

BotSoc News



Georgia Botanical Society

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2012

Notes from the BotSoc Annual Meeting

IN THIS
ISSUE:

On September 23, 2012, the Georgia Botanical Society had their Annual Meeting at Vogel State Park. This was an election year for new officers for the Georgia Botanical Society. Below is a summary of the election results and other items of interest to members:

From the Board Meeting:

Discussion of newsletter mailing. There are currently fewer than 200 members receiving printed copies of the newsletter. The rest of the membership has opted to receive the newsletter electronically. We are saving money by printing less paper copies, however, with fewer than 200 pieces to mail, we lose the use of the bulk mailing permit which greatly reduces the cost of postage. The board agreed to add the names of enough libraries to increase the mailing list number to 200. Anita will add enough libraries to the mailing list that goes to the printer and also delete them if the number of members requesting paper copies again reaches the level of 200.

Treasurer's report. Richard Reaves reported that the Society will break even this year. The 2012 pilgrimage made money because the regular newsletter and the pilgrimage mailing were combined due to the timing of the pilgrimage. All of the Society's investments and accounts (stocks, bonds, money markets, and bank accounts) saw an increase since January 1, 2012. Rich reported that this year saw the lowest income to the Marie Mellinger fund since he has been treasurer, probably due to the recession. Discussion about how to increase donations to the fund followed. Linda suggested that we mail a fundraising letter to

the membership to go out either with the next newsletter or mailed separately depending on what Rich and Anita find out about mailing costs. This was presented as a motion, which Rich seconded. The vote was unanimous.

2013 Pilgrimage report. Maureen Donohue is planning the 2013 pilgrimage for April 5-7 in Augusta, GA. The Quality Inn in Augusta has been selected as the Host Hotel, with the Sleep Inn next door to accept spillover. Rooms at these hotels have been blocked. Field trips will include a visit to a Carolina Bay in South Carolina (Ditch Pond) and three trips to Heggie's Rock (one per day), plus many others. We will be able to visit Fort Gordon, barring military emergency, but will not have access to the Savannah River Site.

Election of Officers occurred at the Annual Meeting. Officers are elected for a term of two years. The slate was presented and the members elected these officers:

President – Jerry Hightower

Vice President – Maureen Donohue

Treasurer – Rich Reaves

Secretary – Linda Chafin



Parnassia grandifolia, largeleaf grass of Parnassus, observed on the field trip following the Annual meeting.

Photo by Rich Reaves

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Society News

President's Perspective

BotSoc News

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We are very fortunate to not only live in the largest state east of the Mississippi River, but to live in a state with such a rich diversity of plants and plant communities. Each region offers a wealth of opportunities for exploration and discovery. We are also very fortunate to have a botanical society with a rich legacy that, through its field trip offerings, also offers a wealth of opportunities for exploration and discovery. BotSoc affords interested individuals wonderful learning experiences with workshops and outings. I have been most fortunate to have discovered the Georgia Botanical Society almost forty years ago. I will always remember my first field trip and asking Marie Mellinger, “tell me this plant’s name again” for the third time. She most kindly told me yet again that it was *Trillium grandiflorum*; probably wondering who this young dummy was. I learned quite a bit on that first outing.

I now find myself, a bit to my amazement, with the honor of serving as president. And for me, it is indeed a honor. As such I would like to put forth a challenge to each member of the Georgia Botanical Society. Let us see if we can each recruit one new member before our next annual meeting. In fact let’s see if we can show a fifty percent increase in membership by the Spring Wildflower Pilgrimage in Augusta. BotSoc is an extraordinary organization with very fantastic folks who love to share their knowledge with others. Let’s do everything we can to ensure that more people across all of our regions learn about the Georgia Botanical Society. Let’s keep the legacy going strong throughout the twenty-first century.

Jerry Hightower

Georgia's Rare Plants

Pickering's dawnflower

Stylisma pickeringii (Torrey ex M.A. Curtis) A. Gray var. *pickeringii*

Text and photos by Hal Massie



Pickering's dawnflower, *Stylisma pickeringii*

The Fall Line sandhills of central and west-central Georgia are a harsh environment. Rainfall quickly seeps through the deep sand, nutrient levels are low and easily leached away. The sand also works like a reflector oven, causing plants to deal with bright light from above and below. Droughts are common and high temperatures during the summer are intense and unforgiving. In Georgia, only granite outcrops present a more extreme habitat than the sandhills.

Despite those severe conditions, the Fall Line sandhills have a complex and amazingly varied flora, including many rare plants. One of those rarities, Pickering's dawnflower,

Stylisma pickeringii, thrives in the deepest and most barren sands. A visitor viewing the delicate and beautiful flowers of this sprawling vine might have a hard time realizing that this plant is incredibly tough – a survivor in a harsh landscape.

A Dawnflower by Any Other Name

Pickering's dawnflower belongs to the morning-glory family, the Convolvulaceae. Synonyms include: *Bonamia pickeringii* (Torrey ex M.A. Curtis) Gray; *Breweria pickeringii* (Torr. ex M.A. Curtis) A. Gray; and *Breweria pickeringii* (Torrey ex M.A. Curtis) A. Gray var. *pickeringii*. As far as common names go, Pickering's dawnflower is also sometimes called Pickering's morning-glory.

Tougher Than It Looks

Stylisma pickeringii is an herbaceous, perennial vine. Because the numerous individual stems radiate out from a center point, the plant actually looks more like a mounding perennial than a trailing vine. The stems are usually 3-4 feet long, but occasionally reaching 6-7 feet in well-established plants.

Georgia's Rare Plants

The leaves of Pickering's dawnflower are narrowly linear and held vertically on the stem, a character that allows you to identify this plant even when it isn't flowering. The vertical arrangement of the leaf minimizes the amount of light striking the leaf surface from either direction, giving it an advantage in the open sand habitat it prefers. Leaves are typically about 5 cm long and less than 3 mm wide.

The flowers are axillary on stalks that usually have two leaf-like bracts. Individual flowers are white, with a delicate appearance, and are about 2 cm wide, the petals fused with 5 flattened lobes. Five white stamens share the middle of the flower with a pistil that has a style divided only at the tip, another character useful in identifying this species.



Living the Hot Life

Members of this genus are referred to as 'dawnflowers' because the flowers open early in the morning and close up as the day begins to get hot. Some references state that the flowers close up by 10:00 in the morning, but, in reality, it is more complicated than that. I have seen Pickering's dawnflower with open flowers at 3 in the afternoon on a cool and cloudy day. Conversely, I have seen days when they were just starting to open by 10 AM.

Pickering's dawnflower is an important source of nectar and pollen for a variety of insect pollinators, including this bee mimic, true bees, butterflies, and flies.

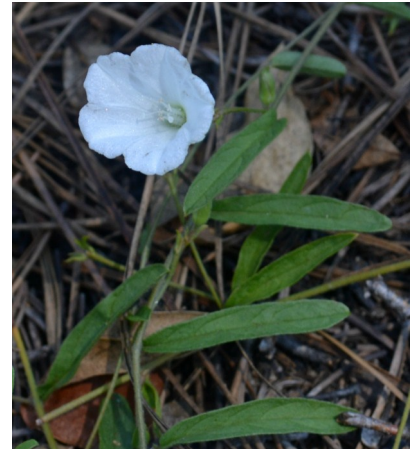
Flowering starts in early June (with occasional early flowers in late May) and continues through September (with a few scattered flowers through October in warm autumns). Peak flowering usually happens in late June and early July...making appreciating and photographing the flowers of this tough sandhills vine a rather warm chore.

Fruiting can occur from late June through October. The tiny seeds often germinate as soon as they contact sand. The dispersal mechanism that allows Pickering's dawnflower to colonize disturbed sites seems to be poorly understood.

Georgia's Rare Plants

Hanging Out With the Commoners

The only plant likely to be confused with Pickering's dawnflower is *Stylisma patens*, common dawnflower, a species that shares the same sandy habitats as Pickering's dawnflower, though it does not appear to be as dependent on disturbance events and is more accepting of competition. The leaves of Common dawnflower **are narrowly elliptic and much wider than those of Pickering's dawnflower and they are held horizontally on the stem.** The flowers are somewhat larger than Pickering's **and the style is divided to the base** (Pickering's style is divided only a short way at the top). Common dawnflower is...well...much more common than Pickering's dawnflower.



Common dawnflower, *Stylisma patens*, grows in the same sandy habitats, often side by side with Pickering's. As well as other differences, the flowers of common dawnflower are larger.

Life's a Very Old Beach

In Georgia, Pickering's dawnflower is found on deep, bare sands of the Fall Line sandhills and on sandy terraces and ridges along Coastal Plain rivers. It responds well to disturbance events that create bare soil and reduce competition. It will quickly colonize plowed fire breaks and can sometimes be found growing in the center of sand roads where the sand tends to 'hump' in the center. Pickering's dawnflower is found in areas where fire occurs on a regular basis and most populations occur with other fire-dependent species like longleaf pine and turkey oak.

One of the largest populations of Pickering's dawnflower that I know of occurs along a rural sand road that is scraped occasionally. The county road maintenance tends to create a deep sand ramp beside the road, accidentally providing prime habitat for this species.



Pickering's dawnflower can often be found cascading over the banks of sandy roads. This plant grows along a well-traveled road in Taylor County.

Southern Roots and Northern Cousins

The range of Pickering's dawnflower is somewhat disjointed – this species is found, but not continuously, from southern North Carolina, through South Carolina and into Georgia, Alabama and eastern Mississippi. It is most abundant in the Fall Line sandhills of Georgia and the

Georgia's Rare Plants

Carolinas. Oddly, there is also a disjunct population in the Pine Barrens of New Jersey. One other variety of *Stylisma pickeringii* occurs - var. *pattersonii*. It ranges from eastern Texas north to Iowa and Illinois. Patterson's dawnflower, as this variety is called, also prefers sandhills and other sandy habitats. The differences between the two varieties are slight, but they do not overlap in range.

The Pickering in Pickeringii

Stylisma pickeringii was named in honor of Charles Pickering (1805-1878), a Harvard-trained medical doctor and naturalist. Pickering was a member of the Wilkes Expedition that explored the Pacific Ocean from 1838 to 1842. His family has had a significant role in American history, especially in politics and science.

Abundantly Rare

Pickering's dawnflower is legally protected as a threatened species in Georgia. It is considered endangered in the states of North Carolina and New Jersey. The Georgia Natural Heritage Program ranks *Stylisma pickeringii* var. *pickeringii* as a G4T3/S2 (the species is globally secure, but the variety is rare and it is imperiled within the state of Georgia). Like several other rare sandhills plants, including *Pityopsis pinifolia* which it often grows in association with, Pickering's dawnflower is often locally abundant, despite the fact that it is rare outside the Fall Line sandhills.



Pickering's dawnflower, *Stylisma pickeringii*

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- USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 2 February 2011). National Plant Data Center
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Upcoming Field Trips

Date	Description	Directions	Leader
<p>Nov 11 10:00 am Veterans Day Note: this is a Sunday trip.</p>	<p>Grass-of-Parnassus, Roosevelt State Park, Meriwether and Harris Counties</p> <p>The focus of this trip to FDR State Park will be to see a spectacular display of kidney-leaf grass-of-Parnassus, <i>Parnassia asarifolia</i>. In past years, this display has been at its best on or about Veteran's Day. The site is a boggy springhead on the south side of Pine Mountain. <i>Gentiana saponaria</i>, soapwort gentian is another possibility for this wet area. We'll walk down part of the Pine Mountain Trail to Sparks Creek, hopefully with colorful fall foliage and a wildflower or two along the way. If time permits, we may cross Sparks Creek and walk a little farther up the trail to see a couple of American chestnuts, <i>Castanea dentata</i>.</p>	<p>Directions: From the Atlanta area, Take I-85 south to Exit 41 (I-185), and head south on US 27Alt. Stay on US 27Alt all the way through the town of Warm Springs, then up the side of Pine Mountain. Just as you top the crest of Pine Mountain, you will see GA 190 and the western entrance to FDR State Park. Turn right onto 190 (heading west) and go just under 2 miles to the Rocky Point Trailhead parking lot on the left. From the south, take US 27A north from Columbus until you crest Pine Mountain. Turn left onto GA 190 and go to the Rocky Point Trailhead parking lot.</p> <p>Walking: Easy to moderate. We'll walk about a mile on the Pine Mountain Trail on a gradual downhill slope to Spark's Creek. The trail is rocky, but well-used and well maintained. If we go to see the American chestnuts, we'll add another half mile or so. The trip out will be by reversing direction on the PMT, but a gradual uphill march.</p> <p>Facilities: There are no facilities at the western end of FDR State Park. Last facilities will be in Warm Springs. However, we have managed to place trees, rocks and tangles of vegetation at regular intervals for your privacy and convenience.</p> <p>Bring: Comfortable walking shoes, \$5.00 parking fee or annual pass, water, camera, binoculars to see features high in the trees, and a lunch to eat somewhere along the trail. You can probably leave the bug spray at home this time. Dress for the weather.</p>	<p>Hal Massie 478-836-4907 478-957-6095 (cell on the morning of the hike) massiefarm@aol.com</p>

CONSERVATIONISTS ENCOURAGE SEX AT BROAD RIVER WMA

By Jean Smith

Well, plant sex – but read on, botany can be heart-warming and romantic.

In early February 2010 – just in time for Valentines Day – two dozen female flowering dwarf sumac were transplanted from the Atlanta Botanic Garden to a ridge overlooking the Broad River in Elbert County. Thus ended decades of loneliness for our watershed's male flowering dwarf sumac.

Rhus michauxii, as the plant is known in the botanical world, is dioecious: some plants produce pollen but no seeds (the male plants of a dioecious population) while other plants produce seeds but no pollen (the female plants of the population).

This is a fine strategy for preventing inbreeding and maintaining genetic diversity. It works very well for American holly, for example, whose robust populations of male and female flowering plants are found throughout the eastern US from Maine to Florida.

It's not such a good idea, however, if you belong to the only natural population of male flowering plants for the entire state of Georgia and the nearest female flowers are 80 miles away in Newton County.

Never abundant and once thought to have completely disappeared from Georgia, the last surviving four stems of dwarf sumac were discovered in the 1980s on Corps of Engineer land leased to Georgia's Department of Natural Resources as the Board River Wildlife Management Area. Typically found growing on sandy soils in openings or thin woods and dependent on fire or some other disturbance to maintain the open quality of its habitat, the 4 stems have clung to life through years of drought and almost two decades of discussion among state and federal scientists as to how best to lead this plant back from the edge of extinction.



Drawing by Linda Chafin

Plant News

But finally in 2009, the drought ended for our rarest shrub - both literally and figuratively. The rains came back to our watershed and a controlled burn in March, 2009 reduced to ashes the under brush threatening to overtake the sumac's ridge habitat. The plant responded to the increased sunlight and much needed rainfall by expanding to 23 stems!

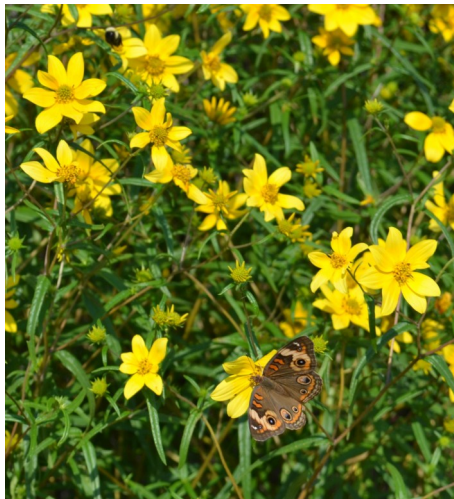
To celebrate this progress, rooted cuttings from the Newton County female population were planted in February 2010 alongside the fire-invigorated male plants. If all goes well, the two populations will bloom each summer (sometime between June and August) and we'll have an exchange of germplasm. And maybe, just maybe, one of the Southeast's rarest shrubs will be born anew.

Update to the story: In September 2012, the Athens Herald Banner reported that fruit has been found this year on one the female plants. Approximately 50 small fruits were taken back to the Atlanta Botanical Garden to see if they contain viable seeds. If there are viable seeds, ABG's conservation team will try to grow new plants using some of them.



Beechdrops (*Epifagus virginiana*)

Photo by Rich Reaves



Buckeye butterfly on Stone Mountain daisy (*Helianthus porterii*)

Photo by Hal Massie



Soapwort gentian (*Gentiana saponaria*)

Photo by Richard Ware

Society News**Save the date—2013 Spring Wildflower Pilgrimage****April 5-7, 2013**

The Quality Inn in Augusta, GA is our headquarters for the 2013 pilgrimage. The banquet and evening programs will be held there. Field trips planned include Heggies Rock, serpentine barrens, a rocky blackjack oak savannah, a Carolina bay and many more. Our pre-pilgrimage field trip on Friday will include a choice of 3 trips. The full program will be available in early January.

We're looking forward to seeing you in Augusta, so please save these dates.

Maureen Donohue

The Natural Communities of Georgia - Now Available for Pre-order on Amazon

The Natural Communities of Georgia presents a comprehensive overview of the state's natural landscapes, providing an ecological context to enhance understanding of this region's natural history.

Georgia boasts an impressive range of natural communities, assemblages of interacting species that have either been impacted by modern human activities or have successfully recovered from them. This guide makes the case that identifying these communities and the factors that determine their distribution are central to understanding Georgia's ecological diversity and the steps necessary for its conservation.

Within Georgia's five major ecoregions the editors identify and describe a total of sixty-six natural communities, such as the expansive salt marshes of the barrier islands in the Maritime ecoregion, the fire-driven longleaf pine woodlands of the Coastal Plain, the beautiful granite outcrops of the Piedmont, the rare prairies of the Ridge and Valley, and the diverse coves of the Blue Ridge.

This book was written by Leslie Edwards, Jonathon Ambrose and L. Katherine Kirkman. The photography is by Hugh Nourse and Carol Nourse, and the publisher is the University of Georgia Press. The book is now available for pre-sale on www.amazon.com.

The release date is scheduled for February 25, 2013 and it will be shipped on that date if pre-ordered. The book is 800 pages, a hardcover book and is priced by Amazon at \$54.73. It might make the perfect holiday or birthday gift for your favorite botanist.

Hugh and Leslie are both past presidents of the Georgia Botanical Society. Carol is also a long time Botanical Society member. Kay Kirkman has been very responsive to our requests for field trips in her capacity as a plant ecologist at the Jones Ecological Research Center at Ichauway. Jon Ambrose is the assistant chief in the Nongame Conservation Section, Wildlife Resources Division for Georgia DNR. Leslie Edwards is a professor at Georgia State University. Carol and Hugh Nourse are nationally recognized nature photographers.

Society News

Georgia Botanical Society Annual Holiday Lunch

December 15, 2012 10:00 am – 4:00 pm

Our annual holiday gathering will be at the Chattahoochee River Environmental Education Center, 8615 Barnwell Road, Johns Creek, Georgia 30022. Everyone is invited to a potluck lunch at the beautiful Environmental Education Center overlooking River Glen Pond, the Choestoe Meadows, and the forest along the Chattahoochee River. Bring an appetizer or lunch dish to share and join us for good conversation, sharing of books, news, discoveries, plants, or anything else that you would like. We'll have a warm fire in the fireplaces and the fire ring. There will be a short program on the best wildflower trails in the Chattahoochee River Corridor at 11:00 am and a great post lunch walk on the Lutra Loop Trail (participation optional).

FROM HWY. 400:

- Take exit 7; Holcomb Bridge Road, Hwy. 140
- Turn east and travel approx. 4 miles.
- Turn left onto Barnwell Rd. (CVS on right/Kroger on left).
- Travel approximately .7 mile. Entrance on right.

Large brown sign with white letters on roadway.

FROM INTERSTATE 85:

- Take exit 99; Jimmy Carter Blvd. and travel west.
- Jimmy Carter Blvd. becomes Holcomb Bridge Rd.
- Continue west on Holcomb Bridge Rd.
- Cross the Chattahoochee River.
- Turn right onto Barnwell Rd. Travel .7 mile.

Entrance located on right.

NOTE: Disregard posted "Do Not Enter" signs.,

IT'S TIME TO RENEW YOUR MEMBERSHIP IN THE GEORGIA BOTANICAL SOCIETY

Memberships are effective for one calendar year, January 1st to December 31st. A renewal form is inserted in the print version of the November newsletter. (If the form is missing, please call or email Ellen Honeycutt at 770-664-0527 or ehoneycutt@bellsouth.net.) Members receiving the electronic version of the newsletter can download a renewal form from our website (gabotsoc.org).

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