

BotSoc News



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FLORA OF GEORGIA CLASS FUNDED BY MARIE'S GRANT

Georgia Southern University professor Bobby Hattaway used his 2009 Marie Mellinger Field Botany Research Grant for field trips in his "Flora of Georgia" class. If the article below, written by GSU student Amanda Smith, is not reason enough to continue our financial support of Marie's Grant, consider also that the 150 botanical specimens collected by the class included 138 county records!

Before Dr. Robert Hattaway's "Flora of Georgia" class, I had not been exposed to descriptive botany beyond the basic stamen-pistil concept of 4th grade. This class was one of the best decisions I have made in my college career. Exposure to flora enriched my view of the importance of plants in our habitat as well as enforced my knowledge and understanding of what many call the underlying theme of biology - evolution.

The "Flora of Georgia" class emphasized that plant identification should be the first concern of any plant scientist, for without proper identification, conservation efforts and a realization of the fundamental importance of plants cannot seriously get underway. New botanists in the class not only learned to key a plant properly, but also to analyze it first so that keying took only half the time otherwise necessary. And the students learned not to rely solely on keys and pictures, but also to consider the ecological aspects and distribution of the plant for accurate identification.

During the plant analysis phase of identification, we discovered the importance of looking at the whole specimen (several branches included) instead of a single leaf and learned ways to help key a plant even without the presence of certain characteristics a key might ask for but which are not available. Most importantly, we learned to look twice at anything encountered - and closely! A magnifying lens or dissecting scope is an absolute necessity for proper identification.

In this class, evolutionary connections between groups of plants allowed insight into their ecological and adaptive connections. We were taught to remember the rules of homoplasies: no one trait is defined to one route in evolution and therefore, there are exceptions to all rules in all families. Similar traits "tackle" similar environments.

Sometimes I wonder if these observations that enforce the theory of evolution are the same reasons that botany is kept out of many public school classrooms. My high school biology teacher told

us "I am not saying I believe in it, but I have to teach it. However, I will not say a lot, because I know many of you also have your own beliefs against it as well." This attitude must be erased if we are going to learn about ecology and diversity (and how to preserve it) through the roots and stems of evolution.

The most powerful teaching tool in this botany class was our group's immersion into Georgia's pine forest understory. We went on five different trips to see the flora in its natural setting and understand its significance ecologically, as well as to take note of crucial plants for easier identification. The plants in real life provide the opportunity to build mental images through Gestalt theory. Significant parts of a plant can be individually recognized and incorporated into a whole, larger picture that can appear far different from the pieces creating it. This kind of mental image building was obviously important to learning phytography and family recognition and is much harder without seeing a live specimen in its natural setting.

Although referred to as "Flora of Georgia", in the end, the class did far more for us than simply open our eyes to local plants. For some, it drove a strict passion; for others, it offered the pure beauty of the natural world in a different way. With the tools and knowledge instilled, I also feel confident in my ability to travel to other regions of the world with different climates and ecosystems and still learn about the flora around me and I know others do as well. If everyone were allowed a course such as this at some point in their life, the preservation of species and plant diversity would have a very different outlook than the one presented today.

Amanda Smith

Pre-Vet Biology major, Savannah GA

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BotSoc News

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Society News

President's Report from the Annual Business Meeting

For those members in the metro Atlanta area, no explanation is needed as to why, in the interest of safety, the business meeting at Pickett's Mill on September 26 was canceled. Most of the items to be discussed that day were deferred until we meet early next year and summaries of committee reports prepared for the meeting are included below. One item could not be delayed however, and the issue of how to best present to members the option of receiving a digital version of the newsletter from our website was discussed and voted on by the board using our email voting procedure. Based on these discussions, the following statement is to be added to the renewal form included with this issue of the newsletter and to a PDF version of the membership form available on the website:

There are now two options for delivery of BotSoc News, our society newsletter. You may receive the printed copy by US Mail OR check the box below to access a color version of the newsletter via a PDF file from our website (www.gabotsoc.org).

I would like to remind all that the color newsletter is a beautiful document and by selecting the PDF version you not only save the Society precious funds but exhibit noteworthy conservation of natural resources. Funds saved in printing and mailing costs will be used primarily to fully fund successful Marie Mellinger Research Grant applicant requests. Please consider these facts during the upcoming renewal period and give serious consideration to joining the more than 40 BotSocers who have already made the choice to receive the newsletter via the website.

One final item: the Georgia Botanical Society has submitted detailed comments on the USDA proposed rule change that would, if approved, provide a more thorough screening of imported plants with the goal of improving US invasive plant prevention policy.

Have a great Holiday Season!

Ed

Committee Reports from the Annual Business Meeting

Membership Report (Rich and Anita Reaves): Membership for 2009 is 437 with 60 new members and 74 members lost to non-renewal (a reduction of 14 from 2008). We currently have 28 Life Members; 15 memberships are complimentary, honorary or exchanges with other botanical societies; 8 memberships are group or student; the remainder are regular memberships. Coastal Plain Chapter membership is currently 46.

Treasurer's Report (Rich Reaves): As of 9/30/2009 total assets in our checking account and investment accounts were \$57,885.82 (total assets were \$50,321.20 on 1/01/2009). Total inflow was \$13,558.27 with most of the income arising from membership (\$6,690.00), the Pilgrimage (\$3,912.00) and T-shirt sales (\$1,395.50). Income from the Marie Mellinger Funds and Endowment was \$530. Total outflow was \$8,300.03 with the largest expenses arising from the newsletter (\$3,028.16), the Pilgrimage (\$2,744.11), the Marie Mellinger Grants (\$1,500.00) and T-shirt production (\$831.93).

Field Trip Report (Maureen Donohue): The 2009 Field Trip schedule included 57 field trips throughout Georgia and nearby states; only 3 trips were cancelled. Accomplishments this year included a completed Pickett's Mill plant inventory, the

beginning of the Red Top Mountain inventory, the 3rd annual Ga Aster Count at Pickett's Mill, 5 workshops, the discovery of a state-record species - the large-flowered rose gentian (*Sabatia grandiflora*), and the implementation of a "No Pet Policy" on field trips.

Pilgrimage 2010 Report (Jim Drake): The 2010 pilgrimage will be held in Bainbridge GA, March 12-14 with headquarters at the Charter House. Evening programs will feature the well-known botanists Gil Nelson and Loran Anderson as speakers. Approximately 25 field trips in both Georgia and Florida are scheduled including a float trip and exploratory hike for Friday's pre-pilgrimage agenda. We anticipate significant participation from members of the Florida Native Plant Society.

BotSoc Boutique & Pilgrimage T-Shirt Report (Jenneke Sommerville): As of September 2009 the Boutique inventory consists of 30 sets of photo cards, 5 ball caps, 19 Atlases and hundreds of patches and decals. Ball caps are definitely our best selling item and we may want to order more. The Atamasco lily was chosen to represent the 2010 Pilgrimage t-shirt

cont. on page 11

Our Members Have Their Say

THERE'S MORE TO SEE AT YELLOWSTONE THAN WOLVES

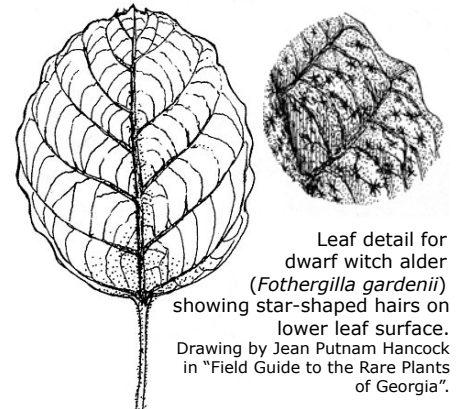
I traded a camp duty day to take an "Art of Wildflower Identification" course. We used a key to identify the family and then the species, but first we had to sketch the flower and write a description identifying leaf arrangement, attachment, shape, edges, veins then the flower parts and arrangement. For some of the tiny flowers this was not an easy process and on average I would spend an hour with each plant.

Who does that? Who has the time? I'm telling you, it will change your life. Go to a spectacular spot - a mountain lake or hillside - and plop down with a sketchbook, pencil and either colored pencils or watercolor pencils and spend one hour getting to know a plant. You will notice all kinds of things you never knew existed and as a plus, your blood pressure will decrease significantly. Make sure you do not have a cell phone with you. Better yet, go where there is no cell service.

We were given handouts, but here are a few notes for my wildflower drawing friends. Draw to accurately identify the plant. In most cases, the leaves carry more ID factors. Establish a line first, and then fill in around it (this works especially well for flower petals). Draw the basic shape of the leaf and then draw its edges. Draw veins. Write down where it is growing, noting surrounding vegetation,

elevation, temperature, date, etc. Later these details will help you in quickly identifying the species. Quickly scan the entire plant. Does it grow singularly or in a clump? What is its typical growth form? Is the stem robust, straight, wavy? Draw the head as a fried egg then fill in details. Separately draw in greater detail of one leaf. Turn the flower head over to draw the bracts. It is best to sit and draw, gather information, then move away and key it for identification.

It's a tough life when you have to spend your entire day sitting on the ground drawing plants and getting to know them. We do carry a crazy-creek chair that gives us some back support. When we forced ourselves to take a lunch break, we climbed to the top of a ridge and found a fallen log to lean against while we ate. It so happened that at this particular site, the tree in front of us appeared like a television set. We were in an area where the 1988 fires had burned all the trees. Twenty years later, most of them still stand bare and naked. This tree was larger than most of the surrounding ones. It was a white bark pine that, unlike the pines in the South, has large branches more similar to a hardwood. The bottom section was burned through the outer bark creating an open cave-like structure. The wood inside appeared like fine-grain mahogany and was in the shape of the Keebler



Leaf detail for dwarf witch alder (*Fothergilla gardenii*) showing star-shaped hairs on lower leaf surface. Drawing by Jean Putnam Hancock in "Field Guide to the Rare Plants of Georgia".

Cookie House. We kept staring at this tree while we ate lunch and the longer we looked, the more beauty we saw. The outer surface was deep gray with honey-colored lines interspersed. I started walking around and noticing the abstract patterns, the odd shaped holes and all the variations.

It was too soon time to get back to wildflowers, but I made a mental note to return and visit with these guys, and who knows, I might spend an hour with each one.

"The girls are coming," I hear my cohorts yelling, which means the bison are headed in. So I close for now, otherwise, I might be pinned in my cabin for a while.

**Shirley Andrews,
Cartersville**

Ed. note: Shirley was a 2009 summer volunteer in Yellowstone National Park.

"LEAVE" THE LEAVES!

I collect pine straw and leaves from my yard, the roadside, and suburban neighborhoods - from whatever source I can find - because I use them around my plants, in my garden and in the compost. Leaves may be raked around plants to a depth of 6 to 8 inches and then covered with a light layer of pine straw to keep the leaves from moving and to form very effective (and attractive) pine islands.

The leaves, left intact, will kill most of the grass and weeds, hold moisture and provide plant food as they deteriorate. The most effective use of the leaves and pine straw is to mulch the plant outward 12 to 18 inches beyond its drip line. Because a heavy leaf mulch can kill tender plants and mulch around a stem can promote disease even in established plants, do not mulch directly underneath the plant. Remove leaf debris from underneath the main stems of the plants and surround the plants

with 6 to 8 inches of new - this year's - pine straw.

Of course you could simply pile the mulched leaves up (if covenants allow) and let them deteriorate for a year before using them; however, in doing this you lose the weed killing and moisture retaining use of them for that time.

So leave your leaves and drought-proof your plants in the best possible manner.

Parrie Pinyan, Canton

The Lady's Slippers (Part II)

LADY'S SLIPPERS (CYPRIPEDIUM SP.) PART II

article & photos by Jim Drake

The lady's slipper orchid is often a featured species on spring field trips and pilgrimages sponsored by the Georgia Botanical Society. This article continues the account of six species (and three variations within one species) found in the eastern United States.

Yellow Lady's Slippers

Yellow lady's slipper nomenclature deserves some discussion. Known until fairly recently as *Cypripedium calceolus* Linnaeus (a name still used for the European species), the name was changed after a 1994 study by Dr. Charles J. Sheviak described morphological differences between the two entities and named the North American yellow lady's slipper *C. parviflorum*. Botanists presently recognize variations within North American yellow lady's slippers due primarily to obvious differences in flower size. Generally recognized are the large-flowered, *Cypripedium parviflorum* Salisbury var. *pubescens* (Willdenow) Knight and small-flowered *C. parviflorum* Salisbury var. *parviflorum*. A third variation, *C. parviflorum* var. *makasin* (Farwell) Sheviak is a northerly small-flowered variety recognized by the *Flora of North America*, Weakley's *Flora* and the USDA Natural Resources Conservation Service. In certain locales, including habitats in north Georgia, both large-flowered and small-flowered plants grow distinctively in close proximity and are herein considered to be var. *pubescens* and var. *parviflorum*, respectively.

Large Yellow Lady's Slipper *Cypripedium parviflorum* Salisbury var. *pubescens* (Willdenow) Knight

The specific epithet *parviflorum* means "small-flowered" while *pubescens* means "hairy." Ironically, all lady's slippers are, to some extent, hairy. Within the group of eastern lady's slippers, the large yellow lady's slipper is the more common orchid and enjoys probably the largest range: Alaska



Large Yellow Lady's Slipper
(*Cypripedium parviflorum* var. *pubescens*)



Small Yellow Lady's Slipper
(*Cypripedium parviflorum* var. *parviflorum*)

south through Canada with a band extending into New Mexico, and from Alaska eastwardly through Canada and extending south into much of the eastern half of the U.S. except Texas, Louisiana and Florida. Flowering times vary greatly with latitude and altitude. For example, flowers peak from April into May in Georgia. Peak bloom in northern Minnesota is late June. The sepals and the twisting, descending lateral petals of large yellow lady's slipper are light green with varying numbers, depending on the specimen, of reddish-maroon veins. Plants are normally 12-15 inches in height. Flower size may equal 1½ inches or more. Habitat is typically rich mesic forests, openings and moist areas along roadsides. In northern areas, the plants prefer limestone habitats, but have adapted to drier acidic soils in southern areas of its range. An individual plant may have one or sometimes two flowers. In some locations plants group to form large showy clumps.

Small Yellow Lady's Slipper *Cypripedium parviflorum* Salisbury var. *parviflorum*

For this species the term *parviflorum* indicates that small flowers are a principal characteristic separating it from var. *pubescens*. The flowers of var. *parviflorum* are sometimes less than one inch in length. Where both varieties are found in close proximity, flower size is a noticeably distinguishing feature. Confusion of var. *parviflorum* with var. *makasin* and small flowering var. *pubescens* makes the exact range, habitat and abundance of small yellow lady's slipper difficult to determine.

Kentucky Lady's Slipper *Cypripedium kentuckiense* C.F. Reed

One of the largest lady's slippers of the eastern United States, this pale-yellow flowered orchid is impressive in appearance. Known from several sites in the ten southern states com-

The Lady's Slippers (Part II)



Kentucky Lady's Slipper
(*Cypripedium kentuckiense*)



White Lady's Slipper
(*Cypripedium candidum*)

prising its range, the Kentucky lady's slipper was for many decades considered a variant of the large yellow lady's slipper. The species was described and named *Cypripedium kentuckiense* by C.F. Reed in 1981. The specific epithet *kentuckiense* indicates the state where it was originally discovered. Sepals and lateral petals of this beautiful orchid are green suffused with numerous maroon interlaced veins giving them a dark appearance. The plants, reaching heights of eighteen to thirty inches, are normally much taller in stature than most other lady's slippers.

Although morphologically somewhat resembling *Cypripedium parviflorum* var. *pubescens*, the flower of *C. kentuckiense* is larger with a swooping lip and more blunt profile and is paler in color with undulating or wavy margins surrounding the orifice. Habitat for this large orchid is mesic, deciduous, overgrown floodplains near streams where it is subject to damage by flooding. Flowering normally occurs during mid May.

White Lady's Slipper *Cypripedium candidum* Muhlenberg

Predominantly a more northern species, the range of the extremely rare white lady's slipper extends from Canada south to Nebraska and Missouri and east to isolated spots in Kentucky and Virginia (and disjointedly to a very

limited area in northern Alabama). Habitat is typically calcareous soils of mesic to wet prairies; bloom time is mid-May. The specific epithet *candidum* means "white" or "shining" and refers to the predominant pouch color. A few pale purple veins suffuse the lower portion of the lip and purple splotches surround the pouch opening. The sepals and lateral petals are yellow-green speckled with brown. The two lateral petals are twisted and descending. A terminal sheathing

leaf protrudes above the rear of the twelve inch tall leafy stems of the flower. Morphologically, the small blooms of white lady's slipper somewhat resemble those of *Cypripedium parviflorum* var. *parviflorum* except that the margin of the orifice of *C. candidum* forms a more acute angle. In fact, in those limited areas where habitats overlap, hybrids of the two species are known and are designated *Cypripedium x andrewsii*.

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Upcoming Field Trips

Date	Description	Directions	Leader
Nov 07 10:00 AM Meet at Riverside Park.	Fall Foliage: Vineyard Mountain Eagle Scout Trails, Allatoona Dam, Bartow County The forested slopes of Vineyard Mountain provide beautiful vistas of the Etowah River Valley, Allatoona Lake & Dam and Cooper's Furnace historic area. We'll discuss the dynamics of fall color and see the wonders of autumn.	From I-75 exit 285 turn west off exit ramp and north on US Hwy 41. Continue ~1 mi to turn right (Old Allatoona Dam / Powerhouse Rd) and continue past entry kiosk and the first picnic areas to last parking area. Trailhead is on the right. See "Yellow Trail" map at http://www.lakeallatoona.com/recreation/hiking-trails/vineyard-mountain-eagle-scout-trails.htm . Walking: Moderate, ~ 5 miles Facilities: At Riverside Park. Bring: Lunch to eat on hike; usually no fee in fall/winter but be prepared for \$4 entry fee.	John Manion 404.814.4073 jmanion@atlantahistorycenter.com
Nov 11 Wednesday Veteran's Day 10:00 AM Meet at Fox Den Cove parking lot.	Remnant Longleaf Pine on Pine Mountain, Harris County This trip will take us to a small remnant tract of montane longleaf pine on the Pine Mountain Ridge. Fall foliage should be at its peak. We will walk ~1 mi on the Pine Mountain Trial, and then wander through the pines. Later, we will drive to other sites to see Georgia oak, Alabama cherry and more montane longleaf and may visit an area where FDR planted longleaf pine and another longleaf pine stand near Warm Springs.	Take US 27 to Roosevelt State Park and turn east on GA 190. Go ~4.3 mi, passing park headquarters and Roosevelt Memorial Bridge. Turn left into Fox Den Cove parking lot. Alternatively, take US 27-Alt south from Warm Springs or North from Columbus. At the top of the Pine Mountain Ridge, turn west onto GA 190 and proceed ~7.4 mi to Fox Den Cove parking lot on the right. Facilities: Bathrooms at park headquarters. Walking: Easy on well-maintained trail for ~1 mi. If we go off trail, we'll go slowly. Lunch: Bring to eat with FDR at Dowdell's Knob.	Hal Massie 478.836.4907 478.957.6095 (cell, day of hike; reception iffy) massiefarm@aol.com

BotSoc Annual Holiday Party



Saturday
December 5

10:00 AM

Hosts:

Jim & Candee Drake

3800 Hickory Branch Trail
 Olde Branch Subdivision
 Suwanee GA

Driving Directions:

From I-85 exit 111 (Lawrenceville-Suwanee Rd) go west (NW) toward Suwanee for ~0.6 mi to turn right onto Satellite Blvd. Go 0.9 mi on Satellite to turn left on Smithtown Rd. Travel 0.8 mi on Smithtown to turn right on Westbrook Rd (across from tree farm). Go 0.7 mi on Westbrook to turn right on Ridge Rd and go 0.6 mi to enter Olde Branch Subdivision on left. Hickory Branch Trail is immediate left after entrance; 3800 Hickory Branch Trail is down the hill.

Jim and Candee Drake
 3800 Hickory Branch Trail
 Suwanee GA 30024
 678.482.2127 678.793.2127 cell
 drake3800@charter.net

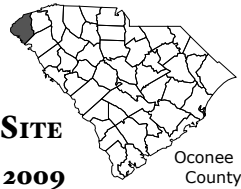
Bring: Your favorite covered dish to feed 8 with any needed utensils. Drinks will be provided.

Richard & Teresa Ware and Rich & Anita Reaves will present brief slide shows about their recent excellent botanical adventures to the Northeastern US and the Sonoran Desert of the American SW. (The Wares visited Mt. Cuba Center, the Arnold Arboretum, the Statue of Liberty and Monticello; the Reaves visited Joshua Tree NP, Saguaro NP and Organ Pipe Cactus National Monument). Linda Chafin will provide a preview of the 2010 Pilgrimage by describing some of the areas, sights and species we hope to see in 2010.

Field Trip Reports

DEVIL'S FORK STATE PARK & OCONEE STATION STATE HISTORIC SITE

MARCH 21, 2009



Seventeen BotSoc members and friends turned out on this surprisingly cool and cloudy, second day of Spring to search for Oconee bells (*Shortia galacifolia* var. *galacifolia*) and other early blooming spring wildflowers. We began with a visit to Devil's Fork State Park, a South Carolina park that borders Lake Jocassee, just north of the Cherokee Foothills National Scenic Highway and just south of the North Carolina border. Some of us cast a baleful eye on the lake, knowing that it had drowned thousands of the Oconee bells plants we had come to admire when it was created in the 1970s, impounding four streams and flooding the beautiful Jocassee Valley. Ducking into the woods adjacent to the lake, we were quickly treated to a spectacular population of Oconee bells, in full flower, that had escaped the floodwaters. Many of us had seen only the small population in Rabun County, Georgia, and we marveled at the seemingly endless sprawl of flowering plants along moist creek banks, stream terraces, and even the occasional lower slope.

Oconee bells is a gorgeous plant, with glossy, evergreen, white-veined leaves somewhat resembling the leaves of galax. The nodding, five-petaled flowers are a delicate, translucent white, with pink tints. The five fertile stamens are oddly shaped, with inward-folding flaps at their tips (there are also five sterile stamens hidden in the base of the flower). The plant spreads by runners, forming clumps and mats along stream banks and terraces.

Bot Soccers had many questions:

How does the American Oconee bells differ from the Asian congeners *Shortia uniflora*, *S. rotundifolia*, *S. exappendiculata*, *S. soldanelloides*, and *S. sinensis*? Why is it so narrowly distributed (only in the escarpment gorges of South and North Carolina, plus the one Georgia population)? What is the relative importance of vegetative versus sexual reproduction? What are the pollinators? In an attempt to answer some of these questions, I offer this admittedly incomplete report and some resources for more information about Oconee bells at the end of this report.

Shortia uniflora has pink flowers, but

otherwise closely resembles Oconee bells. *S. soldanelloides* has pink flowers and elliptic leaves. *S. rotundifolia* and *S. exappendiculata* have white flowers and similar leaves and seem to be separated from our species only by some fairly technical flower characters.

Oconee bells is considered a relict of an earlier flora that existed before the last glacial period. As glaciers advanced across the northern half of the continent and temperatures dropped to boreal levels even in the south, plants were pushed southward and into ravines and gorges where temperatures were moderated. The escarpment gorges at the southern end of the Appalachians harbored many such refugees. At the end of the Ice Age, as temperatures rose and the climate became much drier, some of these species, such as Oconee bells, persisted in the relatively cool, moist gorges. The presence of these relict species has earned the gorges a reputation for a high degree of plant diversity and endemism.

Oconee bells reproduce both sexually and vegetatively. The flowers are pollinated by insects, primarily bees, which are attracted by a mild fragrance and the presence of pollen; there are no nectaries in the flowers. Its seeds are dispersed downslope by gravity and germinate best in patches of bare mineral soil produced by disturbances such as small landslides or tree blowdowns. Seedlings appear in August, overwinter with seed leaves (cotyledons) only, and develop true leaves the following spring. Plants will not flower until they are four or more years old.

Although Oconee bells were by far the showiest wildflower at Devil's Fork, we also enjoyed seeing the flowers of variable-leaf heartleaf (*Hexastylis heterophylla*) on drier slopes under mountain laurel and those of trailing arbutus (*Epigaea repens*) at trailside in the acid soils of the oak-hickory-pine forest. Some folks detected the spicy smell of pygmy pipes (aka sweet pinesap,



OCONEE BELLS
Shortia galacifolia

Oconee bells
(*Shortia galacifolia*)
Drawing by Jean Putnam
Hancock in "Field Guide
to the Rare Plants of
Georgia".

Field Trip Reports

Monotropsis odorata), but we did not discover the actual location of these well camouflaged plants.

After a quick lunch at Devil's Fork State Park, we caravanned the nine miles to Oconee Station State Historic Site. Although this site has several interesting historic features, we headed straight for the waterfall trail where we were rewarded with an amazing display of spring ephemerals and other early blooming wildflowers. For long stretches of this mile-long trail, the ground was carpeted with toadshade (*Trillium cuneatum*) at every flowering stage from bud to fully opened, spreading across the moist forest floor and up the adjacent slopes. I began by writing "100s of plants" in my notes – as we continued to walk, I continued to add zeroes to that number, finally settling for "10,000s" of plants – though there could easily have been more! Petal color varied from (mostly) a dark, velvety maroon to bronze and dark yellow.

Other flowering plants along the trail included bloodroot (*Sanguinaria canadensis*), lousewort (*Pedicularis canadensis*), rue anemone (*Anemonella* [*Thalictrum*] *thalictroides*), hepatica (*Anemone* [*Hepatica*] *acutiloba*), halberd-leaved violet (*Viola hastata*), giant chickweed (*Stellaria pubera*), blue cohosh (*Caulophyllum thalictroides*), small white violet (*Viola blanda*),

and poor robin's plantain (*Erigeron pulchellus*). Flowering shrubs included yellowroot (*Xanthorhiza simplicissima*), hazelnut (*Corylus americana*) and spicebush (*Lindera benzoin*). Many hundreds of recently emerged mayapple (*Podophyllum peltatum*) and wild geranium (*Geranium maculatum*) promised more to come. In the non-flowering category, we found walking fern growing in the rocks at the waterfall and were struck by the large swathes of two different species of ground-pine, *Lycopodium obscurum* (synonym: *Dendrolycopodium dendroideum*) and *Lycopodium digitatum* (synonym: *Diphasiastrum digitatum*), growing together on moist slopes and terraces. In case this abundance had not convinced us of the reality of spring, we were treated to the mating calls of two spring harbingers from the amphibian world: spring peepers, with their high repeating whistles, and chorus frogs, with a trilling call that sounds like a thumb running up the teeth of a comb. We humans may have shivered in the fifty-degree temperatures, but clearly the natural world was well into springtime mode.

Linda Chafn, Athens

More about Oconee bells:

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<http://georgiawildlife.dnr.state.ga.us/assets/documents/shorga.pdf>

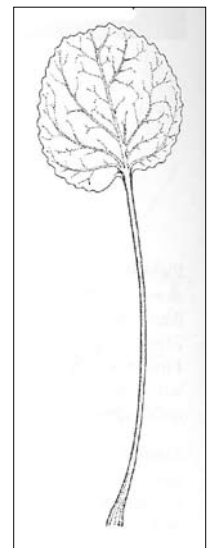
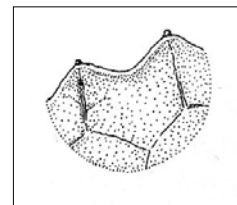
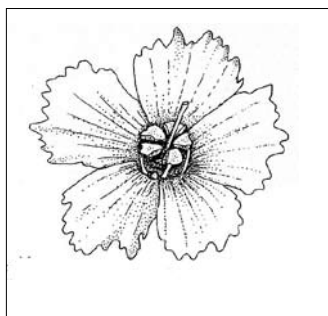
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Vivian, V.E. 1967. *Shortia galacifolia*: life history and microclimatic requirements. Bulletin of the Torrey Botanical Club 94: 369-387.

Zahner, R., and S.M. Jones. 1983. Resolving the type locality for *Shortia galacifolia* T. & G. Castanea 48: 163-173.

Details of flower, fruit, leaf margin, and leaf stem showing flat leaf tip for Oconee bells (*Shortia galacifolia*)

Drawing by Jean Putnam Hancock in "Field Guide to the Rare Plants of Georgia".



Field Trip Reports



DUNCAN PROPERTY

APRIL 18, 2009

Athens-Clarke County

When Dr. Wilbur H. Duncan died in May 2005 at age 94 at his home in Athens, he was Georgia's best known botanist and an inspiration to countless nature lovers. As a University of Georgia botany professor for 40 years, he introduced scores of students and fellow educators to the Southeast's immensely rich and diverse flora, on which he was a leading expert.

He and his wife Marion, also a botanist, wrote three authoritative guidebooks on the region's vascular plants. Their "Wildflowers of the Southeastern United States" has been one of the UGA Press' bestsellers since its publication in 1975. The books have been vital additions to the libraries of Georgia Botanical Society members, past and present.

So, when some 25 BotSoc members and friends visited the 33-acre Athens estate of Wilbur and Marion Duncan on April 18, it was like visiting a Mecca of Georgia botany. Greeting us were one of the Duncans' sons, Mack Duncan, and his wife Julie, also a distinguished botanist. Mack and Julie now live on and care for the hilly, wooded property cut through by three creeks.

His mother and father, Mack told us, bought the property in 1943 and built their red-brick home there in 1962. Over the years, Wilbur and Marion Duncan transplanted some 150 species of wildflowers and other native plants on their property. Many of the plants came from land later submerged by reservoirs, including lakes Allatoona, Russell, Sinclair and Hartwell.

On our Bot Soc visit in April, we first found several interesting plants, including bird's-foot violets, along a stone wall directly in front of the house. Julie explained that her father-in-law moved several big rocks "inch by inch" -- and sometimes with a tractor -- to build the wall.

Julie then led us down the driveway along which we found some 20 native plants, including several in bloom -- Atamasco lily (*Zephranthes atamasca*), spiderwort (*Tradescantia* sp.), horsebalm (*Collinsonia* sp.), yellow stargrass (*Hypoxis hirsuta*), yellow trillium (*Trillium luteum*) and sessile trillium (*T. sessile*). In some rock depres-

sions along a rippling, scenic creek running the length of the property, we found sunnybells (*Schoenolirion* sp.) in bloom. As we started walking along the creek, Julie called our attention to a snowbell tree (*Styrax americanus*), "One of our pride and joys," she said. She also pointed out a bottlebrush buckeye (*Aesculus parviflora*), one of four buckeye species on the property.

Along the creek, we found many plants typical of the Georgia piedmont. It was near the end of our walk that we saw the individual tree for which the Duncans' property is well-known -- the national and the state champion Georgia oak (*Quercus georgiana*), measuring 75 feet tall and 73 inches in circumference.

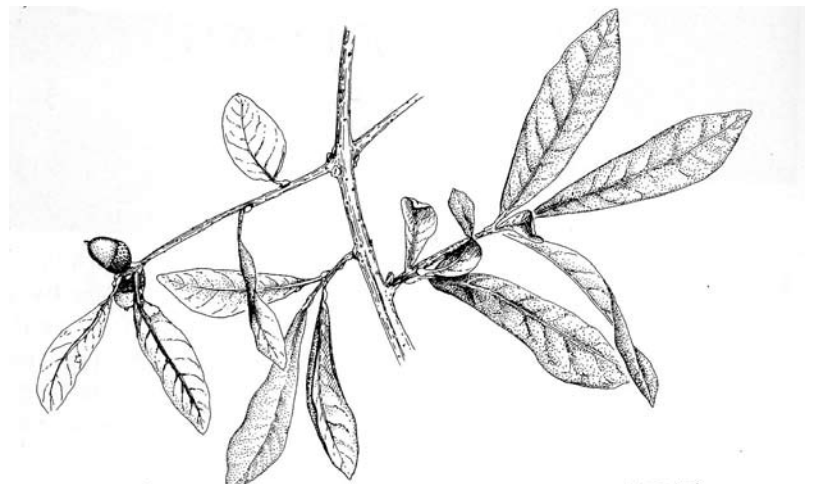
Dr. Duncan, however, made botanical history because of another *Quercus* species, the Oglethorpe oak (*Quercus oglethorpensis*). He first identified the tree in 1939 along a quiet creek in Oglethorpe County. At the time, it was the first new oak found east of the Mississippi in 90 years, an event so newsworthy that Time magazine did a feature article about it. It was one of three "new" species identified by Dr. Duncan during his illustrious career.

It was fitting, then, that we ended our walk in front of a hardy specimen of the Oglethorpe oak growing just in back of the Duncans' home.

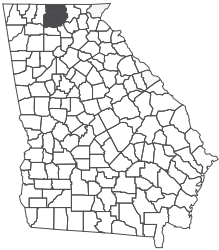
Charles Seabrook, Decatur

Oglethorpe oak
(*Quercus oglethorpensis*)

Drawing by Jean Putnam Hancock in "Field Guide to the Rare Plants of Georgia".



Field Trip Reports



Gilmer & Fannin Counties

COHUTTA MOUNTAINS: ROADSIDE BOTANIZING IN GILMER & FANNIN COUNTIES

MAY 23, 2009

During the Cohutta field trip, Anita Reaves discovered a wonderful grouping of small yellow ladies slippers (*Cypripedium parviflorum* var. *parviflorum*), but to some BotSocers the day's biggest thrill was a yellow buckeye (*Aesculus flava*) so wonderfully branched and massive that Hal Massie resurrected the term "tree hugger".
Photos by Teresa Ware.

Despite the threat of inclement weather, at least a dozen BotSocers arrived at our meeting site west of Ellijay, near the Cohutta Wilderness Area. Despite the forecast, we had surprisingly good weather for the day. The field trip, as planned by our leader Rich Reaves, was a series of roadside stops on the Forest Service roads leading into and around the wilderness area.

Of course, you can't stop BotSocers from botanizing, so the first stop was at the meeting site and we weren't disappointed! Here we observed galax (*Galax urceolata*), large-flower heartleaf (*Hexastylis shuttleworthii* var. *shuttleworthii*), and mountain laurel (*Kalmia latifolia*) blooming. Cinnamon fern (*Osmundastrum cinnamomeum*) and rattlesnake fern (*Botrypus virginianus*) were in abundance and with fertile fronds on display. A patch of royal fern (*Osmunda regalis*) was observed without fertile fronds. Just before we moved on to our next stop we found a patch of grass-of-Parnassas (*Parnassia asarifolia*) along a small creek. This plant will not bloom until the fall.



Our next stop was at the junction of two Forest Service roads and did yield the main plant that Rich wanted to show us here which was four-leaved milkweed (*Asclepias quadrifolia*). Additional plants found in this section included white milkweed (*Asclepias variegata*), sweetshrub (*Calycanthus floridus*) and a vine that proved controversial. Later attempts



at keying from photographs (and you know how dangerous that can be), lead the author to believe it was hedge bindweed (*Calystegia sepium*).

The next stop was at Bear Creek Falls and Picnic Area. The falls themselves were beautiful enough, but there was a dainty little plant with white flowers growing in small patches of soil and rock in the creek. This beauty is called lady rue (*Thalictrum clavatum*). We also saw buffalo nut (*Pyrularia pubera*) and a tiny little flowering plant which was forming a ground cover, that Hal Massie keyed to be a non-native plant called common speedwell (*Veronica officinalis*).

As we drove up the mountain, we stopped to admire the masses of wild geranium (*Geranium maculatum*), which seem to be a darker color here in the mountains. There were also extensive patches of Canada violet and star chickweed (*Stellaria pubera*). The author stopped to inspect the giant basal leaves of common burdock (*Arctium minus*), which blooms later in the year.

Reaching the crest, we turned right and made another stop. This one was really rewarding because soon Anita Reaves discovered a wonderful grouping of small yellow ladies slippers (*Cypripedium parviflorum* var. *parviflorum*) in full bloom! This stop also provided us with our first trillium sighting of the day. This was really a wonderful day for trilliums, as we saw a total of seven different species and many different color variations, which leads us to believe that we were seeing hybrids of several different species. We saw toadshade trillium (*Trillium cuneatum*), large-flowered trillium (*T. grandiflorum*) which was just past blooming, red trillium (*T. erectum*), Vasey's trillium (*T. vaseyi*), sweet white trillium (*T. simile*), Catesby's trillium (*T. catesbaei*), and even found a site with sweet enough soil to support yellow trillium (*T. luteum*).

We made several other stops to see such beauties as: Solomon's seal (*Polygonatum biflorum*), Solomon's plume (*Maianthemum racemosum*), horse gentian (*Triosteum aurantiacum*), and lily-of-the-valley (*Convallaria majuscula*). However, the biggest thrill of the day for Hal and this author was a giant yellow buckeye (*Aesculus flava*) growing near the side of the road. This was a beautiful, wonderfully branched, and massive tree which led us to resurrect the term "tree hugger." Thanks to Rich & Anita Reaves for an excellent day of roadside botanizing.

Richard Ware, Rome

In Memoriam

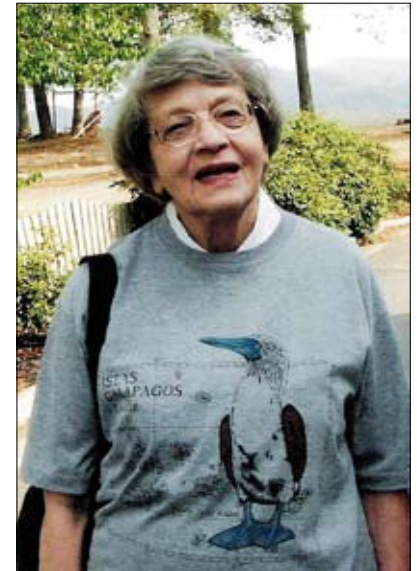
Kathryn (Jonny) Howell

Eileen and Frank French contributed a remembrance of long time Society member, Jonny Howell.

Kathryn (Jonny) Howell died April 12, 2009 in her Athens, GA home, one week after participating in the 2009 Wildflower Pilgrimage. She joined the Georgia Botanical Society over 30 years ago with her husband, Dr. Almonte C. Howell, Jr. Her parents were Lutheran Missionaries and she was born in Seoul, Korea (17 July, 1922) and lived in Japan until she was nine years old. Jonny had many passions in life -- she belonged to a variety of music groups (choral, handbells, recorder), she enjoyed origami and making paper and books and she was an active supporter of the Georgia Museum of Art.

She loved field outings and was an active member of the Georgia Conservancy, Georgia Ornithological Society, The Oconee River Greenway Commission, Audubon December Bird Count and Sandy Creek Nature Center. She eagerly participated in the Georgia Botanical Society's Annual Wildflower Pilgrimages.

Survivors include her son Doug Howell of Watkinsville, GA; daughter Libby (Fred) Schempf of Odenville, AL; sister Rebecca Leager of Raleigh, NC and grandsons Jacob and Freddy Schempf.



Jonny Howell at the 2007 Pilgrimage in Blairsville.

Margie T. Harbin

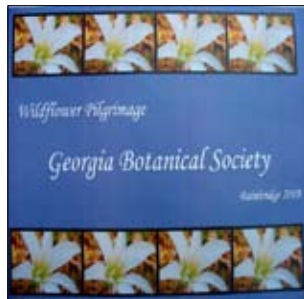
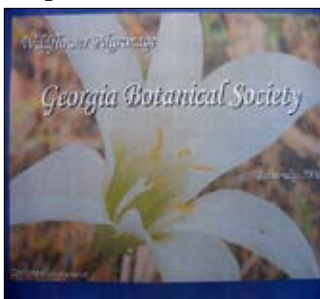
Richard Ware forwarded the news that Margie Harbin, a longtime member of the Georgia Botanical Society, had died August 18, 2009 at her home in Rome GA.

Margie T. Harbin, age 87, died Tuesday evening at home after a brief illness. She was born in Atlanta, Georgia on November 15, 1921. Her great grandfather was Robert Battey, a surgeon in the Civil War for whom Battey Hospital (now Northwest Georgia Regional Hospital) was named and who performed the world's first oophorectomy surgery in Rome. After graduating from Sweet Briar College in 1942, she worked for the War Department during World War II training pilots how to fly with instruments using the Link trainer system. She then married Dr. Thomas S. Harbin, and they were together for over 60 years. She had a lifelong love of the natural world and was active in many environmental organizations including the Nature Conservancy and the Coosa River Basin Initiative. She was instrumental in assisting the Nature Conservancy in establishing the Marshall Forest. She continued her love of learning by taking all of the art, botany and biology courses available at Shorter College, and was inducted as an honorary member of the Cum Laude Society at Darlington in 1973. She was also active in the local arts community. She took great joy in her children, their spouses, her grandchildren, her nieces and nephews, and her many friends. In lieu of flowers, the family requests that contributions be made to The Nature Conservancy, 1330 West Peachtree Street, Suite 410, Atlanta, GA 30309-2904.

Excerpted from the Atlanta Journal-Constitution.

Committee Reports (cont. from page 2)

design. Shirts will 'stone blue' or 'oceana'. Two designs are possible (see below): Comments are welcome.



Tipularia Report (Richard Ware): The 2009 issue, due in October or November, will contain five articles: Investigating the ecological and evolutionary responses of Sea Oats (*Uniola paniculata*) to the coastal dune environment by Cara Gormally; Native Hollies (*Ilex*) of the Eastern United States by Gil Nelson; Polygalaceae: The Milkwort Family in Georgia by Hugh Nourse; Native Lilies (Genera *Lilium*) of the Eastern United States by Jim Drake; The genus *Clematis* in Georgia by Richard Ware. Richard Ware also reviews the "Field Guide to Trees of North America" by Kershner, Mathews, Nelson and Spellenberg,

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GEORGIA BOTANICAL SOCIETY

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