

TENNESSEE NATIVE PLANT SOCIETY



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Dr. Edward Chester Receives TNPS Conservation Award

The fourth annual TNPS Conservation Award has been presented this year to Edward W. Chester, emeritus professor of biology at Austin Peay State University and a leader in research into plants and plant communities of Tennessee and Kentucky.

The award was made during the TNPS annual meeting in September, and though Dr. Chester was not able to attend because of the illness of his wife, he expressed his gratitude and has accepted the thanks of the society for his work in botany and conservation.

TNPS members are particularly familiar with Dr. Chester because of his work on a Tennessee checklist of plants (for which he was lead author) made in preparation for a technical manual of the Tennessee vascular flora. That manual is expected to be completed in 2012 by the Tennessee Flora Committee, with Dr. Chester serving as the facilitator and project coordinator. The project receives financial assistance from TNPS.

Over 46 years of teaching and research at APSU, Dr. Chester's research interests and subsequent publications (more than 150, including seven books) have mostly involved a broad range of plant studies. His special interests are the flora of Land Between the Lakes, the barrens of the Pennyroyal Plain in Kentucky and Tennessee, rare plants, and woody plants of Tennessee.

Dr. Chester continues to teach at Austin Peay on a part-time basis, and he continues his research. He is a reviewer of science books for the University of Tennessee Press and the University Press of Kentucky. He is also a manuscript reviewer for several scientific journals and is a botanical consultant for the U.S.



Dr. Chester

TNPS Creates Botanists Hall of Fame

Part of the mission of TNPS is to make the public aware of the value of native flora. Botanists, both amateur and professional, who expand our knowledge of plants are essential to that mission. Therefore, your society has now created what we term the Tennessee Botanists Hall of Fame. What great fun this will be from year to year, beginning with the selection of this year's four inductees.

The idea for a hall of fame was suggested by a member of the TNPS Board of Directors, and President Bart Jones quickly picked up on the idea. Bart asked board members to present nominees and then vote for four. The winners were announced by Bart at September's annual meeting. To see who the first inductees are and to read short biographies, please turn to page 4.



*Merry Christmas
& Happy
New Year*

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TNPS Newsletter

December 2011

Vol. 35, No. 4

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

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A Letter from the President

I am so grateful for all the people who do so much for TNPS. It is a real comfort as president to know that all I have to do is ask and there will be someone willing and able to help. There are even times when I don't have to ask, people just do things because they care deeply about our natural spaces and want to make sure they are protected. So I want to say a huge "THANK YOU" to all of you who have made this year another wonderful one for TNPS.

Our first annual fund drive was an incredible success. Again, thanks to everyone for their generosity. I will be sending a letter to the membership in a few weeks requesting your consideration for a donation. This money enables us to meet our budgetary demands without raising dues and allows us the freedom to make donations to worthy causes, procure topnotch speakers, and produce a first class newsletter.

I hope everyone enjoyed the annual meeting as much as I did. The facilities at DuBose were wonderful and the staff a joy to work with, and I know I had absolutely no complaints about the food—marvelous! A special thanks goes to our speakers for the weekend, Eunice Colmore and our very own Mary Priestley, who presented a program about Mary's book, *William's Wildflowers*, giving the background of the paintings and life of William Crutchfield and the use of the book as an educational tool teaching children about our native plants and wildlife. Saturday evening's program by Pat Cox was an entertaining, comprehensive tour of all the species of ferns found in Tennessee. Pat's tips on identification made me feel like I might actually ID the things I see, well at least those that don't promiscuously form hybrids!

The annual meeting was also the backdrop for our announcement of the first class of our newly-created Tennessee Botanists Hall of Fame and the 2011 TNPS Conservation Award. Biographies of the selected individuals are featured in this issue of the newsletter and I know everyone will enjoy learning more about the giants of Tennessee botany.

Of course the annual meeting would not be complete without a wonderful field trip. Thanks to Todd Crabtree for leading the hikes at May Prairie and Franklin-Marion Forest. I don't think I've ever seen May Prairie so beautiful.

While we're speaking of field trips, I want to extend my gratitude, not only to the trip leaders, but to all the members and visitors who attended this year's events. I feel that the field trips and the newsletter form the core of what makes up the soul of TNPS, and if you haven't gone on one of the trips, I think you are really missing out on a fantastic experience. The field trip committee will be meeting soon to finalize our schedule for 2012. If you know of a site that you feel we should visit, let me know by email, bjones7777@hotmail.com, and we'll see if we can include it. But rest assured, our schedule will be exciting, with a mix of old favorites as well as new places.

And doesn't Latham Davis do an incredible job with our newsletter? I thank



Latham all the time, but if you see him, let him know how much you appreciate the work of art that he creates with each issue. We as an organization receive newsletters from other plant societies all across the country, and I can honestly say our newsletter is as good as any other group's newsletter, better than most.

The fall weather is beautiful, but it means winter is right around the corner. Enjoy all the holidays everyone, and make your New Year's resolution to do more with TNPS. I'm looking forward to my second year as president, which I to be an improvement over the first. With your help, I'm sure 2012 will be another banner year for us.

See you on the trail,

Bart



Dr. Chester Receives Conservation Award

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Forest Service at Land Between the Lakes. He has served since 1988 on a committee of 12 botanists appointed by the Tennessee Commissioner of Environment and Conservation to recommend additions and revisions to the Tennessee rare plants list. He has received numerous grants from agencies, foundations, and organizations to pursue his research.

Dr. Chester was born in Blooming Grove, Tennessee, the ninth of ten children, worked on the family farm, and later worked in construction and a factory. He received his bachelor's degree from Austin Peay, also attended Peabody College, and received his master's and Ph.D. degrees from the University of Tennessee. He was a science and math teacher in a rural Tennessee school before attending graduate school.

The most important things in his life, Dr. Chester says, are family, faith, friends and colleagues, and the conservation of natural resources. His philosophy of education is centered on the worth of every person, the belief that learning is a vital part of life, that learning should be a joy, and that anyone can learn something from each experience that life offers, confronts us with, or that we make on our own.

A Letter from Edward Chester

I received yesterday the beautiful plaque for the 2011 conservation award. I am deeply honored to have received the award and offer my heartfelt thanks to all of you who made the decision to extend this honor to me. The award is especially meaningful since it came from colleagues and friends who share my strong feelings for stewardship and conservation of our natural resources, especially our native plant life. I regret that I was not able to attend the annual meeting and receive the award in person, but know all of you understand the extreme circumstances that prevented by attendance

Edward W. Chester

Dr. Chester's wife, Bonnie, who was very ill at the time of the annual meeting, has since fully recovered.

Board Members Nominated for Re-election

Three current at-large members of the TNPS Board of Directors, whose terms are expiring, have been nominated to continue on the board for new two-year terms. They are Susan Sweetser, Michelle Haynes, and Bertha Chrietzberg.

The executive committee has certified all of the nominees, who will automatically begin their terms in January unless additional nominations are forthcoming.

Any eligible member may be nominated to the board of directors by written petition of not less than 10 members, received by the chair of the nominating committee within three week of publication of this issue of the newsletter. If you would like to make a nomination, contact President Bart Jones by email at bjones7777@hotmail.com. Nominations must be accompanied by the written consent of the nominee to be a candidate and to serve if elected.



Four Botanical Stars Named to New Hall of Fame

Continued from page 1

FOUR OF THE MOST IMPORTANT BOTANISTS in Tennessee history have been selected to the Botanists Hall of Fame for their special contributions to science in the state. The inductees are listed here chronologically by date of birth:

- *André Michaux*, who explored and elucidated the botanical landscapes in Tennessee in the late 1700s;
- *Augustin Gattinger*, author of the state's first flora manual and the person many people consider the father of Tennessee botany;
- *A. J. "Jack" Sharp*, internationally known bryologist, conservation leader, and, for 45 years, a professor of botany at the University of Tennessee;
- *Elsie Quarterman*, emeritus professor of biology at Vanderbilt University and the one living member of this group.

Elsie Quarterman, born in 1910 in Georgia, completed her undergraduate work at Georgia State Woman's College and post-graduate studies at Duke University.



Elsie Quarterman

She accepted a faculty position at Vanderbilt University and later became the University's first female department chair, heading the biology department in 1964. Dr. Quarterman is best known for her work on the ecology and plant communities of the cedar glades of the Central Basin. She is widely recognized for the re-discovery of the Tennessee Coneflower (*Echinacea tennesseensis*) in 1969, a plant once thought to be extinct and subsequently the first plant endemic to Tennessee to be protected by the Endangered Species Act. She was a leading proponent of the creation in 1973 of Savage Gulf State Natural Area, the largest state wilderness area in Tennessee. Dr. Quarterman has received many honors, including our very own TNPS Conservation Award. She has been a fellow of the American Association for the Advancement of Science, President of the Association of Southeastern Biologists, and chairman of the election committee for the Botanical Society of America, as well as acting director of the Tennessee Botanical Gardens at Cheekwood. The Elsie Quarterman Cedar Glade State Natural Area was named in her honor in 1998.

She accepted a faculty position at Vanderbilt University and later became the University's first female department chair, heading the biology department in 1964. Dr. Quarterman is best known for her



Elsie Quarterman here is accepting the 2008 TNPS Conservation Award from then president Mary Priestley.

A native of Plain City, Ohio, Jack Sharp earned degrees from Ohio Wesleyan (1927), the University of Oklahoma, and Ohio State University. His teaching career at the University of Tennessee spanned 45 years, from 1929 to 1974. An internationally-recognized expert in the field of bryology, Dr. Sharp wrote many seminal papers on the subject. He was also a champion of the Great Smoky Mountains National Park, serving as its first botanist, and was instrumental in starting the annual Spring Wildflower Pilgrimage. He co-authored the popular guidebook *Great Smoky Mountains Wildflowers* and refused royalties to help keep the handbook affordable. He was the founder of the UT Arboretum Society and was associated with the UT Herbarium until 1973.

Among many awards and honors he received was his election to the Linnean Society of London in 1992. The author of more than 200 publications, Sharp was a consultant for Time-Life Books, the British Broadcasting Corp., *Encyclopedia Britannica*, and *National Geographic* magazine. He collected plants and mosses from every county in Tennessee, every state in the nation, and at least a dozen countries including Mexico, Japan, Taiwan, Russia, Tanzania, and Finland. Dr. Sharp died in 1997.



Jack Sharp

Augustin Gattinger was born in Munich, Germany in 1825. He studied medicine at the University of Munich. When time allowed away from his medical studies, he pursued an interest in botany with a friend, Ferdinand Arnold, who went on to become a leading expert on mosses and lichens. While a student, Gattinger became involved in radical politics and was forced to leave the country. He and his new wife immigrated to America in 1849, eventually settling in Kingston, Tennessee. He practiced medicine there and began exploring the flora of the area, eventually moving with his wife to Ducktown where he worked as the doctor for the copper mines. In 1864 he became the State Librarian, a position which allowed him free travel by freight and passenger train, which he took advantage of to visit other areas of the state to botanize. He corresponded with many leading botanists of the day. At a meeting of the American Association for the Advancement of Science in 1877, several botanists in attendance convinced him to publish his studies. This small volume, *The Flora of Tennessee, with Special Reference to the Flora of Nashville*, was self-published in 1887 and paved the way for Dr. Gattinger's subsequent work, *Medicinal Plants of Tennessee*, which was published in 1894 under the auspices of the State of Tennessee Department of Agriculture. *Flora of Tennessee and Philosophy of Botany*, his major work, was published in 1901. He died in 1903.



Augustin Gattinger

André Michaux, born in 1749 near Versailles, France, showed unusual talent in plant propagation under the guidance of his father and, as a young man, studied under the best botanists of France. But after the death of his wife, soon after the birth of their son François André, Michaux began traveling abroad collecting seeds, plants, and other objects, often under circumstances of



Magnolia macrophylla, one of many of André Michaux's botanical discoveries.

great danger and duress. Impressed by this resilient scientist, French officials chose Michaux for a mission to the United States. In 1785 he traveled to North America accompanied by 15-year-old François André, who was also to become a noted botanist. Michaux initially constructed a garden in New Jersey and explored the New York/New Jersey area and formed a friendship with William Bartram. Later he established a garden in Charleston, South Carolina, from which he explored the southern Appalachians of North Carolina and Tennessee. Michaux returned to France in 1796, having identified 260 species in Tennessee. Three species in Tennessee bear the specific epithet of *michauxii* in his honor. Over 200 years later, André Michaux is still being recognized for his accomplishments.

Tennessee Naturalist Program Underway and Expanding

Two years ago Margie Hunter gave a presentation at the TNPS annual meeting about plans for the Tennessee Naturalist Program. Despite a paucity of funds, the program has managed to get off the ground, and a second group of 20 Tennessee Naturalist hopefuls are taking the course at Owl's Hill Nature Sanctuary in Brentwood.

The first session produced 16 graduates at Owl's Hill last spring.

Participants complete a 10-class course in the natural sciences. To earn certification in the program, participants must volunteer in a wide variety of service activities generally involving the environment and conservation.

In an article published last year, Margie writes that naturalist programs produce two highly desirable outcomes. "First, citizens gain valuable insight into the natural history of their state. This knowledge not only allows them to better understand and appreciate living organisms, natural systems, and their functions, but it also increases understanding of current environmental and conservation issues, which can influence personal, social, and political decision making. Second, a pool of informed volunteers can make vast contributions to over-worked and understaffed government agencies, nature centers, and parks on national, state, and local levels."

TNP is currently developing a comprehensive startup packet for potential chapters. In addition to Owl's Hill, new chapters are being organized at Memphis Botanic Garden, Chattanooga Nature Center and Arboretum, and Friends of South Cumberland in Monteagle. Others are anticipated.

TNPS has provided a gift of \$500 to assist the program.

Snowy Orchid, *Platanthera nivea* (Nuttall) Luer

Dennis Horn

Snowy orchid is an appropriate name for *Platanthera nivea*, an orchid with snow-white flowers. The Latin *nivea* also means “snowy” or “white as snow.” Bog Torch is another common name referring to the bright racemes that sometimes blanket a bog or pine savanna. This orchid is also occasionally referred to as frog spear or bog spike. Snowy orchid is currently placed in the genus, *Platanthera*, which includes the rein orchids or fringed orchids, although the lip of this orchid is not fringed.

- **Description:** Plants are terrestrial, single stemmed, erect, typically 30 to 60 cm tall. There are two to three bluish-green leaves near the base that are reduced to bracts upward on the stem. The leaf blades are linear-lanceolate, keeled, and folded lengthwise, 10 to 20 cm long by 1 to 2 cm wide (Luer, 1975). The inflorescence is a dense terminal raceme, cylindrical, 7 to 10 cm tall and about 3 cm across, with 20 to 40 pure white flowers. The flowers are non-resupinate (lip on top), each about 1.5 cm wide, and with a nearly straight horizontal spur, 1.5 cm long. The ovary is stout, horizontal, about 1 cm long. The sepals and lateral petals are about 5 mm long. The middle (lower) sepal is elliptic while the lateral sepals and petals are oblong. The lip is linear-elliptic, bent backward in the middle, and slightly longer than the petals. The column is yellow and less than 1 mm long (Luer, 1975).

- **Habitat:** Snowy orchid is a plant of acidic bogs and sunny, wet meadows. It can also be found in moist prairies, pine savannas, and along wet roadside ditches.

- **Distribution:** Snowy orchid is found in the eastern U.S. mostly along the Atlantic and Gulf coasts. It ranges from the southern tip of New Jersey, southward through

Deleware, along the Coastal Plain of Maryland, Virginia, North Carolina, South Carolina, Georgia, and the entire state of Florida, then westward along the Gulf Coast of Alabama and Mississippi, the Coastal Plain of Louisiana and Texas, and one county in the Arkansas Delta. It was also collected in 1948 from a remnant bog in the Piedmont of Georgia, in Douglas County southwest of Atlanta, but this site is now destroyed (Thomas S. Patrick, personal communication). A viable population still exists in the Interior Low Plateau of southern Middle Tennessee, in Coffee County. The Tennessee site is the most inland location for this plant and possibly the only population remaining outside the Coastal Plain. Snowy orchid has become increasingly rare in the Coastal Plain north of Florida (Weakley, 2008).

- **Flowering Season:** May to July in Florida, June to August in North Carolina, and mid to late July in Tennessee.

Although increasingly rare, spectacular colonies of snowy orchid can still be found occasionally in coastal bogs and pine savannas. In these wet, rich soils this orchid is often associated with pitcher plants, sundews, butterworts, and sedges. The flowers are a brilliant white, almost blue-white, and have a mild scent of orange blossoms. The surface of the flower has a rather grainy texture that produces a radiant glow.

The plant is bluish-green throughout except for the flowers, including the fluted stem, leaves, and ovary. The leaves are often withered at flowering time (Sheviak, 2002). As with all *Platantheras*, flowering begins at the bottom of the inflorescence and continues upward. Thus the raceme is at first conical but later becomes cylindrical as flowering progresses.

The lip of snowy orchid is positioned atop the flower, a characteristic that is unique for the genus *Platanthera*. The lip is narrow, strap-like and bends backward at the center, then often turns upward at the tip. The margin is entire,



not toothed or fringed as in many other *Platantheras*. The lateral sepals behind the lip have a one-quarter twist exposing the back surface as they project horizontally to either side of the lip. The lateral petals together with the middle sepal behind them form a landing below the column for pollinators. A long slender spur projects horizontally behind the flower and extends beyond the central axis of the inflorescence.

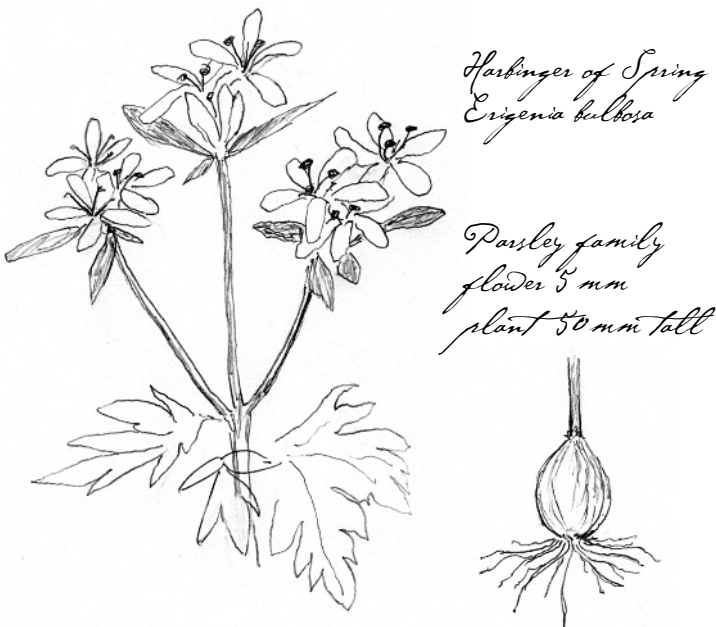
This species, as well as yellow fringed orchid (*Platanthera integra*) and small green wood orchid (*P. clavellata*), is separated from the other members of the genus *Platanthera* by some taxonomists and placed in the genus, *Gymnadeniopsis*, proposed by Rydberg in 1901. The column of these three species bears two pairs of lateral appendages not found in other species of *Platanthera* (Sheviak, 2002). This difference, along with the non-resupinate lip, and other characteristics not considered here, may be reason enough to exclude snowy orchid from the genus *Platanthera*.

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Weakley, A. 2008. *Flora of the Carolinas*, Virginia, Georgia, northern Florida, and surrounding areas, working draft of 7 Apr 2008. (<http://herbarium.unc.edu/flora.htm>). Univ. of North Carolina, Chapel Hill.

You may send questions and comments to Dennis at horndd@lighttube.net.



TNPS FIELD TRIP

September 17, 2011 (Annual Meeting)

May Prairie and Franklin-Marion State Forest

Field trips during the annual meeting just always feel special. I don't know if it's the larger number of participants, the uniqueness of the site, or a combination of both, but it is always something to which I look forward. This year was a reconnection with an old friend, May Prairie.

It takes a little jaunt through the woods to get to the actual prairie, but a few things along the way caught our eye. There were several very large and intriguing mushrooms that commanded our attention. We were treated to several fine specimens of pinesap (*Monotropa hypopithys*) along the trail. At the edge of the woods where it begins to acquire some prairie-like traits were plants of Gattinger's purple gerardia (*Agalinis gattingeri*). Turned out this was just the prelude to what awaited us in the prairie.

As we moved into the open, a galaxy of pink flowers lay before us. May Prairie seemed to be literally covered in *Agalinis*. Closer inspection showed at least four species present; smooth purple gerardia (*Agalinis purpurea*) the most abundant, slender purple gerardia (*Agalinis tenuifolia*), the aforementioned Gattinger's purple gerardia, and the state endangered ridgestem purple gerardia (*Agalinis oligophylla*). Many plants that bloom in late summer were just holding on, including ironweed (*Vernonia gigantea*), orange coneflower (*Rudbeckia fulgida*), small-headed blazingstar (*Liatris microcephala*), and two rare species of Silphium – tansy rosinweed (*Silphium pinnatifidum*) and Mohr's rosinweed (*Silphium mohrii*). Other noteworthy plants in flower were coyote thistle (*Eryngium integrifolium*), big mock bishop's weed (*Ptilimnium costatum*), justice weed (*Eupatorium leucolepis*), Mississippi Valley flat-topped goldenrod (*Euthamia leptoccephala*), narrow-leaved sunflower (*Helianthus angustifolius*), cowbane (*Oxypolis rigidior*), and downy lobelia (*Lobelia puberula*). One species that was just coming into bloom which on the surface appeared to be bushy aster (*Aster dumosus*) but now is thought to be either a species found on the Coastal Plain or a new species altogether, so stay tuned.

The afternoon sent us to Franklin-Marion State Forest where we hiked to the bottom of a cove where we saw many individuals of richweed (*Collinsonia canadensis*). The hike was a nice, relaxing way to end the day.

Bart Jones

Next Annual Meeting Planned for Carson Springs, Newport

This year's annual meeting at DuBose Conference Center in Monteagle provided once again an entertaining mixture of informative programs, displays of botanical art, and field trips, along with good food and fellowship.

It is not too early to plan to attend the 2012 annual meeting, which shifts to upper East Tennessee. The meeting will be held September 14–16 at Carson Springs Baptist Conference Center in Newport. Carson Springs provides modern meeting facilities, motel-like accommodations, and a large dining hall, all in a natural setting. Streams and hiking trails are handy, and the Great Smoky Mountains are an easy drive away.



*Watercolor
by Mitzi
Roess*

Field Trip Plans for 2012

The field trip planning committee of Dennis Horn, Todd Crabtree, Bart Jones, and Mary Priestley met December 3 at Mary's house to prepare a schedule of hikes for the new year. The final schedule will be approved by the Board of Directors at its January 7 meeting and will be published in the March issue of this newsletter. Please join other members for some of those field trips.

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 2010 or 2009, please send a check promptly to Darel Hess, our treasurer. TNPS, P.O. Box 159274, Nashville, TN 37215.

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