Here, some of the walkers had their first encounter with green violet (*Hybanthus concolor*), a member of the Violet family, although it doesn't exactly look like a typical violet at all, at least at first glance.

Also, we spotted yellow trillium (*Trillium luteum*), (which smells to me just like Lemon Pledge!) and a large number of American columbo plants (*Frasera caroliniensis*), some of which had sprouted a tall flowering stem.

Next, we came upon our second big surprise of the day, a small-flowered yellow lady's slipper (*Cypripedium parviflorum*) in glorious bloom.

On the way down the wooded hill, we came to a small clearing full of a myriad of colorful plants, including the wild red columbine (*Aquilegia canadensis*), some dwarf larkspur (*Delphinium tricorne*), and fire pink (*Silene virginica*).



Trip Leader, Richard Ware, showing the way at Fort Mountain State Park



Shooting stars (*Dodecatheon meadia*)

We also saw wild hyacinth (*Camassia scilloides*) and Eastern bluestar (*Amsonia tabernaemontana*) both showing shades of pale blue.

Finally, further down the trail, Richard spotted some late blooming shooting stars (*Dodecatheon meadia*), growing on a steep bank. These stunning plants made for a fitting end to a great day of botanizing. Thanks to Richard for another wonderful BotSoc trip.

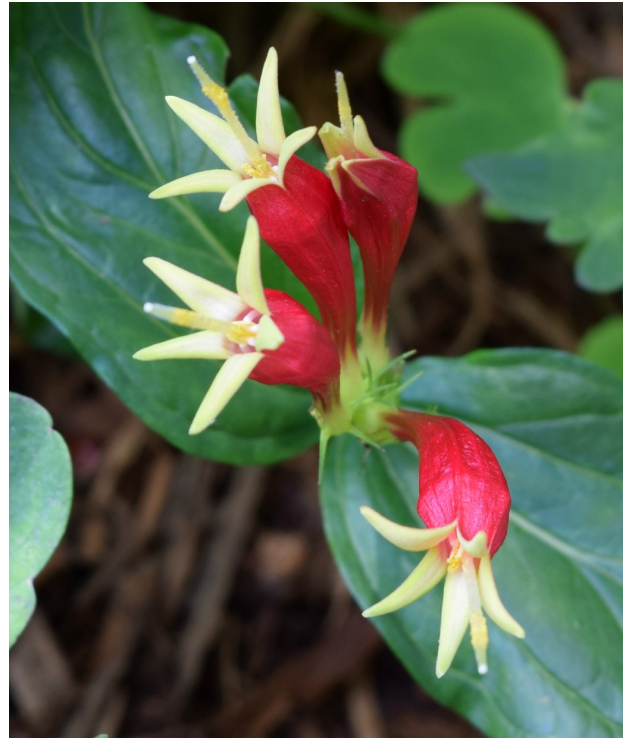
Crawford County Field Trip—May 3, 2014

“Hardwood Ravines, Pitcherplants and Conjurer’s Nut” was the field trip title for a journey to Crawford County just west of Macon on Saturday, May 3, 2014. Twelve BotSocers and leader Tom Patrick succeeded in finding fringed campion (*Silene polypetala*) in the headwaters of Tanyard Creek. The population was vigorous, consisting of at least 15 clumps from near the top to the bottom of a rich hardwood slope.

Some associates were buffalo clover (*Trifolium virginianum*), nettle-leaf sage (*Salvia urticifolia*), downy woodmint (*Blephilia ciliata*), pinkroot or Indian-pink (*Spigelia marilandica*), aromatic sumac (*Rhus aromatica*), southern shagbark hickory (*Carya carolinenseptentrionalis*), violet wood-sorrel (*Oxalis violacea*) and bloodroot (*Sanguinaria canadensis*).

The bedrock here is likely a mafic amphibolite gneiss with a high nutrient loamy soil. We then looked at conjurer’s nut or Indian olive (*Nestronia umbellula*) on the way to Lake Milton further south into the sandhills. This turned out to be a female colony with single flowers in the axils of opposite leaves. Most colonies in Georgia appear to be male with an umbel of flowers in the axils. The shrub is colonial with long narrow rhizomes and is often overlooked, since it strongly resembles lowbush blueberry in habit, but its twigs are purplish with opposite, 2-ranked leaves.

Some of us went onto a powerline right-of-way to a small sweet pitcherplant (*Sarracenia rubra*) bog, where we found about 5 or 6 clumps in flower. Along the way, other interesting plants



Spigelia marilandica

observed were pink sundew (*Drosera capillaris*), horned bladderwort (*Utricularia juncea*), green-eyes (*Berlandiera pumila*), Carolina pinwheel (*Piriqueta caroliniana*), tread-softly (*Cnidocolus stimulosus*), sandhills hairy phlox (*Phlox nivalis*), gopherweed (*Baptisia lanceolata*), and poison sumac (*Toxicodendron vernix*).

The intact hardwood ravines and sandhills of Crawford County are likely to harbor more botanical treasures, if only we had time to explore them.

Submitted by Tom Patrick



Drosera capillaris

Upcoming Field Trips

Date	Description	Directions	Leader
July 19 10:00 AM	<p>Summer Tree Identification</p> <p>The morning session at the library will be a workshop teaching participants how to identify the major genera of trees in the summer condition, mostly using leaf characteristics.</p> <p>This session will last until ~1:00pm. Then most will enjoy lunch at a local Mexican Restaurant. Following lunch (if it's not too hot or raining) we will drive to the Big Trees Forest Preserve in Sandy Springs for a walk and to apply the knowledge gained at the workshop in the field.</p> <p>If you have these items, please bring: hand lens, measuring tool and either "Native Trees of the Southeast" by Kirkman, Brown & Leopold or "Trees of Georgia and Adjacent States" by Brown & Kirkman.</p>	<p>Directions: Dunwoody Library, the Williams Room, Dunwoody, GA.</p> <p>Facilities: Yes.</p> <p>Bring: Lunch, snacks, & water. Insect repellent and tick spray are also advisable and good walking shoes.</p>	Richard and Teresa Ware gabotany@comcast.net 706-232-3435 - (cell) 706-766-5143 - (cell) 706-766-4228
Aug 16-17 10:00 AM both days	<p>Oaky Woods Weekend</p> <p>We will explore several blackland prairies for unusual plants and conduct a butterfly count. Each day will offer new prairies to explore. Butterfly experts will be on hand. Depending on summer heat, we will also explore limestone bluffs and cooler places.</p> <p>Saturday participants are invited to nearby Yoder's Mennonite restaurant for dining afterwards.</p>	<p>Directions: From Macon, take Exit 160A, Interstate 75, then south on GA Hwy. 247, pass Robins Air Force Base, continue to Bonaire, jct. with GA Hwy. 96, ca. 5 miles south of Warner Robins. Flash Foods/Taco Bell in Bonaire, corner of GA Hwy. 247 and 96.</p> <p>Facilities: none at the natural area.</p> <p>Difficulty: Easy to moderate, lasting all day, some bushwhacking, covering up to 3 miles, mostly in grassy habitat and along jeep trails.</p> <p>Bring: Snacks, water, lunch, butterfly binoculars, notebook, hat, sunscreen. Wear long pants, hiking shoes for ankle support and double socks to avoid ticks and chiggers.</p>	Tom Patrick tom.patrick@dnr.state.ga.us 706-476-4541 (cell)
Aug 23 10:00 AM	<p>Hickory Workshop</p> <p>The morning session at the library will be an earnest attempt to teach participants how to identify the eleven species of Hickories found in Georgia, in the summer condition, mostly using leaf characteristics. This session will last until ~1:00pm. Then most will enjoy lunch at a local Mexican Restaurant. Following lunch (weather permitting) we will drive to the Big Trees Forest Preserve in Sandy Springs for a walk and to apply the knowledge gained at the workshop in the field.</p>	<p>Directions: Dunwoody Library, the Williams Room, Dunwoody, GA.</p> <p>Facilities: Yes.</p> <p>Bring: Lunch, snacks, & water. Insect repellent and tick spray are also advisable and good walking shoes.</p>	Richard and Teresa Ware gabotany@comcast.net 706-232-3435 - (cell) 706-766-5143 - (cell) 706-766-4228

Upcoming Field Trips

Date	Description	Directions	Leader
Sept 6 10:00 AM	<p>Williams Bluffs Preserve</p> <p>We will meet at the preserve gate, and carpool around the 1000-acre preserve, hitting the major habitats. The preserve includes longleaf pine sandhill woodlands (regularly burned), isolated limesink depressional wetlands, mixed-pine flatwoods, rich hardwood bluff forests, and various bottomland swamp communities along the Chattahoochee River. We should see at least two rare species, Florida willow (<i>Salix floridana</i>) and swamp black-eyed Susan (<i>Rudbeckia auriculata</i>), the latter in flower. We will drive to the different habitats and explore from the vehicles on foot.</p>	<p>Directions: I-85 South to I-185 (Exit 21, about 63 miles); I-185 South to End at U.S. 27 south of Columbus, about 50 miles; U.S. 27 south to S.R. 62 in Blakely, about 90 miles. West (right) on S.R. 62 to Hilton, about 11 miles; In Hilton, turn left on S.R. 370 south, just before RR crossing; About 6 miles down the road watch on the right for a small white switching shack along the railroad line that parallels the road on that side. Shortly after the shack, turn right onto a dirt driveway leading across the tracks and through a field to a gated fence. (If the railroad track is no longer visible on the right side of the road, or you have come to the GP plant entrance on the right, you have gone too far.)</p> <p>Facilities: None at the preserve. Nearest bathroom at convenience store 1.5 mi S.</p> <p>Difficulty: Most walking will be in flat or slightly sloping land. Some bluff forests can be steep and difficult to traverse.</p>	Malcolm Hodges mhodges@tnc.org 770-776-9194
Sept 13 10:00 AM	<p>Fall Line Sandhills WMA</p> <p>Fall Line Sandhills contains the highest density of state-listed species (animals and plants) of all. No less than 12 listed species, including at least six plants, are found here. The state's largest population of federally listed pondberry is among them. Its bright red fruits are a rare sight and should be present. Other specialties at this site include sandhills golden aster, Pickering's morning-glory, lax water-milfoil, and dwarf witch-alder. Late summer and early fall is a great time to visit the sandhills due to the high diversity of colorful composites in bloom. We'll also explore depressional wetlands and seepage slopes.</p>	<p>Directions: From the junction of GA Hwy 96 and US Hwy 19 in the town square of Butler (Taylor County), travel west on GA Hwy 96 for 2.6 miles (turn right at a stop sign to remain on 96 at about 2.4 miles) to Taylor County Industrial Park; turn right. Meet at the entrance kiosk for the WMA.</p> <p>Facilities: None</p> <p>Walking: Easy</p> <p>Bring: Lunch, snacks, water, hat, sunscreen, insect repellent, and rain gear.</p>	John Jensen, Nathan Klaus, Hal Massie john.jensen@gadnr.org 478-550-4406
Sept 13 3:00 PM Note: unusual start time	<p>Annual Meeting</p> <p>This meeting follows the nearby field trip to the Fall Line Sandhills, but attendance at the field trip is not required.</p>	<p>Location: The Forsyth DNR office located at 116 Rum Creek Drive, Forsyth, GA 31029 .</p> <p>Facilities: Yes</p>	Check the BotSoc website for latest information if needed.

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