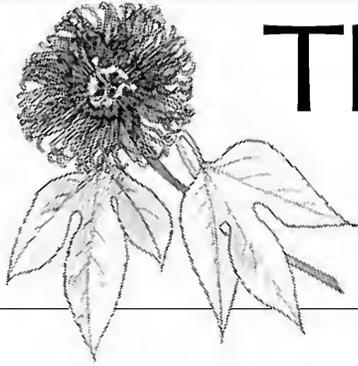


TENNESSEE NATIVE PLANT SOCIETY



Volume 36, Number 2

June 2012

TNPS Has Hand in Trillium Discovery

BART JONES

It all started with a simple email to our website on April 15, "My husband and I found a trillium growing on our property, which appears to be the yellow form of the lanceleaf trillium. All of the field marks point to this flower, however, it has not been reported in this county. Is it possible for someone to review the attached photos and give us a positive ID? I have many more photos if you need them. Thank you for your time, Marci Dunaway."

I get two or three ID requests a month through the website and most of the time they are relatively easy to identify. So I opened the photos thinking I'd have a quick answer, but although the plants did remind me of *Trillium lancifolium*, there was something that didn't quite look right, it looked more like a yellow-flowered cross between *T. lancifolium* and *T. recurvatum*. I forwarded the email to Todd Crabtree and Dennis Horn for their

insight. Dennis, also perplexed, sent it to Tom Patrick. Tom replied back that it did look like a hybrid, but it also looked like a newly described species endemic to the Wateree River watershed in South Carolina, *Trillium oostingii*. He included a link to a Flickr page of photos of *T. oostingii* and the Tennessee plants in question did look like an awfully good match.

Marci, a clinical psychologist, and her husband Mark, a vertebrate zoologist, moved to their property in Hamblen County and began documenting the wildflowers on their property. They searched for trilliums in places they

*Trillium oostingii?*

Photo by Marci Dunaway

Big Plans for Annual Meeting Sept. 14-16

Programs, field trips, and fellowship will highlight the TNPS Annual Meeting September 14-16 at Carson Springs Baptist Conference Center near Newport at the edge of the Smoky Mountains.

Everyone is urged to register, using the form on page 3. The form should be mailed to Lorie Emens at her address in Memphis, which is listed on the form.

Carson Springs provides modern accommodations and meeting rooms in the natural setting atop English Mountain. It's the perfect jump-off point for field trips to rich sites of this section of the Appalachians.

State Botanist Todd

Continued on page 8

Don't Miss the
Annual Meeting
Sept. 14-16

Continued on page 6

TNPS Newsletter

June 2012

Vol. 36, 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

P.O. Box 159274

Nashville, TN 37215

Officers

Bart Jones, President

Todd Crabtree, Vice-President

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Darel Hess, Treasurer

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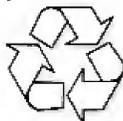
Latham Davis, Editor

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

It's so hard to believe that we are almost halfway through the year. We have had some great field trips, some of which you can read about in this issue, and the second half of the year promises to give us more of the same.

Speaking of this issue of the newsletter, we have a story about some new apps created by Chris Fleming for the nature lover in all of us, an article detailing the discovery of a very significant population of trillium in Hamblen County and TNPS' role in it, a mid-year financial overview, field trip reports, the registration information for our annual meeting in Newport, and some very informative book reviews. I want to thank everyone who contributed to the newsletter as it is you who make it one of the best newsletters in the area.

And finally, I want to express my thanks and appreciation to all of you who once again contributed to our annual fund drive. We collected a total of \$2063.48, money that the board will use wisely to further the cause of conservation, education, and promotion of our society. You guys are simply amazing!!!

See you on the trail,

Bart

Report from the Treasurer

Darel Hess and Bart Jones

First, we send a BIG "thank you" to the membership for your continuing generous support of the Annual Fund Drive. This year we received \$2,063.48, money that will ensure TNPS will be able to meet all budgeted expenses for the year and support items that will come up as 2012 progresses.

TNPS' financial standing is on a very firm foundation. The two society accounts are solid. Our checking account maintains the functions of the society, based on our budgeted income and expenses and contributions to the annual fund drive. This account is at its high point as most membership renewals have come in, but many expenses are still to be paid. The savings account is our safety net and a resource for unbudgeted projects or donations that the board feels worthy of our participation.

As you can see, the majority of our money ("Book" accounts) is related to funds that were earmarked for our portion of the Flora 2001 Project, granted by the state legislature and donations from individuals or groups. Our responsibilities were to produce the official color pictorial wildflower field guide (which we spectacularly accomplished!), assist in the production of the checklist of the Flora of Tennessee (completed), which is being used as a starting point in the publication of the official technical manual of the Flora of Tennessee, which we were also charged with supporting. This work is nearing completion, and much of the accumulated book revenue will be used as publication commences.

Bank Accounts

Book CDs – \$12,174.02

Book Savings – \$17,338.09

Checking – \$5,424.39

Savings – \$9,072.50

Total – \$44,009.00

2012 TNPS Annual Meeting

September 14–16, 2012

Please complete and return by August 31

Registration fee per person \$15.00	# _____	@ \$15.00	_____
Room: Single per night		\$63.00	_____
Double per person, per night		\$31.50	_____

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

Friday Supper	_____	@ \$ 7.75	_____
Saturday Breakfast	_____	@ \$ 7.75	_____
Lunch	_____	@ \$ 7.75	_____
Saturday Supper	_____	@ \$ 7.75	_____
Sunday Breakfast	_____	@ \$ 7.75	_____
		TOTAL	_____

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
 557 N. Mendenhall Rd. #6
 Memphis, TN 38117



TCV Issues New Legislative Scorecard

Tennessee Conservation Voters (TCV) has just released its annual scorecard, which provides factual non-partisan information about how each member in the state legislature voted on a range of conservation issues.

TCV is a statewide non-partisan, nonprofit organization dedicated to protecting the state’s environment and preserving natural resources through effective legislative and administrative advocacy. TCV leads a coalition of state-based conservation and environmental organizations that seeks to turn conservation values into priorities by advocating for strong environmental policies, endorsing conservation candidates, and holding elected officials accountable. The annual scorecard is one of the ways TCV creates accountability for state legislators.

To compile this scorecard, TCV worked with environmental leaders, including member groups, to select the most important conservation actions of the year. TCV and the conservation community then clearly communicate the importance of these bills to legislators.

TCV focused on four major legislative priorities for the 2012 session:

- Protections against mountaintop removal mining.
- Maintaining real estate transfer tax funds for land acquisition and preservation.
- Expressing concern about hydraulic fracking.
- Deregulation and funding for TDEC.

See the scorecard for other legislation that was tracked by TCV and the conservation community. See the complete scorecard at www.tnconservationvoters.org

Exploring Nature in the Digital Age

Chris A. Fleming

Some TNPS members are already hiking with wildflower guides in the form of “apps” on their iPhones or other mobile devices. So, it seems apropos (and about time) for us to explore what’s going on with this new technology and put it into perspective.

Also, some members may already have met Chris Fleming, who has been a guide for several years at the Smoky Mountains Wildflower Pilgrimage. Chris is a biologist, botanist, and principal in BDY Environmental, a consulting firm based in Nashville. Mary Priestley buttonholed Chris at this year’s pilgrimage, and he agreed to write about his development of a wildflower app titled Guide to the Common Wildflowers of the Great Smoky Mountains.

In recent years there have been incredible advances in mobile computing with the proliferation of powerful handheld devices and mobile phones.

Mobile computing technology has historically been restricted to only the most savvy users. Today’s user friendly devices possess extremely intuitive interfaces accessible to almost anyone.

As these devices have evolved, they have begun to integrate many new features, such as global positioning systems (GPS), digital cameras, and standard data processing and storage. While conducting botanical field work only a few years ago, it was not uncommon for me to utilize three unique devices for all of these end uses.

As a graduate student at the University of Tennessee, Knoxville, I worked extensively on the herbarium website (www.tenn.bio.utk.edu) to incorporate images into the interactive plant checklist for Tennessee. Eugene Wofford, curator of the UT herbarium, and I were always discussing ways to distribute these data

and images to more people so that this information would be readily available in the field.

When the first iPod Touch and iPhone were introduced in 2007 along with the idea of mobile applications, it soon became apparent the vehicle for providing interactive reference data had arrived. These thoughts were further solidified in 2008 with the introduction of the Android operating system, which runs on numerous mobile devices, and the development of Android-specific mobile applications.

Since the introduction of these devices to the marketplace, their use has become widespread and enhancements to hardware and software are continually occurring.

As a guide at the annual Spring Wildflower Pilgrimage at the Great Smoky Mountains (GSM) for over ten years, I was commonly carrying several guides along to show the participants information regarding the plants that we observed and photographs of flowers when only leaves were

present. Through these experiences, I realized in late 2009 that a mobile application for the wildflowers of the Great Smoky Mountains would be both extremely useful and an excellent first project to undertake. Our goal was to produce an informative application suitable for use by both the scientist and layman that allowed for interactive searches and basic keying of species using easily observable morphological attributes.

After several months of development, we launched GSM Wildflowers, our first application for iOS (Apple) operating systems, in early 2010. While we are constantly working on ways to tweak and enhance the application, it currently includes 172 of the most common wildflowers one might encounter within the park with narrative descriptions and over 600 representative photographs.

Through a partnership with Discover Life in America (DLIA), the GSM Wildflowers application also educates people about DLIA’s mis-



sion while providing some monetary support by donating a portion of the application sales proceeds.

Subsequent to the development of the wildflower application, we partnered with Dr. Ed Pivorun at Clemson University to develop *Mammals of the Great Smoky Mountains & Southern Appalachians* for iOS (iPhone and iPad). We are currently in the development and testing phase for several other applications and are working to develop all of our applications for the Android operating system in the next few months.

In addition to our applications, there are several others available that provide a wealth of information for both professional and amateur naturalists. While the intended uses of many of these applications is identification, there are some new applications on the market that utilize social interaction to share nature observations, provide interactive mapping tools, and assist field biologists with data collection. A list of these applications is included below for reference.

While it is not possible to reference all of the mobile applications offered, I hope that this article at least provides an informative introduction to mobile tools available for exploration of the natural world. It is not our intention to discourage the use of available printed guides and taxonomic keys, but instead to provide a supplemental tool that allows for quick, regionally specific reference in the field for beginning and experienced naturalists. If you have any questions, suggestions, or recommendations for existing or projects in development, feel free to contact me at cflaming@bdy-inc.com.

Digital Nature Guides

- Audubon Nature Guides—digital format of most popular field guides
- Fungi—interactive identification of common fungi
- Wildflowers Along The Way: Central and Southern Appalachian—includes 240 species
- iBird—includes all species within North America

Interactive Nature Guides

- Project Noah—suitable for adults and children; utilized in classroom curriculums

Mapping

- Google Earth—mobile version of desktop software
- ArcGIS—mobile version of desktop reader
- iGIS—fully featured GIS application

Data Collection

- EcoMap—highly adaptable tool for field data collection

TNPS Board Approves Funds for Conservation Group and New Guide Book

The TNPS Board of Directors, meeting June 9, approved a donation of \$500 for the Tennessee Invasive Pest Plant Council.

This is the latest of annual gifts made to Tennessee organizations that are doing significant work in conservation locally. Last year TNPS gave \$500 to the Swan Trust.

The Board also approved future support of \$5,000 to assist the publication of *A Winter Guide to Woody Plants of Kentucky and Tennessee* by Eugene Wofford and Ron Jones.

Dennis Horn said the book, referred to informally as the “twig book,” is “sumptuously illustrated” with photographs by Professor Wofford, curator of the University of Tennessee Herbarium. The text and keys are being done by Professor Jones, who is curator of the herbarium at Eastern Kentucky University and author of *Plant Life of Kentucky*. The twig book publisher will be the University Press of Kentucky, which has agreed to give TNPS a 50 percent discount and 50 free books for our contribution. Funding is also being provided by the Kentucky Native Plant Society and the UT Botany Department.

The board also heard updates on editorial work being done on the technical manual of Tennessee flora, with which TNPS is helping financially. Dennis Horn, referring to progress made at the editorial committee meeting in May, said revisions should be completed by August 1. By this fall, the committee will begin seeking a publisher, beginning with the University of Tennessee Press.

TNPS funds for this book will come from revenue generated by the TNPS guide book *Wildflowers of Tennessee, the Ohio Valley, and the Southern Appalachians*.

Action was also taken at the board meeting to form a nominating committee that will present a slate of new officers and directors at the annual meeting.

While discussing this year’s annual meeting at Carson Springs, President Bart Jones informed members of progress made in plans for the 2013 annual meeting, which will be held at Lake Barkley Lodge at Lake Barkley State Resort Park in Kentucky. The meeting will be held jointly with the Kentucky Native Plant Society. Meeting dates will be announced later.

TNPS had displays at both the Nashville Lawn and Garden Show and the Memphis Area Master Gardeners Spring Fling. It was reported that more than 30 books were sold, and TNPS attracted 35 new members.

Recent Trillium Discovery

—continued

thought were good habitats, but no trilliums were there. Later in the season, they did spot a plant at the edge of the woods, but it appeared not to have flowered. They made a note to visit next spring. Fast forward to this April and the visit to their lone plant, there it was in flower. Further into the woods they found dozens, if not hundreds, of these odd trilliums. They scoured their field guides, including our own *Wildflowers of Tennessee, the Ohio Valley, and Southern Appalachians*, which they had just purchased a couple of months before. Since they were unsure of the identity of the plant, they decided to contact TNPS through the website mentioned in the book and, unbeknownst to us, Dr. Ed Schilling at UT. Dr. Schilling forwarded everything to Dr. Susan Farmer, who had done the DNA analysis on the South Carolina *T. oostingii*. She in turn contacted Dr. Chick Gaddy who described *T. oostingii* in 2008.

Tom Patrick continued his look as these plants and also contacted Dr. Gaddy, so now everyone was talking to each other trying to figure out what we were dealing with. Although there is still some debate about some characteristics being different in the Tennessee plants and sequence analysis to be done, the consensus is these plants are *Trillium oostingii* or a closely-related undescribed species. We'll have to be patient and wait for the final answer, but one thing is for sure, there's something special growing in Hamblen County. Marci summed up the experience very eloquently, "We were hoping to find trilliums on our property, and it looks like we got our wish in a big way. It's always fun to find a rare plant, however, this is beyond anything we could have imagined. We liken it to winning the lottery."



Nettle-leaf sage (*Salvia urticifolia*)

Photo by Bart Jones

TNPS FIELD TRIPS

Cane Creek Canyon Preserve

April 21, 2012

You'd think with the warm spring we enjoyed I'd have no worry about cool weather for our trip to Cane Creek Canyon Preserve in northwest Alabama—WRONG! A temperature that remained in the lower 50s under cloudy skies and a stiff breeze put a chill in the air, but not to the enthusiasm of the nine TNPS members and guests. Whatever chill we felt was soon alleviated by the warm welcome given to us by Jim and Faye Lacefield.

Cane Creek Canyon is the passion of the Lacefields and over the years they have assembled several hundred acres under the trust of the Nature Conservancy, lands which protect many rare plants in Alabama. What makes this site special is the cap of Hartselle sandstone which Cane Creek cuts through. The area is quite reminiscent of many areas of the Cumberland Plateau with sheer cliffs and rock-houses overlooking the creek and limestone barrens at the bottom of the canyon.

As we ventured into the woodlands we were met by some beautiful patches of Eastern bergamot (*Monarda bradburiana*) and a couple of outstanding specimens of nettle-leaf sage (*Salvia urticifolia*). As the trail descended toward a waterfall we encountered gold star grass (*Hypoxis hirsuta*), partridgeberry (*Mitchella repens*), eared tickseed (*Coreopsis auriculata*), Solomon's plume (*Smilacina racemosa*), and the first Alabama azalea (*Rhododendron alabamense*). The trail led back up to a gorgeous overlook surrounded by mountain laurel (*Kalmia latifolia*) in peak bloom with large-flowered tickseed (*Coreopsis grandiflora*) and an atypical form of wild garlic (*Allium canadense*) that had no bulbils in the flower head, just flowers. Immediately down the trail from the lookout was false flowering spurge (*Euphorbia pubentissima*) looking for all the world like a wimpy flowering spurge.

On to the rockhouses and our highlight plant of the trip, French's shooting star (*Dodecatheon frenchii*). All along the drip line of the rockhouses patches of shooting stars thrived. These are much smaller, more gracile plants than the more familiar *Dodecatheon meadia* with smaller flowers. Also, located here was cliff meadow rue (*Thalictrum clavatum*).

As we arrived at Cane Creek, the habitat became much moister and several small meadow-like openings appeared supporting a riot of flowers including leather vase vine (*Clematis viorna*), smooth carrion flower (*Smilax herbacea*), Seneca snakeroot (*Polygala senega*), smooth phlox (*Phlox glaberrima*), long-sepal beard-tongue (*Penstemon calycosus*), veiny pea (*Lathyrus venosus*), American columbo (*Frasera caroliniensis*), spiny pod



Photo by Bart Jones

Alabama azalea (*Rhododendron alabamense*)

(*Matelea carolinensis*), and a couple of beautiful thicket hawthorn (*Crataegus intricata*) bushes.

Making our way along the wooded areas of the creek we saw some lovely bigleaf snowbell (*Styrax grandifolia*) and a few sweetshrubs (*Calycanthus floridus*). Though not in flower, Jim and Faye pointed out some good stands of Alabama warbonnet (*Jamesianthus alabamense*). Ascending back up to the top and the completion of our loop hike, one more treat awaited us: a rescued southern lady's slipper (*Cypripedium kentuckiense*) from the Birmingham area. It seemed to be quite happy in its adopted home.

Cane Creek Canyon Preserve is a wonderful place and the Lacefields are informative and gracious hosts. If you get the opportunity to visit, I highly recommend you do. Just give Jim and Faye a call, you won't be disappointed.

Bart Jones



TNPS Members and student listen to Paul Davison, during the spring Micro-Safari near Sewanee.

Jackson Bend Hike April 14, 2012

On April 14, 13 people from both Tennessee Citizens for Wilderness Planning and TNPS joined for a hike along TVA's Tellico Lake. The usual spring wild flowers were mostly gone but we did see some interesting plants, Eastern prickly pear cactus (*Opuntia humifusa*), yellow fruit horse-gentian (*Triosteum angustifolium*), baby blue eyes (*Nemophila aphylla*) and nettle-leaved sage (*Salvia urticifolia*). There was a mystery plant later identified on a return visit as *Campanula americana*. (The early confusing basal leaves were gone.) Hikers could adapted their stamina level, and a shuttle was used to shorten the return hike.

Larry Pounds

You can read more about Larry's field trip and about other adventures in nature at the very entertaining website www.benandlarryincumberland.com

Annual Meeting Field Trips and Program by David Haskell

David Haskell, author of the newly released book *The Forest Unseen*, is likely to beguile listeners, not only with his knowledge and observations of nature but also with his subtle poetic style and English intonation, when he speaks at the September Annual Meeting.

David will provide the program on Saturday the 15th, and he may join members for a hike earlier on Saturday.

The Forest Unseen is a collection of Haskell's observations of a small section of forest at Sewanee known as Shakerag Hollow. Those observations can be broad but are frequently microscopic and detailed, often pulling into his field of vision recent biological research by other scientists.

One reviewer compares Haskell to Leopold, Muir, and Thoreau, adding, "For those who are looking for inspiration to spend more time in the wild, this book is the perfect companion. Haskell's vast knowledge of the forest and all its creatures is the perfect guide to exploring wilderness."

Upcoming TNPS Field Trips

- June 30, 10 a.m. Clingman's Dome parking area. Guides: Allen and Susan Sweetser.
- August 4, 10 a.m. Welcome Center at The Farm, Summertown. Guide: Bart Jones (901-726-6891)

Annual Meeting Fast Approaching —continued

Crabtree and TNPS charter member Dennis Horn are among a number of field trip leaders.

David Haskell, Sewanee professor and author of the new book *The Forest Unseen*, will provide the program on Saturday night of the meeting. Also that evening, President Bart Jones will preside at the business session; the annual Conservation Award will be presented; and the election of officers and directors will be held. The program for opening night will be announced later.

Carson Springs is equipped with 34 motel-style rooms, a large dining room, large meeting rooms and smaller lounge areas, and a store.

More information about Carson Springs and directions can be found by doing an internet search for Carson Springs Baptist Conference Center.

Questions about registration may be addressed to Lorie Emens at wildflowerlorie@gmail.com.



Photo by Latham Davis

Aster on Roan Mountain.

Check Your Dues Date?

Check your mailing label—the year through which you have paid dues is printed at the top. If the date's 2011 or 2010, please send a check promptly to Darel Hess, our treasurer. TNPS, P.O. Box 159274, Nashville, TN 37215.

TNPS Newsletter
P.O. Box 856
Sewanee, TN 37375