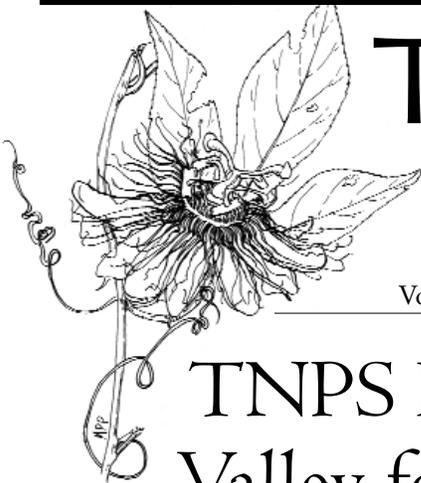


TENNESSEE NATIVE PLANT SOCIETY

Volume 39, Number 2

June 2015



TNPS Returns to Linden Valley for Annual Meeting

Make your plans for the TNPS annual meeting, September 11-13, because we return to one of the society's favorite gathering places, Linden Valley Baptist Conference Centers, located on the Buffalo River south of Linden.

The conference center provides comfortable accommodations, as well as quiet, natural surroundings and a river walk.

Please fill out your registration form on page three. You will not be sent another mailing before the meeting.

This year's activities will begin on Friday evening, September 11. A social will be held starting at 5 p.m. central. Following supper at the conference center dining hall, Allan Trently will provide a program about the west Tennessee natural areas from Reelfoot Lake down to Shelby County and all the way over to Stillhouse Hollow Falls SNA in Maury County. Highlights will focus on rare plants and interesting plant communities.

Saturday's field trip will leave about 9 a.m. With Bart Jones leading, we will venture across the Tennessee River to visit Nine-acre Glade, the largest of all the Silurian limestone hill barrens. Many state rare plants are found here, of which slender blazing star (*Liatris cylindracea*), blue sage (*Salvia azurea* var. *grandiflora*), and silky barrens aster (*Symphyotrichum pretense*) should be in flower.

Several recreational activities will be available at the Center for those who will not be going on the field trip.

Members are also invited to participate in a photography show. Artists may also sell their work.

The annual business meeting will be held after Saturday's supper, with a program following about stream mitigation in May Prairie. ♡



Ohio Buckeye (Aesculus glabra). See reference on page 7. (Photo by Bart Jones)

Tennessee Flora Project Complete

The *Guide to the Vascular Plants of Tennessee* is now published and available to the general public. It represents the final chapter of the Flora 2001 project that commemorates the 100th anniversary of Gattinger's *Flora of Tennessee and a Philosophy of Botany* published in 1901. The new Tennessee flora is a large book, two inches thick, with each page measuring 7x10 inches. It contains over 800 pages and retails for \$49.95.

The Guide provides keys as well as plant habitat, distribution, frequency of occurrence, and flowering time for the 2,878 known species and lesser taxa in Tennessee. The plants in this book are not illustrated. There are introductory chapters describing the physical environment, botanical history, and vegetation of Tennessee. The botanical history chapter

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Don't Miss the
Annual Meeting
Sept. 11-13

TNPS Newsletter

June 2015

Vol. 39, No. 2

This newsletter is a publication of the Tennessee Native Plant Society and is published four times a year, generally in February, June, August, and November.

The Tennessee Native Plant Society (TNPS) was founded in 1978. Its purposes are to assist in the exchange of information and encourage fellowship among Tennessee's botanists, both amateur and professional; to promote public education about Tennessee flora and wild plants in general; to provide, through publication of a newsletter or journal, a formal means of documenting information on Tennessee flora and of informing the public about wild plants; and to promote the protection and enhancement of Tennessee's wild plant communities.

Dues for each calendar year are:

Regular: \$20

Student: Complimentary

Institution: \$50

Life: \$250

Dues may be sent to:

Tennessee Native Plant Society

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Nashville, TN 37215

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Susan Sweetser, President

Todd Crabtree, Vice-President

Margie Hunter, Secretary

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Please send comments or material for the newsletter to TNPS Newsletter, P.O. Box 856, Sewanee, TN 37375 or

lathamdavis@bellsouth.net

TNPS Website:
www.tnps.org/



A Letter from the President

I hope you have been having a wonderful spring. It has been a beautiful one in East Tennessee. Spring has finished its first outburst of beauty. I hope you have been able to attend one of the great hikes we have had already, with more to come!

However, spring is also traditionally a time to clean and organize your home. This seems to happen with a new burst of energy after a long cold winter. It's also an activity that happens with groups too. We need to look at our educational aspect of TNPS and find ways to better reach and educate the public.

I was happy to see new members on all of the outings that I have attended but we should have even more. Recently we have been presented with several opportunities to participate in environmental outreach activities. We currently do not have a person to organize these efforts and get volunteers to hand out brochures, answer questions, talk about field trips, and answer questions about "what plant is that?".

The Board met on May 30 to discuss this and other issues. It would be wonderful to have folks volunteer for each region to manage the booth and get local members to help out. The Board will need to be sure to have enough materials for you to share and distribute. Please contact me at "ssretiree@yahoo.com" with your name to add to the volunteer list.

Now in the summertime mode, it is time to register for the annual meeting on September 11-13 at Linden Valley Conference Center in West Tennessee. Please check the details in this issue of the newsletter and on the website.

Thanks to all,
Susan

Sunny Fleming Replaces Bertha Chrietzberg on TNPS Board

Sunny Fleming, a biologist with the Tennessee Division of Natural Areas in the Rare Plant Protection Program, has been named to the TNPS Board of Directors, replacing Bertha Chrietzberg, who has resigned because of ill health.

Fleming is involved in monitoring federally listed rare plants in Tennessee. She has assisted Andrea Bishop by organizing information and facilitating various aspects of the field work required to monitor rare plants. She has also assisted in other areas such as prescribed burns and rare plant searches.

Her training in botany began under the supervision of Dwayne Estes at Austin Peay State University where she was involved with projects on *Lysimachia* and *Vitis*. She moved to the University of Tennessee at Chattanooga to study botany under Joey Shaw.

During her three years at UTC she organized a large collaborative investigation of the rare plant species, communities, and non-native plant species of the Ocoee River Gorge. She organized more than 10 field botanists and took leadership of the GIS for the project.

2015 TNPS Annual Meeting

September 11–13, 2015

Please complete and return by August 20

Registration fee per person \$15.00 # _____ @ \$15.00 _____
 Room: Single or double occupancy for two nights \$87.00 _____

Those sharing a room should register together. Two checks may be sent.

All meals cost \$9.50. Please mark total number of meals

Friday Supper _____

Saturday Breakfast _____ Lunch _____ Supper _____

Sunday Breakfast _____

Meals Total _____

Total for Meals and Room _____

Registrant #1 Information:

Name _____

Address _____

Telephone _____

Email _____

Special Needs _____

Registrant #2 Information (if sharing a room):

Name _____

Address _____

Telephone _____

Email _____

Special Needs _____

Mail check(s) payable to TNPS to:

Lorie Emens

9705 Kingsbridge Cove

Lakeland, TN 38002

Email: wildflowerlorie@gmail.com

Tennessee Flora Guide on Sale

— Continued

includes a number of photos of persons important to Tennessee botany. A glossary with illustrations and separate indices of families, scientific names, and common names is included.

The major plant groups are presented in the following order: pteridophytes, gymnosperms, monocots, and dicots. Families, genera, and species within the major plant groups are arranged alphabetically. For the family treatments (the largest part of the book), the left page header identifies the major plant group and the right page header identifies the plant family covered on those pages. In general the book format is user friendly, with bold type and ample spacing provided where needed to facilitate ease in reading. The glossary, abbreviations, and symbols are located up front for quick reference.

The Guide will be available for sale at a discount during TNPS events, including field trips, meetings, and special presentations. *The Woody Plants of Kentucky and Tennessee* and the TNPS wildflower book are also available at a discount. TNPS does not accept mail orders. All book royalties and income from book sales will support the many worthy plant conservation and education projects of TNPS.

Dennis Horn



A Fine Birthday for the Rare Plant Act

A thirty (plus)-year reminiscence

by Todd Crabtree

In October of 1978 an article was published in the journal of the Tennessee Academy of Sciences that highlighted the rare vascular plants of Tennessee. It listed 392 species which were believed at the time to be rare in the state. They were categorized as either endangered, threatened, possibly extirpated, or of special concern.

A group of botanists calling themselves the Committee for Tennessee Rare Plants (Collins, DeSelm, Evans, Kral, and Wofford) wrote the article but other botanists contributed to the effort.

The authors of the article realized that this was just the first step in a long process when they stated: "The list . . . should be considered tentative. New collections will uncover additional plants in need of protection while other species will be found to be more common than our current information indicates."

The authors also said, "It is also hoped that this publication will generate educational programs, necessary legislation, public awareness, and general concern for this significant portion of Tennessee's natural heritage."

A first attempt to implement this vision of protecting Tennessee's rare plants was made in 1980. The governor at the time, Lamar Alexander, issued an executive order. However, in order for the state to be able to enter into a cooperative agreement with the U.S. Fish and Wildlife Service certain legal requirements were required. A cooperative agreement would allow the state access to federal funds and use those funds to protect rare plants in the state. It became clear that the protection of rare plants in Tennessee would require a new law.

In December of 1982 the Department of Conservation sponsored a workshop entitled "Conference on Rare Plant Protection in Tennessee." The workshop was held at Montgomery Bell State Park to start the process of enacting legislation to protect rare plants in Tennessee. An ad hoc Rare Plant Committee representing the University of Tennessee, Tennessee Conservation League, Tennessee Native Plant Society, Lambuth College, Tennessee Environmental Council, The Nature Conservancy, Environmental Action Fund (EAF), and Tennessee Nurserymen's Association met with nearly 100 citizens for two and a half days to build the framework for a new law.

At the workshop, Tom Patrick made a presentation on the activities of the Tennessee Native Plant Society. Dr. Eugene Wofford (University of Tennessee) and Dr. Robert Kral (Vanderbilt University) were two of the leaders for the Research/Recovery Needs session in the Policy and Strategy Discussions portion of the workshop. After the



Scaly Blazing Star (Liatris squarrosa)

workshop the EAF set the passing of a rare plant protection bill as their number one priority.

In January of 1983, Dr. Elsie Quarterman sent a letter to Governor Alexander, thanking him for having the Department of Conservation sponsor the workshop. She also requested that he present the issue to the Safe Growth Cabinet Council for their review. The Rare Plant Committee created an outline which the EAF used along with input from the Tennessee Natural Heritage Program to draft a bill. TNPS president Murray Evans issued a letter, which included a resolution that had been drafted at the workshop. This resolution was to be signed and distributed to state officials. The resolution began: "Whereas, the attached undersigned participants in the Conference on Rare Plant Protection in Tennessee recognize that there is a need for comprehensive legislation designed to protect rare, endangered, and certain other plants and their habitats in Tennessee. . . ."

The resolution was signed by a Who's Who of Tennessee botany and presented to the Department of Conservation. The bill was introduced in 1984, and, though the nursery industry had representation at the workshop, the nursery industry, Farm Bureau, and Department of Agriculture did not like everything in the bill. The Department of Transportation also had objections.

Negotiations ensued and amendments were made to the bill. It passed the Senate and made its way to the House Agriculture Committee. The Nurserymen's Association still didn't like the bill, and they wanted the Department of Agriculture to administer the law. The bill was put into a study committee, which effectively killed it for that legislative session.

Throughout this process State Botanist Dr. Paul Somers kept track of all the activity and shepherded it along when necessary as well as offering help in navigating the political landscape at the time. In 1985 after more negotiations and amendments, the bill was reintroduced with the Depart-

ment of Conservation having primary authority for administering the law. This time when the bill went to the House it was through the House Conservation Committee instead of the Agriculture Committee.

Strong constituency support was directed at key members of the committee and the bill passed. "The Rare Plant Protection and Conservation Act of 1985" was supported by the Environmental Action Fund and sponsored by Senator Doug Henry and Representative Steve Cobb. When the vote occurred on April 1, out of 33 Senators only five voted against the bill or were absent.

In the 30 years since passage of the Rare Plant Act, many changes have occurred. Part of the act requires that the rare plant list be evaluated at least every three years and amended as necessary. To facilitate this process, the Department of Conservation established the Tennessee Rare Plant Scientific Advisory Committee (TRPSAC). The committee is composed of knowledgeable botanists familiar with the flora of Tennessee. The composition of the committee has changed over the years but some of the original members still serve to this day.

As predicted in that 1978 article, additional plants have been discovered that need protection and others have been found to be more common than initially thought. The Tennessee Natural Heritage Program and TRPSAC have continually worked to improve the quality and accuracy of the list.

With each passing year new discoveries are made. Some of those discoveries are a direct result of search funded as a result of the Rare Plant Protection and Conservation Act.

In 1978, *Apios priceana*, Price's potato bean, appeared on the published list as present in only two Tennessee counties and was listed as possibly extirpated. Due primarily to work that would not have been possible without the Rare Plant Act we now know this species from 11 counties in the state. As a result of these discoveries, much more is known about the habitat requirements of this species, and sites where the plant grows have been protected.

There are numerous examples of rare plants getting protection as a result of the rare plant act. There are sites which are now in public ownership that contain significant rare plant populations which were discovered as a result of U.S. Fish and Wildlife Service funded searches. It is a blessing to have these sites protected, but with each new acquisition the burden of managing them increases.

Some states still do not have a rare plant protection law. Fortunately, Tennessee is not one of them. Thanks to a group of concerned citizens and scientists who came together 30 years ago to push for legal protection for a "significant portion of Tennessee's natural heritage," we can continue to appreciate the rare flora of Tennessee and know that it will not be ignored. 🐾

TNPS FIELD TRIPS

Rock Island State Park
March 28, 2015

In 2014 it was rain, this year it was a hard freeze. The early morning temperature was 27 degrees, but the sun was bright, and we were fine by the time the hike started.

We hiked the Downstream Trail along the Caney Fork River in White County. The trail goes to the Blue Hole (famous for fishing), makes a half-mile loop, and returns by the same trail. Wildflowers are plentiful all along the trail. The winter snow and ice storm three weeks prior had taken a toll. Trees were down everywhere.

The spring plants were in various stages of flowering. Trout lily, bloodroot, and harbinger of spring were essentially past. We found four species of toothwort, wild blue phlox (*Phlox divaricata*), purple phacelia (*Phacelia bipinnatifida*), sweet betsy (*Trillium cuneatum*) and a couple of yellow trillium (*T. luteum*) in flower. The prairie trillium (*T. recurvatum*) was mostly in bud. We found early saxifrage (*Saxifraga virginensis*), Allegheny spurge (*Pachysandra procumbens*), and wild ginger (*Asarum canadense*). Louise Gregory photographed long-spurred violet, rue anemone, halberd-leaf yellow violet, star chickweed, and hepatica.

After a hearty lunch at the Rock Island Market, we walked the short loop trail at the Badger Flat picnic area. The large-flowered trillium was not open yet, but leatherwood (a shrub) and a few dwarf ginseng were flowering. When at its peak Badger Flat has a large assortment of spring flowers. We were a bit early this year.

Dennis Horn



Prairie trillium (*Trillium recurvatum*)

TNPS FIELD TRIPS

Meeman-Shelby Forest State Park
April 4, 2015

I know, don't be confused by the title. For those paying attention, we were supposed to go to Millstone Mountain, but a call from a lady who lives in the community informing me that the land around the mountain had been sold to a new owner who wasn't very friendly and had cut



Photo by Bart Jones

Downy yellow violet (Viola pubescens)

off access to the mountain changed the plans totally. Luckily, I was able to get the word out to most everyone and only a couple of people showed up at the McDonald's in Covington. But they called and were able to join us at Meeman-Shelby.

We started out the morning with a walk along the paved trail past the picnic pavilions and were immediately greeted by several non-native species that were leftovers from earlier homesteads within the park. Periwinkle (*Vinca major*) was in bloom and there were large clumps of daylily (*Hemerocallis fulva*) along the trail. Eventually, we began to see the spring wildflowers appear. Beautiful clumps of wild blue phlox (*Phlox divaricata*) lined the path with numerous downy yellow violet (*Viola pubescens*) and prairie trillium (*Trillium recurvatum*) interspersed.

We observed several clumps of the trillium that had arisen from ants moving the seeds into their hill and then subsequently germinating. Trillium seed have a waxy appendage called an aril that ants love. They move the whole seed into the colony and then feed upon the aril, but leave the seed intact. Several seeds are deposited this way and give rise to clumps of many individual plants.

Another interesting plant along this blufftop trail was the tiny oceanblue phacelia (*Phacelia ranunculoides*). This species closely resembles baby blue eyes (*Nemophila*

aphylla), but the flowers are more cup shaped and bloom successively along a cyme, not in the leaf axils. This plant used to be on the state rare plant list, but was taken off several years ago because of its abundance on the Chickasaw Bluffs along the Mississippi River.

Our group enjoyed lunch at the Shelby Forest General Store. For those who haven't been to the General Store before, you have missed out on a treat that will send you back to your days of youth. The selection of "old fashioned" candies and bottled sodas of every brand from back in the day will leave you feeling nostalgic.

After lunch we headed back to the park and to a trail that skirted the flanks of the bluff. This area was much richer and got better and better as we made our way along it. Jack-in-the-pulpit (*Arisaema triphyllum*), large flowered bellwort (*Uvularia grandiflora*), wild ginger (*Asarum canadense*), and a surprise clump of spring coralroot (*Corallorhiza wisteriana*) were our first wildflower encounters. The trail was lined with red buckeyes (*Aesculus pavia*) and redbuds (*Cercis canadensis*) in perfect bloom. The dogwoods (*Cornus florida*) were just a bit behind, but still punctuating the woods with white.

Further along the trail we began to see several fluttering falcate orangetip butterflies. These butterflies use toothwort as their caterpillar host plants, so it wasn't surprising that in just a few more feet was the first colony of cutleaf toothwort (*Dentaria laciniata*). Most of these were past prime, but the spring cress (*Cardamine rhomboidea*) was in high gear. There were a few flowers of yellow fumewort (*Corydalis flavula*) still hanging on. At this point we came to the big find of the day.

Along the trail were large seedpods that resembled honey locust pods, but were much thicker and fleshier. Some of the pods had split open and indeed, there was a fleshy residue and large seeds inside. You could catch a fragrance that smelled a little like spice cake emanating from the residue. Looking up, we could see the mother tree, a tall, yet very slender tree with branches high up the trunk still holding on to a few pods. At first we were stumped, but finally we figured out this was a Kentucky coffee tree (*Gymnocladus dioica*). What a great find!



After a chilly morning, the afternoon was quite pleasant. The wildflowers were accommodating with a floriferous show, and we found a Kentucky coffee tree, always a thrill. Sounds like a good spring day to me.

Bart Jones

TNPS FIELD TRIPS

Tour of Southern Decatur County
April 12, 2015

A small but enthusiastic group met at Carroll Cabin Barrens State Natural Area for a day of roadside botanizing covering some wildflower hotspots in the southern end of Decatur County. We went to one of the barrens to get an impression of what this community looks like in the spring. The barrens are not known for their spring flora (much better in fall), but we did get to see a nice show of yellow star-grass (*Hypoxis hirsuta*) and pale blue-eyed grass (*Sisyrinchium albidum*). The woodland trail to the barren also produced some nice wood violet (*Viola palmata*).

Back to the cars and on the road, our first stop was Penny Slough, where the day before while conducting a butterfly count, we were shocked to see dozens of featherfoil (*Hottonia inflata*) plants projecting above the water of the slough. This is a state listed plant of special concern and not commonly seen as it has a very finicky disposition about blooming. The feathery rosette of leaves spends the winters along the bottom of shallow, quiet pools of water. If conditions are right, then the rosette begins to sprout flowering stalks that are hollow and inflate with air. This causes the plant to become buoyant and the whole plant is pulled from the muck to the water's surface. From there, the flower stalks branch and along each node, a whorl of tiny white flowers subtended by large green bracts emerge. The overall effect is enchanting.

As we left, we noticed the sides of the road appeared striped in white, the result of a profusion of blooming glade sandwort (*Minuartia patula*) growing in the gravel of the road shoulder.

The second stop was a limestone bluff along Stewman's Creek near its confluence with the Tennessee River. The limestone manifested as large blocks protruding from the ground, giving the woods a karst aspect. Our main focus for this stop was Carolina silverbell (*Halesia tetraptera*), a tree more typically associated with the Blue Ridge Mountains. This population is the most western one in Tennessee. There were two large trees near the boat ramp where we parked that were almost finished blooming, with just a few blossoms still hanging on near the tops. Luckily, I had binoculars with me so everyone could get a look at them. Several smaller saplings were quickly identified, so the population seems to be doing fine.

Additional species seen near the boat ramp included sweet Betsy (*Trillium cuneatum*) another plant near the westernmost part of its Tennessee range, twisted trillium (*Trillium stamineum*), eastern bluestar (*Amsonia tabernaemontana*), violet



Photo by Bart Jones

Featherfoil (*Hottonia inflata*)

wood sorrel (*Oxalis violacea*), and a large patch of common blue violet (*Viola sororia*) that had flowers that were more a red-purple than the more familiar blue-violet. As we maneuvered into the karst woods, things got a little more lush. The rocks were covered with mountain stonecrop (*Sedum ternatum*), wild ginger (*Asarum canadense*), and green violet (*Hybanthus coloratus*). The trilliums became more numerous and wild blue phlox (*Phlox divaricata*) dotted the entire scene.

Two understory shrubs/trees were in flower, bladdernut (*Staphylea trifolia*) and pawpaw (*Asimina triloba*). After enjoying our sack lunches, we moved on to another bluff, this one facing east and overlooking a branch of Whites Creek. This is one of the best spring wildflower spots in Decatur County. We were too late to catch a straggling flower or two on the beaked trout lily (*Erythronium rostratum*), cutleaf toothwort (*Dentaria laciniata*), or the sharp-lobed hepatica (*Hepatica acutiloba*), but the rest didn't disappoint. Wild blue phlox lined the roadside and the green violets were the dominant plant in some stretches of the ditch along the road. Both trilliums were present here, too.

New plants for the trip found here were purple phacelia (*Phacelia bipinnatifida*) a few of which were beginning to bloom, a small patch of Allegheny spurge (*Pachysandra procumbens*), a large limestone block covered with false rue anemone (*Enemion biternatum*) that cascaded down and surrounded the boulder, and two species of buckeyes; Ohio buckeye (*Aesculus glabra*) and red buckeye (*Aesculus pavia*). Close examination of the limestone outcroppings also yielded a couple of interesting ferns: walking fern (*Asplenium rhizophyllum*) and hairy lip fern (*Cheilanthes lanosa*).

As we made our way back to Carroll Cabin Barrens on Bob's Landing Road, we started to notice small drifts of

Continued on back page



Photo by Bart Jones

False rue anemone (*Enemion biternatum*)

Explorations in West Tennessee's Decatur County — Continued

lavender along the red clay banks of the roadside. As we continued, these drifts got larger until we eventually stopped at one of the largest. The riot of violet was due to bird's foot violet (*Viola pedata*) and in this large colony there were a few clumps of the exquisite bicolored form. No other violet can match the beauty of this two-toned masterpiece with its two upper petals an incredible deep purple and the other three lavender, the lip being striped with darker lines, and punctuated with an orange beak formed by the anthers. After everyone "ooed and awed" and had their fill of photos, we arrived back at Carroll Cabin Barrens and called it a successful botany tour.

Bart Jones

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. We cannot print the newsletter in full color, but you may be pleased to find all the color in email copies and at the website.

TNPS Newsletter
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