White Fringeless Orchid Nears Federal Protection

The US Fish and Wildlife Service has announced a proposal to list Platanthera integrilabia, white fringeless orchid (WFO), as threatened under the Endangered Species Act. This species is on the Tennessee Rare Plant List, but the federal listing would provide more protection. Numerous factors were considered in deciding to pursue the proposed listing. Aspects of the plants life history and significant threats to its survival are the primary reasons that this species needs additional help.

White fringeless orchid was originally described by Constantine Samuel Rafinesque (Rafinesque 1836) but the name he used, Blephariglottis bicornis, has not been accepted, possibly due to his report of the species from Louisiana where it is not currently known to occur (Baumback 2009). His concept of the species may also have been too general for acceptance as it appears to include Platanthera conspicua. It was included in the broader concept of Habenaria blephariglottis var. conspicua based on a specimen from Tennessee collected by a Mrs. Bennett in 1888 (Ames 1910). Dr. Donovan Correll described it as a distinct variety, Habenaria blephariglottis var. integrilabia (Correll 1941). The currently accepted name for the species is based on the description by Carlyle A. Luer (1975). It was subsequently placed in a different genus as Blephariglottis integrilabia (Schenk 1976) but this name was not accepted.

Various common names have been applied to this plant including monkey face orchid and white fringeless orchid. The late Dr. Harry Yeatman told me that it was actually called monkey tail orchid and apparently someone misheard that and recorded "monkey face" instead. It is easy to see the monkey tail on this orchid but I challenge you to find a face anywhere on the plant.
A Letter from the President

If you missed the Annual Meeting, you missed a great time. Wonderful field trip and a nice location. Next year’s meeting is scheduled for September 16–18 and will be at Fall Creek Falls State Park.

I wanted to let you know that TNPS is still looking for persons to coordinate Education/Outreach events in East and West Tennessee. Kim Sadler has agreed to coordinate Middle Tennessee. Thank you, Kim.

I guess the key word is coordinate. You don’t have to be the person who sits at the booth. You can find volunteers from people you know in your Region. We have volunteers in all three regions who already help. You don’t have to solicit events. We do get requests through our contact site on the website. The Board will make sure you have promotional materials. At some events TNPS is represented only by our brochures.

If you want to think of new ways to share in the education of the public about native plants and find new ways to support efforts to protect wild plant communities, TNPS will be very happy.

Kim and I will be meeting in the next few months to discuss our plans for this new adventure. If you can coordinate, please contact me. If you have ideas on how to proceed or ideas for new projects, let me know those also.

Thanks for your interest.

865-938-7627, ssreitreer@yahoo.com

Thanks to all,

Remembering Margret Rhinehart

September 23 marked the anniversary of the passing of Dr. Margret Rhinehart, a long-time TNPS member and frequent trip leader in the 1980s and 1990s, usually on Sundays.

She was known for her botanical explorations in Tennessee, which often led to significant new discoveries, such as the population of *Trillium pusillum* on Hinch Mountain. She also contributed numerous voucher specimens to the University of Tennessee Herbarium, greatly expanding the county occurrence records for various species. Being a practicing physician in Spencer, Tennessee, from 1951 to 2001, her site discoveries were often marked with surgical gauze!

Dr. Rhinehart was also instrumental in the production of the TNPS wildflower book. During its inception, she suggested that her husband Shelby Rhinehart, who was a member of the Tennessee House of Representatives for 36 years, might help obtain state funding for the book. TNPS officers contacted Shelby and Senator Doug Henry to request support, and they were successful in securing partial funding.

In recent years Dr. Rhinehart hosted an annual winter gathering at her home in Spencer, wherein various native plant photographers presented some of their findings from the previous season. Those sessions were well attended by her devoted friends and often ran well into the night. She was a unique and giving individual, and is deeply missed by those who had the privilege of knowing her.

— Chuck Wilson
White Fringeless Orchid — continued

There is a monkey face orchid (*Dracula simia*) in South America and the face is very apparent. The earliest existing specimen of WFO was collected by J. B. Buckley in 1840 in Georgia (Shea 1992). Any herbarium specimens that may have been collected by Rafinesque, apparently, were lost. The known range extends from northeast Mississippi into southern Alabama, then north through Georgia and Tennessee into southeastern Kentucky. Outliers exist in western South Carolina and a historic population that was known from western North Carolina (Kartesz 2013).

The first collection in Tennessee was made by Edmund Kirby-Smith in 1880 near Sewanee (Correll 1941). There are other early specimens from the Cumberland Plateau. Sites in the mountains of east Tennessee were not discovered until the early 1980s. New locations continue to be discovered and the latest discoveries were made on the southern portion of the Cumberland Plateau in 2011 and 2012. The majority of the known populations in Tennessee are in this area and the frequency of new discoveries is greater in this area as well (Biotics 2014).

To make an important decision like listing a species under the Endangered Species Act requires accurate and detailed information. Much of the information used in this decision came from Natural Heritage Programs in the southeast. Botanists periodically monitored this species because it was for many years a candidate for federal listing. The data collected during these studies showed a general decline in numbers of plants. Observations of significant threats at each site were recorded as well. A majority of the populations of WFO are in Tennessee so the Tennessee Natural Heritage Program made a large contribution to this effort.

Science based decisions are crucial to the process of listing a species under the Endangered Species Act. Resources are limited at the state and federal levels and only by setting priorities based on science can we assure that those resources are utilized effectively.

The official proposal to list WFO was published in Federal Register Volume 80, Number 178 (September 15, 2015). Accessed online at http://www.gpo.gov/fdsys/pkg/FR-2015-09-15/html/2015-22973.htm. Detailed information on the species biology and documented threats can be found in the listing proposal. Public comments on the proposed listing will be received until November 16.

— Todd Crabtree

References


Gifts Honor Beloved Plant Enthusiast

The family of Sibyl Whelchel Nestor, who passed away this summer at age 83, listed the Tennessee Native Plant Society for memorial donations in lieu of flowers. Friends have contributed a total of $1,025 to TNPS.

Sibyl Whelchel grew up in Columbia, Tennessee, where her father was president of First Farmers and Merchants Bank. She married Charles William (Bill) Nestor, Jr., an employee at Oak Ridge National Laboratory, and they lived in or near Oak Ridge from 1955 to 2015.

Mrs. Nestor created an extensive wildflower garden that several donors referenced in notes.

Thomas Moore, director at ORNL, wrote, "Sibyl Nestor was a wildflower enthusiast known for her beautiful gardens and had a great appreciation for the diverse beauty of many native plants around the Kingston/Oak Ridge, Tennessee, area where she lived for many years." Margaret Dungan said, "I enjoyed her wildflower garden and our —her—love of native plants." TNPS is honored to be the recipient of these donations in Mrs. Nestor’s memory and extends our heartfelt condolences to her husband, children, grandchildren, great grandchildren, and many friends.

— Margie Hunter

Melanthra nivea (*Snowy Squarestem*)
Surprise Appearance of Filmy Fern

It’s always when you give up on something and let go of your expectations that you’re presented with something grand.

A couple of weeks ago in mid-August, our field day was no exception. Todd Crabtree and I were on a mission to find _Clematis morefieldii_ in a cove on the southern Cumberland Plateau. The day had presented itself with some challenges including high humidity, heat, difficult terrain, a yellow jacket nest, and running out of water. We also didn’t have any luck finding the _Clematis morefieldii_ and had given up when we decided to head back.

As we proceeded to a limestone bluff and stepped up to examine the way out, we were presented with a beautiful display. It took a moment to realize what we were seeing, but it was a very long and lush population of _Vandenboschia boschianum_ (syn. _Trichomanes boschianum_, Appalachian filmy fern.)

This fern is in the _Hymenophyllaceae_ or filmy ferns; so called because the members of this family are one cell-layer thick, giving it a transparent appearance. The fragility of their fronds means that they don’t tolerate much sunlight, so they hide in sandstone crevices. They’re a state threatened species in Tennessee, and we have only a handful of known populations, with this newest one possibly being the largest. It was an exceptional reward for a difficult day!

— Sunny Fleming

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**TNPS Field Trips**

**AEDC and May Prairie**

_June 6, 2015_

About 35 participants turned out on this hot June day in Coffee County. Folks came from as far away as Memphis, Athens, Georgia, and possibly beyond.

Our morning started with a visit to the power lines at the Arnold Air Force Base between Tullahoma and Manchester. We found grass-pink (_Calopogon_), spreading pogonia (_Cleistes_), rosebud pogonia (_Pogonia_), and ragged fringed orchid (_Platanthera lacera_), all four orchids in flower. At this location we found hyssop-leaved skullcap (_Scutellaria integrifolia_), whorled loosestrife (_Lysimachia quadrifolia_), and death camas (_Zigadenus leimanthoides_) in flower, and slender blue flag (_Iris prismatic_) in fruit.

After lunch in Manchester we drove to May Prairie State Natural Area for some afternoon botany. The prairie was not burned this past winter, so the flowers were not as colorful overall as last year, but most of the plants we expected to see in bloom were there. These included eryngo (_Eryngium integrifolium_), swamp candles (_Lysimachia terrestris_), horned bladder pod (_Utricularia cornuta_), marsh pea (_Lathyrus palustris_), rosinweed (_Silphium mobrii_), mock bishop’s weed (_Ptilimnium costatum_), sweet goldenrod (_Solidago odora_), and many more. Dwarf sundew (_Drosera brevifolia_) was located, but not in flower.

After the May Prairie hike, four of us drove back to AEDC to look for pale purple coneflower (_Echinacea pallida_) along the old rail line. We found one plant in flower and one in bud. However the next weekend 10 to 15 plants were flowering. AEDC is currently the only known site for this plant in Tennessee.

— Dennis Horn

**Roan Mountain, Ed Schell Memorial Hike**

_June 27, 2015_

With Susan and Allen Sweetser— and Lacie— shepherding us, we gathered first at the Appalachian Trail crossing at Carver’s Gap amid gathering clouds. While there, we examined a thicket of green alder (_Alnus viridis_), which is a rare plant.

We took a minute for our group photo, and we were on our way to Roan Mountain Gardens; as we drove up the mountain we stopped for our first glimpses of Gray’s lily (_Lilium grayi_) on the roadside. Then we strolled through the gardens, which is paved but not otherwise managed.

The Catawba rhododendron was almost finished blooming, but we found a few bright pink patches remaining. We wandered through the Gardens until rain began to threaten. Then we convoyed down to the head of the Cloudland Trial, where we waited out the rain with lunch.
and for some of us, a short nap, in the car.

When the rain cleared, a group of us wandered out to the point, where we were rewarded with a spectacular view. We peeked over the fence to see spreading avens (*Geum radiatum*), a federally listed plant, and took a few minutes to share memories of Ed Schell, several of which included descriptions of botanical “death marches” past.

On the way back we saw several examples of three-toothed cinquefoil (*Potentilla tridentata*), another rare plant. After heading back to the cars we went in search of Roan Mountain bluets (*Hedyotis purpurea var. montana*), which we found growing on the roadside next to a very unusual club moss—staghorn clubmoss (*Lycopodium clavatum*). Back at the parking lot, we were chatting and saying goodbye after a pleasant day when we noticed a plant we didn’t recognize. It was up to 1.5 meters tall, with umbels of flowers which were extremely attractive to bees.

Epilogue: After study of the matter by several people we came to the conclusion that our mystery plant was the wild parsnip (*Pastinaca sativa*), which frequently escapes from cultivation.

— Bettina Ault

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**Ed Schell: An Early Memory**

The year was 1978. The Tennessee Native Plant Society had just been organized. I found Sherry that year and also met Ed Schell. Ed was leading hikes on Roan Mountain for TNPS the 4th of July weekend.

Ed moved to Johnson City in 1975, having retired early from civil service work as a physicist in Ohio and then DC. He had just coauthored a book using his photos, *Potomac: The Nation’s River*. Another book, *Tennessee*, was about to be published.

The hikes were Friday and Saturday. I rode over from Tullahoma with Denny Fulcher. Dr. Paul Somers, our state botanist at the time, was staying the weekend with Ed. It was my first time to visit Roan Mountain and my first TNPS field trip.

Ed took us to Roan High Bluff and to the rhododendron gardens. We hiked the AT from Carver’s Gap to Grassy Ridge. The trail through the grassy balds on the Roan is probably the most scenic in Tennessee with unobstructed views in all directions. At the far end of Grassy Ridge, Ed showed us the Roan Mountain bluet (*Houstonia purpurea var. montana*). Upon returning we dropped off the trail at Engine Gap and scrambled down a ravine looking for the rare wolfsbane (*Aconitum reclinatum*). Finally we reached the highway below.

After two days of great botanizing with Ed and Paul we said our goodbyes. Denny and I headed down the mountain in his Fiat. As we approached the community of Burbank the engine quit and we coasted into a service station. The timing chain had broken and we were stuck. About 20 minutes later Ed and Paul came by and rescued us.

Denny and I wound up staying that night at Ed’s place. Ed showed us some of his wonderful wildflower and nature slides that evening. At one point he said, “These slides I’m showing now are unedited, something a photographer should never do.” Paul dropped us off in Cookeville the next day on his way back to Nashville and Denny’s wife picked us up.

After that beginning, a trip to Roan Mountain in late June to botanize with Ed was an annual event for Sherry and me for the next 10 or 12 years. Ed had selected Johnson City for his retirement because of its proximity to Roan Mountain. It was a wise choice.

— Dennis Horn
Devil’s Backbone, Lewis County
August 8, 2015

A fantastic group of over 20 folks met at the parking area at the trailhead into Devil’s Backbone State Natural Area. Leader Allan Trently immediately led us just a few feet from the parking area to our first plant of the day, shortstalk false bindweed (Calystegia silvatica), a seldom encountered morning glory relative.

Devil’s Backbone was set aside because of the dry oak woods community, and several species of oaks were seen. Along the dry ridges we also came across a few herbaceous species of wildflowers: little ladies’ tresses or pearl twist (Spiranthes tuberosa), elephant foot (Elephantopus carolinianus), and hawkweed (Hieracium sp.).

As we made our way down the trail we descended to a seepy area and small stream. Along the banks was our second orchid of the day, rattlesnake plantain (Goodyera pubescens). This area also held two of our most spectacular ferns, royal fern (Osmunda regalis) and cinnamon fern (Osmunda cinnamomea). A quick look at the alder (Alnus serrulata) seep gave us our third orchid. The small green woodland orchid (Platanthera clavellata) produced plants that had already flowered and were setting capsules.

During our lunch at the creek, we were treated with two red-spotted newts in the eft stage. These salamanders undergo a life cycle with distinct morphological stages during their development. The eft stage is characterized by the entire animal being a brilliant red-orange with even brighter orange spots outlined in black. This is often the form encountered as it is at this stage where individuals travel to new locations to reproduce.

As we made our way back to the trail, we spotted our last species for the day, a beautiful spikenard (Aralia racemosa) with both flowers and developing fruit on its lateral inflorescence. Back at the cars, everyone agreed it was a nice day, albeit a bit warm, but good nonetheless.

— Bart Jones

Elephantopus carolinianus (elephant’s foot)

This circle of TNPS members discusses a plant of Nine-Acre Glade, during the recent annual meeting—typical of society field trips throughout the year.

Nine-Acre Glade (TNPS Annual Meeting)
Sept. 12, 2015

One of the great things about having our annual meeting at Linden Valley is the proximity to two great botanical areas: the Silurian glades and barrens of Decatur County and the Parnassia seeps of Lewis County. We’ve visited both habitats during our two previous meetings at Linden Valley, with a trip to Dry Branch State Natural Area in Lewis County during the last one. So it was natural to go back to a barrens site in Decatur County this time.

Nine-Acre Glade is the largest of all the glades/barrens that make up a large complex of these open areas in Decatur and Perry Counties. These sites differ from the cedar glades of Middle Tennessee in that the exposed limestone is of Silurian/Devonian age, not Ordovician, and lacks endemic plant species. This age limestone matches exposures in the upper Midwest and the Ozark region and the plant community typical of these barrens reflect elements with a Midwestern affinity, with many plants disjunct from their major populations found in those areas and rare in Tennessee.

As we left Linden Valley, we couldn’t have ordered up a more perfect day for a field trip. The clouds and rain from Friday were gone, being replaced by sunshine and mild temperatures in the 70s. Once we arrived at our parking area, a quick shuttle to the entrance to Nine-Acre Glade left our group examining the plants along the road. These included frostweed (Verbesina virginica), partridge pea (Chamaecrista fasciculata), tall goldenrod (Solidago altissimum), and snowy squarestem (Melanthera nivea), a plant more commonly found along the Gulf Coast and Florida but found in Tennessee in a few counties along the western
run of the Tennessee River and Shelby County.

As we entered into the barrens, the plants dramatically shifted from the more common species seen roadside to those restricted to the barrens. A few very showy species immediately grabbed our attention. Among them were prairie dock (*Silphium terebinthinaceum*), tall blazing star (*Liatris aspera*), the state-listed blue flax (*Salvia azurea var. grandiflora*) southern prairie aster (*Eurybia hemispherica*), Gattinger’s false purple foxglove (*Agalinis gattingeri*), and obedient plant (*Physostegia virginiana*). Scattered among those plants were slenderstalk bee blossoms (*Gaura filipes*), gray goldenrod (*Solidago nemoralis*), and glade heliotrope (*Heliotropium tenellum*).

Nine-Acre Glade encircles the summit of a conical hill and as we made our way to the northern face of the hill, the soil layer deepened and additional species were encountered. The most interesting was the state-listed rare plant Ontario blazing star (*Liatris cylindracea*), a smaller species of blazing star. It is distinguished by the cylindrical form the floral bracts take. There were several plants of a second *Silphium* in bloom in this area, whorled rosinweeds (*Silphium asteriscus var. latifolium*). Also new to this spot were glade wild petunia (*Ruellia humilis*) and fluxweed (*Isanthus brachiatus*).

As we made our way around the hill, some of the woody plants were pointed out. Of course in the glade proper, most of the trees were stunted, twisted eastern red cedars (*Juniperus virginiana*), but there were also a few examples of Carolina buckthorn (*Rhamnus caroliniana*), Virginia pine (*Pinus virginiana*), redbud (*Cercis canadensis*), and fragrant sumac (*Rhus aromatica*). Along the periphery of the glade, a ring of various oaks (*Quercus* spp.) and hickories (*Carya* spp.) had escaped the clearcut done a few years ago.

On the south facing side of the hill, outcropping layers of limestone formed a stair step that allowed us to descend to the bottom. This side of the glade has a harsher environment with the thinner soil and more intense sunlight and the vegetation was much sparser. It was here near the bottom that we saw a few asters that were not quite in bloom. They were wavyleaf aster (*Symphyotrichum undulatum*), and two rarer species; smooth blue aster (*S. leave var. leave*) removed from the next closest population by nearly 100 miles and barrens silky aster (*S. pratense*), a state-listed endangered species.

As we exited the barren, a few more species were found including stiff goldenrod (*Solidago rigida*), tall coreopsis (*Coreopsis tripteris*), orange coneflower (*Rudbeckia fulgida var. fulgida*), rattlesnake master (*Eryngium yuccifolium*), and the uncommon Elliott’s fan petals (*Sida elliottii*).

Back at the parking area, we enjoyed a quick lunch, then strolled down the gravel road that leads to a private encampment. The plants here were those usually found in dry, rocky woods and roadsides. Late fall aster (*Symphyotrichum patens*), field thistle (*Cirsium discolor*), tickseed sunflower (*Bidens aristosa*), fragrant goldenrod (*Solidago odora*), and blue mist flower (*Conoclinium coelestinum*) were scattered all along the roadside showing the familiar fall color combination of yellow and blue. Occasional white thorough worts were interspersed among the yellow and blue. It turned out to be four different species: late flowering thoroughwort (*Eupatorium serotinum*), roundleaved thoroughwort (*E. rotundifolium var. ovatum*), hyssop leaf thoroughwort (*E. hyssopifolium*), and tall thoroughwort (*E. altissimum*). As the habitat became drier, other species showed up like smooth yellow false foxglove (*Aureolaria flava*), little ladies’ tresses (*Spiranthes tuberosa*), and small partridge pea (*Chamaecrista nictitans*).

Good friends, good weather, and great native plants. Sounds like another successful field trip at the annual meeting.

— Bart Jones
Annual Meeting — Continued

Bailey has managed 28 stream restoration projects at the request of government and private landowners. More information can be found with an online search for Tennessee Stream Mitigation Program. The site provides explanations and many photographs of the TSMP projects.

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The TNPS Board of Directors has voted to join and partner with the Plant Conservation Alliance. PCA is a public-private partnership of organizations that share the same goal: to protect native plants by ensuring that native plant populations and their communities are maintained, enhanced, and restored. Members will be exploring ways to assist with projects. Information about PCA can be found at www.plantconservationalliance.org.

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When Dues Are Due

Unless you are an email subscriber, check your mailing label for your membership date. You are paid through the year listed just above your name. You can pay TNPS dues at any time, and now you can pay online at the TNPS Website. Just go to www.tnps.org, click “Membership,” and follow directions there. If your address has changed, you can email the new address to info@tnps.org.