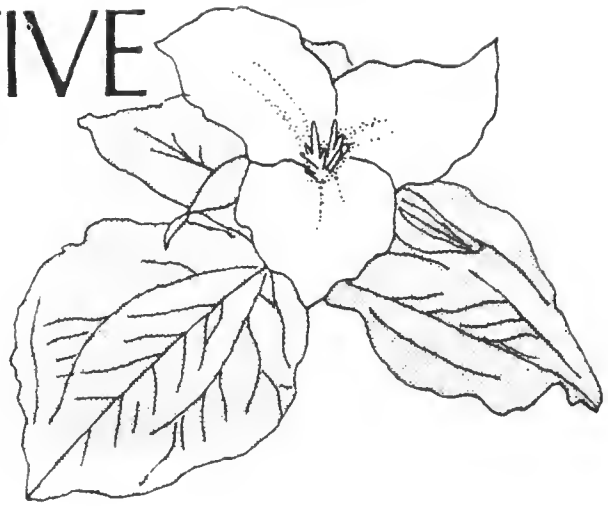


TENNESSEE NATIVE PLANT SOCIETY NEWSLETTER



Vol 5, No.1
February 15, 1982

MESSAGE FROM THE PRESIDENT

With the temperatures hovering around 0° it seems a little absurd to be concerned about whether or not the wildflowers will be up for the March 20 trip along the Mississippi River bluffs, or whether Ruth's Golden Aster, (Heterotheca ruthii), one of our special rare plants, will still bloom on October 16th along with lots of fall colors for one of our fall trips, but that is what several of us have spent the last week doing. I hope we have produced something for someone every time. I have included several of the pilgrimages which are springing up everywhere, produced in a genealogy leading back undoubtedly to the 32 year-old Gatlinburg Pilgrimage, sponsored jointly by the Great Smoky Mountain National Park, the Botany Department of the University of Tennessee, Knoxville, and the Gatlinburg Garden Club. These pilgrimages all feature educational programs for which TNPS is intended. Most of them also call on the expertise of several of our members, as well as the participation of many. We have had unfortunate schedule conflicts on occasion in the past, and by including them on our official field trip program perhaps we can start a tradition of avoiding this problem. But we do want to be sure that we preserve our own special brand of enjoyable and educational botanical hikes which are really a mainstay of our Society.

We hope the March trip will include the beginnings of spring. In April, everything breaks loose everywhere, and it is the time when everyone wants to take people to their favorite places. But after all, even spring wildflowers would get monotonous (maybe) if that were all there was to see all year long. The Cedars of Lebanon trip is timed to catch the remarkable carpets of whites and yellows with other small splashes of color as the glade flora does its thing between winter and the dry barren grays of the rest of the year. The Annual Meeting at Beersheba Springs has been delayed a month so as not to conflict with the Fall Creek Falls program, as happened last year. The cedar glades may look bleak in July, but this is the time of bloom for the Tennessee Coneflower (Echinacea tennesseensis), another of our rare plants. Paul Somers is going to go over the Recovery Team program, show us a population or two, and then we can see what the glades look like most of the year instead of mid-April when at peak bloom. Also, early in July, Linda Parrish wants a crew to help her weed the rare plants plots at Norris and then reward them with updates on the rare plants nursery at TVA and a cool walk along the Clinch River Bluffs Trail. Larry Wilson really had two ideas for his September West Tennessee trip. He toyed with the idea of leading a field trip on urban wildflowers, or plants between the paving stones. This could be very interesting and educational, as well as being the potential botany of the future, whether we like it or not. If there is interest in such an expedition, let Larry know and he might swing his program in that direction. We do have the peculiar problem that it seems to be farther from Nashville to Memphis than it is from Memphis to Nashville. We would like to facilitate more involvement from east to west, so try to organize some car pools or other enticements for the western trips.

We have left January and December for cross-country skiing, winter canoeing, sorting field notes or specimens, or just reading in front of the fire. To end on the note with which I began, though, this is the time of the year to contemplate the ways in which plants adapt to winter conditions. Animals can seek shelter from some of the worst of winter, plants just sit and "take it". Their adaptations to cold can be impressive and range from simply dying and leaving behind resistant dormant seeds, to dying back to the ground or underground capitalizing on the ameliorating effects of a more stable environment close to the ground. But the physiological changes which allow tree buds with delicate leaf primordia already set from the previous summer to withstand wind chill factors of 50 to 100° below boggles the mind a bit. Then when things do begin to pop in the spring some plants, like the skunk cabbage, can produce metabolic heat which allows them to compensate for early spring cold temperatures by raising the temperature of the flowering parts as much as 22°C and get the jump on their neighbors.

A. Murray Evans



ANNOUNCEMENT OF WILDFLOWER CALENDAR AVAILABILITY:

I strongly recommend to members that they consider purchasing the 1982 Endangered Wild Flower Calendar. The calendar contains a full color photo for each month and information on the Rare and Endangered Native Plant Exchange. Two Tennessee plants are featured, namely, the Tennessee coneflower (with a photo by Paul Somers) and Ruth's golden aster. Single copies sell for \$5 or four copies for \$15, plus \$0.50 per calendar for postage. Send orders with check made out to Rare and Endangered Native Plant Exchange to:

Rare and Endangered Native Plant Exchange
New York Botanical Garden
Bronx, NY 10458

Tom Patrick



*****DEADLINE FOR MID APRIL - MID JUNE ISSUE IS MARCH 15*****

Send Materials to: Lorene L. Sigal, Environmental Sciences Division,
Oak Ridge National Laboratory, P.O. Box X,
Oak Ridge, TN 37830. Phone: (615) 574-7266

1982 ANNUAL TRIP SCHEDULE

27 Feb.	Laurel Snow Pocket Wilderness	Murray Evans	615-974-2256 (H) 615-588-1128
20 Mar.	Meeman-Shelby Forest State Park	Charles Norverll	901-876-5201 (H) 901-876-5529
3 Apr.	Memphis, Audubon Park Wildflower Garden, Open Garden	Larry Wilson	901-454-5603 (H) 901-458-8724
16-18 Apr.	Cedars of Lebanon State Park	Sharon Patterson	615-444-9404 (H) 615-444-7775
22-24 Apr.	Gatlinburg Wildflower Pilgrimage	Ed Clebsch	615-974-2256
30 Apr. - 1 May	Carter County Wildflower Pilgrimage	Carter County Chamber of Commerce or James Potter	615-543-2122 615-772-3335
7-9 May	Fall Creek Falls State Park Wildflower Pilgrimage	Herb Roberts	615-881-3708 (H) 615-881-3772
29 May	Bear Creek, Stuart County	Wayne Chester	615-648-7781
19-20 June	Savage Gulf, Beersheba Springs, Annual Meeting	Tom Patrick	615-974-2256 (H) 615-577-5652
10 July	Rare Plant Plots, TVA Reservation, Norris, and River Bluff Trail	Linda Parrish	615-632-6450 (H) 615-974-0593
24 July	Tennessee Cone Flower and Cedar Glades	Paul Somers	615-741-3852 (H) 615-385-3482
14 Aug.	Arnold Engineering Reservation, Sinking, Pond, Westall Swamp, Goose Pond	Mark Moran and Dennis Horn	615-455-2611 X7477 615-455-2611 X7547 (H) 615-455-5742
10-12 Sept.	Roon Mt. Naturalist's Rally	Ed Schell or Carter Co. Chamber of Commerce	615-282-6125 615-543-2122
25-26 Sept.	Mississippi River Bottoms	Larry Wilson	901-454-5603 (H) 901-458-8724
16 Oct.	Hiwassee River Valley and Ruth's Golden Aster	Gene Wofford	615-974-2256
20 Nov.	Frozen Head State Park	Ross Hinkle	615-482-9031

FEBRUARY FIELD TRIP

LAUREL SNOW POCKET WILDERNESS

Date: Saturday, February 27, 1982
Time: 9:00 a.m. EDT
Organizer & Leader - Dr. Murray Evans, Botany Department, Univ. of Tenn.,
Knoxville, TN 37996-1100; Tel., office 615-974-2256,
home 588-1128
Meeting Place: Courthouse, Dayton, TN, Rhea Co., Rt. 27, between Rockwood
and Chattanooga. The trail is just a few miles away; the
courthouse is an interesting and historic site, as is the town.

This is a winter hike; bring lunch, good walking footwear, warm clothes and rain or snow gear. The trail is one of Bowaters' Pocket Wilderness trails. It is about 8 miles long, but can be varied according to the number of waterfalls or overlooks visited. The emphasis will be on trees and shrubs and adaptations of plants (and perhaps people) to winter.



MARCH FIELD TRIP

MEEMAN-SHELBY FOREST STATE PARK

Date: Saturday, March 20, 1982
Time: 8:30 a.m. CDT
Organizer & Leader - Charles Norvell, M-S Forest State Park Rt. 3, Millington, TN
38053; Tel., office 901-876-5201; home 876-5529
Meeting Place: Park Office. Directions to Park - I-40 east of Memphis, take
I-240 north to Millington exit, Rt. 51 to North Watkins, left on
Watkins, Park clearly marked by road signs. Camping with full
hookups and cabins available at park. Inquire for rates and
reservations with Charles Norvell by letter or phone at above
address and office phone.

The trail will be the Chickasaw Bluffs trail, 10 miles one way with a car shuttle back, a moderate hike, pack your lunch. We will see early spring flowers along the Mississippi River bluffs. This is one of the few areas that has not been reduced to soybeans and channelization, and very different from the mountains, gorges and rockhouses of middle and east Tennessee.

MEMPHIS, AUDUBON PARK WILDFLOWER GARDEN, OPEN GARDEN

Date: Saturday, April 3, 1982
Organizer & Leader - For details, members can contact the Audubon Park, or Larry Wilson, Tel., office 901-454-5603, home 458-8724
Meeting Place: Audubon Park, Memphis

This is not one of our regular trips, but is an educational native plant program open to the public and we want to make sure our members are alerted to it.

APRIL FIELD TRIP

CEDARS OF LEBANON STATE PARK WILDFLOWER PILGRIMAGE

Date: Friday-Saturday, April 16-18, 1982
Time: Evening Programs Friday and Saturday evening, hikes with experienced leaders Saturday and Sunday.
Contact Person: Sharon Patterson, Cedars of Lebanon State Park, Tel., 615-444-9404, home 444-7775
Meeting Place: Cedars of Lebanon State Park, times and places of events to be programmed by Park Staff.

This program is listed by the State Park as jointly sponsored by TNPS because so many of our members participate as leaders and participants. The program will emphasize the unique spring flora of the middle Tennessee cedar glades. Many species grow nowhere else but on these thin soils over porous limestone which are winter wet and summer dry, and produce incredible carpets of spring colors.

Campground and cabins available at the park.

SECOND APRIL FIELD TRIP

32nd ANNUAL SPRING WILDFLOWER PILGRIMAGE,
GREAT SMOKY MOUNTAINS NATIONAL PARK, GATLINBURG

Date: Thursday-Saturday, April 22-24, 1982
Time: Half-day and all day hikes, Thurs., Fri., and Sat.; evening programs all three evenings.
Contact Person: GSMNP Office, Gatlinburg, TN 37738, Tel. 615-436-5615, or Dr. Ed Clebsch, Botany Dept. and Ecology Program, UT-K, Knoxville, TN 37996, Tel., 615-974-2256
Meeting Place: Civic Auditorium, Gatlinburg for registration (small fee), programs, information, and trip sign-ups.

This event is jointly sponsored by the Great Smoky Mountains National Park, The University of Tennessee Botany Department and the Gatlinburg Garden Club.

SECOND APRIL FIELD TRIP (cont'd)

Experienced leaders, many of whom are TNPS members, lead guided wildflower tours all over the Park. An enormous display of labeled wildflowers (mostly borrowed from local private wildflower gardens!) and evening programs emphasize the natural history of the region. There are also bird hikes, owl prowls, ecology and photography workshops.

THIRD APRIL FIELD TRIP

CARTER COUNTY WILDFLOWER PILGRIMAGE

Date: Friday, April 30 - Sunday, May 1, 1982
Contacts: Carter County Chamber of Commerce, Elizabethton, TN,
Tel., 615-543-2122, or James Potter, Tel., 615-772-3335
Meeting Place: Friday, 6:30 p.m., Elizabethton Junior High School; Saturday, at
the flagpole, Elizabethton High School, morning bird walk at
6:30 a.m., wildflower hikes 8:00 a.m.; Sunday, 1:00 p.m. at
Roan Mountain State Park.

The Junior High School and High School are about two blocks apart, along Rt. 321 on the west side of Elizabethton. Roan Mt. State Park is on Rt. 143 between the town of Roan Mt. and Roan Mt. itself, southeast of Elizabethton.

The field trips will feature the spring flora on the Roan, which is one of the premier places with some of the most interesting flora and spectacular vistas in the southern Appalachians.

Although this is not one of our programs, so many of our members either do, or should, participate that it is appropriate to feature it on our program. The hikes are moderate; there is a picnic lunch at Twin Springs picnic area at about 1:00 p.m. Saturday. Bring your own, or one of the local motels will prepare a bag lunch on request.

The final schedule may vary from this somewhat.



CLASSES ON PLANTS

Notice of two four-week evening workshops on plants offered by Dr. Tom Hemmerly, Professor of Biology, Middle Tennessee State University, Murfreesboro, Tenn. One course is 6:00 - 9:00 p.m., March 18, 25, April 1 and 8 on Identification of Middle Tennessee Plants. The other is Man and Plants in Middle Tennessee (wild edible, poisonous, and medicinal plants) and is offered at the same time on April 15, 22, 29, and May 6. For details contact Dr. Betty Harper, Office of Continuing Education, MTSU.

ENDANGERED SPECIES ACT IN JEOPARDY

Once again Congress is focusing its attention on the Endangered Species Act, since it is up for re-authorization in 1982. News from Washington indicates that the Act is being carefully scrutinized by members of the James Watt "team," and certain weakening amendments are being considered. Several high officials have indicated that they favor elimination of plants and invertebrate animals from the Act, so this is likely to be a central topic during the hearings. Thus far, Secretary Watt and Asst. Secretary Arnett have refused to commit themselves to continued protection of plants and invertebrates under the Act.

What impact would deletion of plants and invertebrates have on Tennessee's environment? Currently, Tennessee has two plant species listed as endangered and 62 others under review for listing. There are 12 invertebrates listed as endangered and 13 others proposed for listing. The listed plants are the Tennessee coneflower and the green pitcher plant (now extirpated from TN). Most of the invertebrates are mussels and snails. Tennessee is known for its great diversity of these aquatic animals and a few of them have become rare celebrities in the Columbia Dam controversy. Pollution and impoundments have taken a heavy toll on them, and the endangered status is an accurate reflection of the perils they face. Because of their sensitivity to pollution and sedimentation, they are regarded as excellent indicators of water quality.

A recovery plan for the Tennessee coneflower is being reviewed by the U.S. Fish and Wildlife Service at present, but it may never be funded if plants are eliminated from the Act. Similarly, status reports on many other rare plants would be eliminated, as well as federal assistance for State plant protection programs authorized under Section 6 of the Act.

What can be done to counter these threats? In Washington, representatives of many conservation organizations are trying to organize a strong coalition to defend the Act. Audubon is represented by Mr. Ken Berlin:

National Audubon Society
645 Pennsylvania Ave., SE
Washington, D.C. 20003

Please contact him if you want to get involved. Defense of rare plants is being coordinated especially well by Ms. Faith Campbell of the National Resources Defense Council. Contact her if you have a special interest in plants:

Plant Conservation Project, NRDC
1721 I St., N.W., Suite 600
Washington, D.C. 20006
(202) 223-8210

Preliminary hearings began Dec. 9, and Senate and House hearings are expected to happen in late January. We need to make it known that the ESA has worked exceedingly well, with very few unresolved conflicts. In the Southeast Region, between 1979 and July 1981, there were 2,057 endangered species consultations with the U.S. Fish and Wildlife Service staff that were resolved with no biological opinion necessary (no conflict). Only 137 opinions were issued, and of these only 18 were determined to represent "jeopardy" situations to the endangered species. Of the 18 cases, only 6 remain unresolved today. This represents 0.3% of the cases handled, a very low percentage of conflicts.

ENDANGERED SPECIES ACT IN JEOPARDY (cont'd)

Now is the time to take action. We need to let our Senators and Representatives know that we care about these symbols of unique eco-systems and biological diversity that enrich our lives. As majority leader and member of the Environment and Public Works Committee, Senator Baker will play an important role in the reauthorization. Senate hearings will begin in the Environmental Pollution Subcommittee headed by Sen. John Chafee (R-R.I.) and House hearings are being initiated in the Fish and Wildlife Subcommittee chaired by Sen. John Breaux (D-La.). Please consider contacting these individuals, as well as NRDC's Faith Campbell, on any correspondence. Also, NRDC would be delighted with any contributions you can send their way for the fight ahead.

James Sasser or Howard Baker
U.S. Senate, Washington D.C. 20510

(Baker) 251-5129
(Sasser) 251-7353

Paul Somers

CUMBERLAND ROSEMARY MAPPING PROJECT

In March 1979, the President's Message by Rob Farmer signaled the beginning of the Tennessee Native Plant Society's mapping project for the Cumberland rosemary (Conradina verticillata Jennison). A field trip was planned in May 1979 at Rugby and eight of us trekked from the cemetery down to White Oak Creek to visit a known site. For many of us, this was our first glimpse of Cumberland rosemary. The water was high that weekend and a number of searches along several streams in the Rugby vicinity failed to produce other populations.

Also during 1979 and continuing through 1980, data were collected through field studies from a number of sources. Among these were: The Tennessee Heritage Program with Paul Somers and Larry Smith, TVA Heritage Program with Leo Collins, and the UT Botany Department with Paul Schmalzer, Tom Patrick, Bretta Perkins and Eugene Wofford. Many other TNPS members assisted with the project. Matthew Bennett planned the first field trip to Rugby. My job was to assemble as much Conradina data as possible and map the confirmed data.

The net result was a reasonably complete documentation of the status of Cumberland rosemary. Locations have been verified for portions of three major watersheds: 1) Cumberland River north, including Big South Fork, Clear Fork, New River and White Oak Creek in McCreary County, KY, and Fentress, Morgan, and Scott Counties, TN; 2) Cumberland River south, including the upper section of the Caney Fork in Cumberland and White Counties, TN; and, 3) Tennessee River east, including the Emory River, Obed River, Clear Creek, and Daddy's Creek in Cumberland and Morgan Counties, TN. Altogether some 60 sites were recorded; some populations consisted of only a single individual. It seems that the Cumberland rosemary, although numerous localities are known, is extremely restricted to specific habitat found only along the major streams of the Cumberland Plateau. It is what botanists call a narrowly endemic plant.

CUMBERLAND ROSEMARY MAPPING PROJECT (cont'd)

The Cumberland rosemary, while extremely local in its natural occurrence, appears to be well established in these three watersheds, two of which will be afforded future protection either as part of the Obed Scenic River or the Big South Fork National Recreation Area.

The TNPS mapping project was brought to a close with the recent field trip back to Rugby in May 1981. We went out to revisit the known Conradina site on White Oak Creek, followed by a search for the type locality on Clear Fork. Approximately 12 participants explored the White Oak Creek side of Meeting Bend, although recent logging had obscured the access trail. Again high water made travel along the creek difficult. With Barbara Paylor's persistence, we finally relocated the site and saw the plant in full flower. The locality where the plant was first discovered was also seen along the Clear Fork on the Fentress County side of the stream across from the "ladies swimming hole." A drawing of Conradina verticillata is reproduced on the back cover of this issue.

Dennis D. Horn



A REPORT ON THE CALIFORNIA NATIVE PLANT SOCIETY

Once, in an earlier newsletter, the possibility was raised of reviewing newsletters and/or activities of native plant societies in other parts of the country. I was curious about what other groups might be doing and since our new editor, Lorene, happens to belong to the California Native Plant Society and could provide me copies of their newsletter and journal, I thought I would share with you what the Californians are doing. If members are interested, I'll try to get and highlight newsletter from other states or groups.

The California Native Plant Society publishes both a quarterly journal (Fremontia) and a Bulletin. The journal is, as it says, for layman about California plants. The issue I have is over 30 pages and contains articles about unusual habitats, revegetation with native plants, and gardening, with lots of black and white photos. The Bulletin is more like our newsletter: a calendar of events, plus notes on pending legislation and potential plant disasters. They are also compiling a list of nurseries, with specialities, and acquisition and propagation techniques, that deal with California Native Plants. With thousands of members in the state, the society is broken into many local chapters which publish their own newsletters. I have two issues of the Bay Leaf, published monthly by the San Francisco Bay Chapter. In addition to a local calendar of events and announcements of seminars and classes, these newsletters have two regular features: Family of the Month, and Happenings of the Local Flora, both of which might appeal to our members if we could find someone to write them. It is obvious from reading over the activities in all the publications that plant sales are an important part of the Californians' organization.

This should give you a rough idea of the activities of at least one other native plant society. Let us know if you would like reports on other organizations.

Linda Mann

TENNESSEE NATIVE PLANT SOCIETY SEED LIST

Send self-addressed envelope with sufficient postage to the TNPS Seed Dispatcher,
Al Foster, Box 416, Norris, TN 37828.

<i>Acer rubrum</i>	Red maple
<i>Amorpha fruticosa</i>	False indigo
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit
<i>Asclepias tuberosa</i>	Butterfly weed
<i>Asimina triloba</i>	Pawpaw
<i>Aster dumosus</i>	Bushy aster
<i>Aster infirmus</i>	Creamy white aster
<i>Aster novae-angliae</i>	New England aster
<i>Aster patens</i>	Spreading aster
<i>Belamcanda chinensis</i>	Blackberry lily
<i>Bidens aristosa</i>	Tickseed sunflower
<i>Boehmeria cylindrica</i>	False nettle, bog-hemp
<i>Boltonia caroliniana</i>	Boltonia
<i>Bromus</i> sp.	Brome grass
<i>Cephalanthus occidentalis</i>	Button bush
<i>Clematis virginiana</i>	Virgin's bower
<i>Cocculus carolinus</i>	Coralbeads, Red-berried moonseed
<i>Careopsis tinctoria</i>	Coreopsis, Tickseed
<i>Coreopsis tripteris</i>	Tall coreopsis
<i>Daucus carota</i>	Queen Anne's lace
<i>Delphinium exaltatum</i>	Tall delphinium
NOTE: This is one of Tennessee's sensitive plants in need of propagation. Try some!!!	
<i>Desmanthus illinoensis</i>	Prairie mimosa
<i>Echinacea tennesseensis</i>	Tennessee coneflower
NOTE: This is an extremely attractive rare plant we encourage your trying. Get some!!!	
<i>Eupatorium altissimum</i>	Tall Joe-Pye-weed
<i>E. fistulosum</i>	Joe-Pye-weed
<i>E. hyssopifolium</i>	Hyssop-leaved Joe-Pye-weed
<i>E. perfoliatum</i>	Boneset
<i>E. purpureum</i>	Sweet Joe-Pye-weed
<i>E. rotundifolium</i>	Round-leaved Joe-Pye-weed
<i>E. rugosum</i>	White snakeroot
<i>E. serotinum</i>	Late-flowering Joe-Pye-weed
<i>E. sesilifolium</i>	Upland boneset
<i>Glyceria striata</i>	Fowl-meadow grass
<i>Hackelia virginiana</i>	Beggar's lice
<i>Helenium autumnale</i>	Sneeze-weed
<i>Helianthus angustifolius</i>	Narrow-leaved sunflower
<i>Heteratheca pilosa</i>	Hairy golden aster
<i>Heterotheca ruthii</i>	Ruth's golden aster
NOTE: Another Tennessee rare plant. Recommended in rock gardens. Try some!!!	
<i>Hibiscus militaris</i>	Marsh mallow
<i>Hydrophyllum canadense</i>	Canada waterleaf
<i>Hypericum mutilum</i>	St. John's-wort
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Lobelia cardinalis</i>	Cardinal flower
<i>Lobelia</i> sp.	Blue lobelia
<i>Mimulus alatus</i>	Winged monkey flower
<i>Oenothera biennis</i>	Evening primrose
<i>Polygonatum biflorum</i>	Solomon's seal
<i>Rudbeckia fulgida</i>	Shining coneflower
<i>R. hirta</i>	Black-eyed Susan
<i>R. laciniata</i>	Coneflower
<i>R. triloba</i>	Three-lobed coneflower
<i>Rumex verticillatus</i>	Swamp dock
<i>Sassafras albidum</i>	Sassafras
<i>Silphium integrifolium</i>	Rosinweed
<i>Solidago arguta</i>	Goldenrod
<i>S. caesia</i>	Blue-stemmed goldenrod
<i>S. erecta</i>	Erect goldenrod
<i>S. nemoralis</i>	Old-field goldenrod
<i>S. odora</i>	Sweet goldenrod
NOTE: Our only goldenrod with a anise-like fragrance; used for tea.	
<i>S. rugosa</i>	Rough-leaved goldenrod
<i>Tridens flavus</i>	Purple top, Tall red-top
<i>Verbesina virginica</i>	Tickweed, Frostweed
<i>Vernonia altissima</i>	Ironweed
<i>Viburnum acerifolium</i>	Maple-leaved viburnum

1982 DUES

- Active - \$5 Regular membership with voting rights and Newsletter. Covers one person or an entire family, but carries only one vote per membership. Additional voting rights for couples or families would come through additional Active memberships.
- Associate - \$2.50 Includes the Newsletter and participation in all activities, except voting rights.
- Institutional - \$10 Includes Newsletter, participation in all activities and one vote. For libraries, governmental agencies, parks, recreation areas, consulting firms, other business firms, etc.
- Life - \$100.00 Same as the Active memberships, but a one-time payment; the funds to be invested; the annual income to be used for current expenses and growth.

MEMBERSHIP RENEWAL/APPLICATION FORM

(Check your address label on reverse side and if incorrect indicate necessary changes below).

Name _____ Phone _____

Address _____

(Indicate below TNPS programs you would like to work on)

_____ Publicity: writing, photography

_____ Membership

_____ Conservation: plant mapping, roadside revegetation

_____ Assist with field trips

_____ Other, please specify: _____

ANNUAL MEMBERSHIP DUES

Active	\$5.00	Institutional	\$10.00
Associate	\$2.50	Life	\$100.00

Mail to:

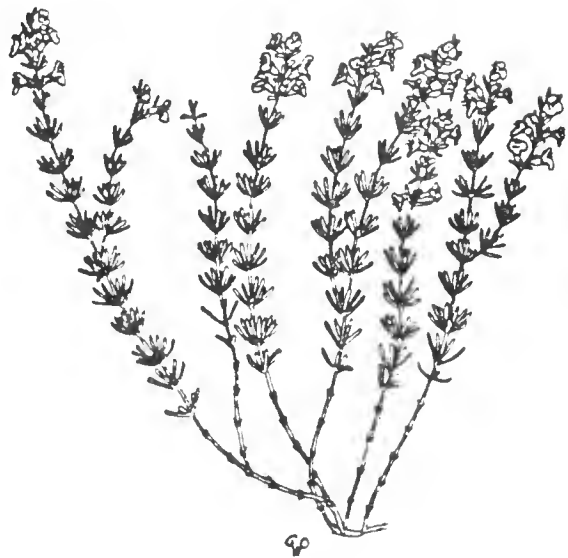
Tennessee Native Plants Society
c/o Department of Botany
The University of Tennessee
Knoxville, Tenn. 37916

Non-Profit Org.
U S Postage
PAID
Univ of Tenn
Knoxville

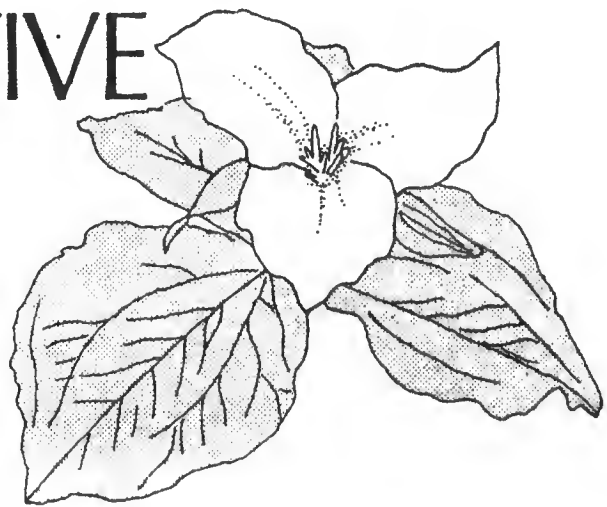
TENNESSEE NATIVE
PLANTS SOCIETY
% Department of Botany
The University of Tennessee
Knoxville, TN 37916



Conradina verticillata Jennison
Cumberland Rosemary



TENNESSEE NATIVE PLANT SOCIETY NEWSLETTER



Vol. 5, No. 2
April 15, 1982

MESSAGE FROM THE PRESIDENT

This epistle feels like a number of miscellaneous odds and ends. There are a couple of errors in the 1982 Annual Trip Schedule. The Cedars of Lebanon Pilgrimage is Friday through Sunday, April 16-18, not Friday-Saturday, as written. Of more profound significance is my error in scheduling the Hiwassee River Valley trip. It should be November 9, instead of the announced November 16. Some people plan ahead, and Gene may be a good botanist, but he is also an unshakable football fan. I considered calling together the triumvirate of Wofford, Bear Bryant and Johnny Majors and having the UT-Alabama game rescheduled, but I think I know when I'm licked. So change the date on your calendars to November 9 - the field trip, not the football game.

I am reminded, as the second newsletter of the year goes out, to remind everyone that dues are due! Our membership year coincides with the calendar year, so dues are due January 1. A lot of people paid delinquent dues last year up to the end of the year, which makes everyone's bookkeeping confusing. We have been sending out cards acknowledging dues received and indicating the paid-up year on the card. We hope this will relieve problems of confused or lost memberships, so save the cards, and remember that January 1 is the Dues Due Date! Jan Ostrowski has been volunteering a couple of hours of office work a week and it has really helped with this kind of record keeping.

The Missouri Botanical Garden and the British Museum of Natural History have printed a set of art posters of wildflowers of different parts of the United States. The MoBG has sent two on approval to see if we would be interested in marketing them through the Society. One is "Spring Woodland Wildflowers" and is based on the flora of the Great Smoky Mountain National Park. The other is "Wildflowers of the Southern Pinelands." They are large (24 x 30"), informative, colorful paintings with Latin and common names of about 30 characteristic wildflowers keyed to a small, marginal finders map. It would seem a worthwhile endeavor, as well as a source of income for the Society. We will have them available for sale at the TNPS booth at the Gatlinburg Wildflower Pilgrimage and see what reception they receive.

My last item is a letter from Governor Alexander soliciting support for his proposed Tennessee Parkway system. This would be a marked and controlled scenic alternative to through routes and interstates, with strict restrictions on billboards, signs, junkyards, and trash dumps. It sounds like a lovely and very worthwhile project. With highspeed interstates, the backroads become more and more enticing and pleasant. I am dubious, however, as to how effective controls can be of the inevitable roadside litter, and the rather absurd "see no evil, hear no evil, speak no evil" game that the billboard industry gets away with when trees in front of billboards mysteriously disappear in defiance of state law. I have often thought of a rather negative and sad, but possibly effective,

alternative to the anti-litter proposals. It seems obvious that the major litter producing industries control enough votes to pass the buck to the state to clean up roadsides, and that basically no one really wants to do it badly enough to bite the bullet. An alternative would be to save a lot of state money and just stop picking up roadside trash until we are so buried with it that everyone gets the picture and effective action is generated. Not a pretty fantasy, unless it worked quickly, and not intended to detract from the Governor's proposal. I grew up around parkway systems in New York State long before interstates were invented. They were lovely then, and they still are after 40 years or so. Any commitment Tennessee can make in this direction would be commitment well spent, so long as the Governor's clout is also committed. I wish him well.

A. Murray Evans

*****LAUREL-SNOW POCKET WILDERNESS FIELD TRIP REPORT*****

The first field trip of the 1982 program was held on Saturday, 27 February, at one of the Bowater Corporation's natural areas, The Laurel-Snow Pocket Wilderness, just northeast of Dayton in Rhea County. Some half-dozen members accompanied Ed Clebsch and his field botany class to the Laurel Falls area of the wilderness and then on up the escarpment to Bryan Overlook, a sandstone flat rock habitat that was springing to life. One of the plants easily seen in the sandy, seasonally moist weathered depressions on the exposed bedrock is the stonecrop known as Diamorpha cymosa, often called, probably erroneously, Sedum smallii. This tiny winter annual was literally submerged in the shallow basins and some of the plants were floating unattached only to settle out later in the season and provide a mass of white blooms on bronzy reddish stems. In Tennessee, the plant is considered an Endangered Species and is found only in a few localities in the southern part of the Cumberland Plateau. It grows with fameflower (Talinum), pineweed (Hypericum gentianoides), blazing star (Liatris microcephala), farkleberry (Vaccinium arboreum), and the ubiquitous scrub pine (Pinus virginiana).

Laurel Falls was spectacular, surrounded by steep cliffs and huge boulders with rosebay rhododendron and mountain laurel. The group managed to stay comfortable, despite cold drizzle at the outset. Most of us vowed to return later in the season to check on the richness of the herbaceous flora and to see the abundant flat rock areas in bloom. Nevertheless, we did want to let you all know that a hike in the winter can be a botanically rewarding one!

Tom Patrick

*****DEADLINE FOR MID JUNE - MID AUGUST ISSUE IS MAY 15*****

Send Materials to: Lorene L. Sigal, Environmental Sciences Division,
Oak Ridge National Laboratory, P.O. Box X,
Oak Ridge, TN 37830. Phone: (615) 574-7266

-----MAY FIELD TRIP-----

FALL CREEK FALLS STATE PARK, PIKEVILLE
3RD ANNUAL SPRING WILDFLOWER PILGRIMAGE

Date: Friday-Sunday, May 7-9, 1982
Time: Hikes with experienced leaders Saturday and Sunday; half-day hike Saturday; evening programs Friday and Saturday
Contact Person: Herb Roberts, Ranger-Naturalist, Fall Creek Falls State Park, Pikeville, TN 37367, Tel., 615-881-3297
Meeting Place: Nature Center, Fall Creek Falls State Park, Pikeville, TN for programs, info, and trip sign-ups.

This event is sponsored jointly by State Parks and TNPS as several members participate. The trips will feature the spring flora of the Cumberland Plateau, which holds a great diversity of plant and animal life. The Saturday evening program will feature a report on the Highland Rim Project being conducted by the Tennessee Heritage Program (see description, p. 5).

-----SECOND MAY FIELD TRIP-----

BEAR CREEK - STUART COUNTY

Date: Saturday, May 29, 1982
Time: 9:00 a.m. CDT
Organizer & Leader: Dr. Wayne Chester, Biology Dept., Austin Peay State University, Clarksville, TN 37040; tel., office 615-648-7781, home 615-648-4458
Meeting Place: South Information Station, Land Between the Lakes TVA Conservation and Education Facility, Stuart Co., Hwy. 49, 2 miles north of junction with Hwy. 79. The junction is just west of Dover, which is west of I-24 through Clarksville. It's well marked.

Bring lunch and water - no facilities. The area is being considered for National Natural Landmark designation by the National Park Service. This is a mesic forest situation of beech and maple, in primarily an oak-hickory forest type. A number of rare and interesting herbaceous plants will be seen. There are hotels and restaurants in Dover for those who want to stay overnight in the area, and there is camping at LBL.

JUNE FIELD TRIP

1982 ANNUAL MEETING, SAVAGE GULF NATURAL AREA, BEERSHEBA SPRINGS

Date: Saturday-Sunday, June 19-20, 1982
 Time: 8:00-9:00 a.m., Central Time
 Hotel check-in and hike planning
 Coordinator: Tom Patrick, Botany Dept., UT-K, Knoxville, TN 37996
 (615) 974-2256, or evenings (615) 577-5652
 Meeting Place: Beersheba Springs Methodist Assembly, a church camp and conference facility just off TN Hwy. 56 near the north end of Beersheba Springs on top of the Cumberland Plateau overlooking the Collins River. Follow your trusty TN Highway map to this tiny Grundy County village. Phone numbers at Beersheba are (615) 692-3669 or 692-3990.

Continuing a long standing tradition of meeting at this historic inn, this year a full-scale annual meeting for all members and guests of TNPS is in the works. We have put a sizable deposit down to reserve a part of the hotel complex, dining lodge, and excellent camping facility. Please, if at all possible, send the Coordinator a post card informing him of your plans to attend. This will facilitate registration procedures with the hotel manager and help him plan for meals. Send cards by 10 June 1982 to the Coordinator (see above address). Include the following:

Name	Number in Party
Address	Campsite or Room
Phone	Time/Date of Arrival
	Time/Date of Departure

Activities will begin with registration from 8 AM through 9:30 AM, Central Time. Anyone is invited to come the night before so you can start the morning on the scene, merely indicate this on your post card. Hikes will be conducted into Savage Gulf Natural Area, including the newly acquired Greeter Falls section. There will be an all day cross-country excursion into a portion of the Gulf not yet explored by botanists. This will be rigorous and will require a good dose of adventure. Besides this "wild" hike, easier hikes will be available - Stone Door, North Rim, and South Rim Trails, and hikes down into the Gulf through the Stone Door with a pick up on the opposite bluff later in the day. Short, self-guided hikes are also easily arranged starting at the Savage Gulf Ranger Station. Maps of all trails will be distributed.

Packed lunches may be arranged for and the Saturday evening meal and Sunday morning breakfast will be provided (both have been excellent in the past for the price!). Prices for meals and lodging are as follows:

	Adults	Under Age 11		
Breakfast	2.25	1.25	Campsite	1.85 per person
Lunch	2.75	1.50	Room at Hotel	8.50 per person
Supper	3.00	1.50		

JUNE FIELD TRIP (cont'd)

The old Beersheba Springs Hotel accommodations are rather rustic. There is a roof, beds (of sorts), nice sized individual or double rooms, but you must provide your own bedding - sleeping bags suggested or a bedroll. Linens are no longer provided.

After the Saturday evening meal, a general business meeting will be conducted. A list of nominations for next year's officers will be called for. The conservation of natural areas, the legislation of Tennessee's Rare and Endangered Plants List, and other business will be discussed. Finally, there will be a program featuring the "Orchids of Tennessee." I invite anyone who has an interest in Tennessee orchids to correspond with me (Tom Patrick) at the above address. Also, please bring along your best orchid pictures. I know several of you have a few favorite slides around somewhere. Dig them out!

A reminder, then, please inform the Coordinator of your plans as soon as possible. If you feel you can't decide by the 10th of June deadline, don't be alarmed. You are most welcome, pre-registered or not!



HIGHLAND RIM STUDY

The Tennessee Natural Heritage Program is conducting a study of the present plant communities and animal habitats of the eastern and western portions of the Highland Rim. Goals of this investigation include the identification and sampling of relatively undisturbed areas (40 years since disturbance) such as barrens, marshes, swamps, uneven-aged forests, and any sites containing rare species not meeting the above criteria. If you are aware of any such sites, please send us a brief description of the area, its location, and your name, address, and phone number. Please send your information to: Tom Smith, Natural Heritage Program, TN Department of Conservation, 2611 West End Ave., Nashville, TN 37212, or call 615-741-3852.



TNPS BOOTH AT THE GATLINBURG WILDFLOWER PILGRIMAGE

TNPS will, as in the past few years, have a booth at the Gatlinburg Wildflower Pilgrimage. (The booth will be in the Gatlinburg Auditorium.)

If you can spare a few hours to help staff this booth, please let me know. Call Shirley Nicholson (615) 588-6976, and let her know as soon as possible. The hours will be all day Thursday, April 22, and all Friday, then Saturday, April 24, until noon. We may need you Thursday and Friday evenings too.

If you cannot commit yourself in advance, drop by during those hours, and you may be able to relieve someone for a short period.

--HAPPENINGS AT THE CHATTANOOGA NATURE CENTER AT REFLECTION RIDING--

● EARTH DAY FESTIVAL TIME - On April 17 from 10 a.m. - 5 p.m., we look forward to the opportunity to celebrate with others the joys and beauty of Earth and reaffirm our efforts to maintain a healthy biosphere. Hikes, music, special events, good food, and exhibits are part of the day's fun and education for all. We are changing our admission arrangements this year. People will be admitted at the corner of Garden Road and Cummings Highway and park in the field behind the Nature Center to avoid traffic jams. The charge is \$3/car and \$5/vehicle with over six people. Remember all monies go the support the Nature Center's programs. Tell all your friends! If you need more information or have any questions, contact me or Randy Brown at the Nature Center, Route 4, Garden Road, Chattanooga, TN 37409, phone (615) 821-1160.

● CHRISTMAS IN THE GALAPAGOS - The Chattanooga Nature Center is sponsoring a trip to the Galapagos Islands and the Cotopaxi region of Ecuador. The group will leave Chattanooga on December 15 and return on December 27. In addition to the tour's regular naturalist-guides, the trip's scientific leader will be Dr. Robert L. Wilson, professor of Geoscience at UT Chattanooga. The itinerary involves flying out of Quito to the islands on the 16th. For the next five days, we will cruise through the islands, exploring both the terrestrial and marine features. The next two days will be spent cruising back to the continent. Back in Ecuador, we will board a chartered train for a two-day trip (with numerous stops at points of interests) back to Quito. From there we will take a two day excursion to the Cotopaxi volcano and market at Pujili. The focus of the entire trip will be on the unique biological and geological features of the area. The total price per person is \$2530.00 (depart and return Chattanooga). This includes everything except pocket money. Those wanting more information and a detailed itinerary should contact, Randy Brown, trip coordinator.

Sandy Kurtz

-----ENLARGING OUR CONTACTS-----

There is a growing interest in native flora throughout the country, and with it comes the opportunity for members of our Society to join with like-minded people outside of the state in a variety of activities. Of interest to some of our members is a group called the National Alliance for Plants. Its founder, Ms. Alice Howard, is an amateur lobbyist for the California Native Plant Society. Her experience has suggested that there needs to be a mechanism by which people interested in native flora throughout the United States can pool their concerns and efforts. The Audubon Society, the World Wildlife Fund, and the Defenders of Wildlife are national organizations which protect the rights of animals. There are no comparable organizations which speak out for the protection of native plants. While the Alliance is still in its formative stages, Ms. Howard now puts out an intermittent newsletter which informs the readership of plant protection issues on the local and national level. Included is background information on the issues, the legislation involved, and a list of the relevant legislators to contact. She is actively seeking local contacts to serve as information sources. The address is the National Alliance of Plants, c/o Alice Q. Howard, 6415 Regent Street, Oakland, CA 94618. She requests that only people who will make active use of the information should ask to be put on the mailing list as her funds are limited.

-----ENLARGING OUR CONTACTS (cont'd)-----

Another opportunity for our Society is to become a member of a southern coalition of native plant societies. There are now six such societies in the south in Florida, Georgia, Texas, North Carolina, Alabama, and Tennessee. Both the Florida and the Georgia Native Plant Societies have already expressed an interest in this idea with the possibility of joint trips and meetings. I have offered to help coordinate our role with these organizations. Let us know what kind of activities you would like to undertake. Besides joint trips, this association can provide an information exchange on conservation issues and publications.

Sally Mirick

-----IN BEHALF OF THE ENDANGERED SPECIES ACT REAUTHORIZATION-----

We are reproducing the conclusions from the statement that was submitted to the Subcommittee on Fisheries Wildlife Conservation and the Environment by 13 organizations (including TNPS) in behalf of the ESA reauthorization. For copies of the full testimony (12 p.) write to Faith Campbell (NRDC) or Paul Somers. Paul also has copies of the latest revision of the "Proposed Official List" of Tennessee Rare Plants -- free for the asking. In addition, Paul would like to hear from folks who want to help with the ESA effort. If you are willing to call or telegram before critical votes, send your name, address, and phone number to Paul so that he can alert you. You are also urged to continue writing letters to your Congress people and key Committee people mentioned in the last newsletter.

".... the organizations joining in this testimony urge that the Endangered Species Act be strengthened by the adoption of the following substantive amendments:

- extend the taking prohibition to plants listed as Endangered or Threatened;
- require that collection from Federal lands of specimens of any plant species listed on the appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) be regulated by permits issued by the U.S. Fish and Wildlife Service;
- authorize funding for the § 8 foreign assistance program.

We also suggest that a technical amendment is required to clarify agency responsibility for "terrestrial" as opposed to other types of plants. We further urge that vital provisions currently in the statute be retained: § 7 provisions protecting species habitat; § 6 authorization of State cooperative agreements; § 9 prohibitions on interstate and foreign commerce; § 14 requirements that importers and exporters of wildlife and plants be licensed; and § 5 authorization of habitat acquisition.

-----IN BEHALF OF THE ENDANGERED SPECIES ACT REAUTHORIZATION (cont'd)-----

As we have pointed out in our testimony, the major problems associated with the Act concern inadequate implementation. Therefore, we ask the Committee to call for adequate funding and personnel levels in all the responsible agencies (FWS, APHIS, and NMFS) to realize the inspired promise of the Act. This funding should include appropriate dollar amounts for §§ 6 and 8. The Committee should direct the responsible agencies to promulgate regulations required by the statute. Finally, the Committee should direct the FWS to publish a proposed priority system for comment by the public and scientific community." —Dr. Paul Somers, Tennessee Natural Heritage Program, Tennessee Department of Conservation, 2611 West End Avenue, Nashville, TN 37203; phone (615) 741-1061.



-----PLANT FAMILY HIGHLIGHT-----

Last newsletter, I raised the possibility of having a 'family of the month' article. Leo Collins has offered to do this and will write an article for the next issue. It is very difficult to select a first family to talk about and even harder to select a favorite out of all the many families with representatives in bloom in East Tennessee, and much of the rest of the state right now.

Of all the prolific spring woodland blooms, the Ranunculaceae or buttercup family is the most diverse. Flowers in this family are highly variable ranging from single, regular blooms to racemes of irregular, spurred blossoms. They have in common numerous spirally-arranged stamens and, generally, several free carpels maturing into follicular fruits and palmately-compound leaves. Often sepals or even stamens are petaloid in this family. The two woodland plants in this family that everyone watches for early in the spring are Hepatica americana (hepatica) and Anemonella thalictroides (rue-anemone). These two species are fairly widespread especially in limestone soils and often are blooming by the end of February in middle East Tennessee. They both have regular flowers and conspicuously colored sepals but no petals. A little later in the spring, several other members of this family come into bloom. Anemone quinquefolia (wood anemone) is another species of this family with no petals but showy white sepals. In contrast to those species with no petals, the many species of Ranunculus (buttercup) have very conspicuous shiny yellow petals, and often the introduced Ranunculus bulbosus (bulbous buttercup) vies with dandelion for coloring a weedy lawn yellow. Delphinium tricorne (dwarf larkspur), Aconitum uncinatum (wild monkshood), and Aquilegia canadensis (wild columbine) have flowers so unlike Anemone and Ranunculus as to make one wonder why they are all in the same family. Although the columbine has regular flowers, it also has long nectar containing spurs. Monkshood and dwarf larkspur also have showy modified petals containing nectar, but these flowers are bilaterally, rather than radially, symmetrical. These latter two are pollinated by bees while columbine is often pollinated by hummingbirds.

Linda Mann

1982 DUES

- Active - \$5 Regular membership with voting rights and Newsletter. Covers one person or an entire family, but carries only one vote per membership. Additional voting rights for couples or families would come through additional Active memberships.
- Associate - \$2.50 Includes the Newsletter and participation in all activities, except voting rights.
- Institutional - \$10 Includes Newsletter, participation in all activities and one vote. For libraries, governmental agencies, parks, recreation areas, consulting firms, other business firms, etc.
- Life - \$100.00 Same as the Active memberships, but a one-time payment; the funds to be invested; the annual income to be used for current expenses and growth.

MEMBERSHIP RENEWAL/APPLICATION FORM

(Check your address label on reverse side and if incorrect indicate necessary changes below).

Name _____ Phone _____

Address _____

(Indicate below TNPS programs you would like to work on)

_____ Publicity: writing, photography

_____ Membership

_____ Conservation: plant mapping, roadside revegetation

_____ Assist with field trips

_____ Other, please specify: _____

ANNUAL MEMBERSHIP DUES

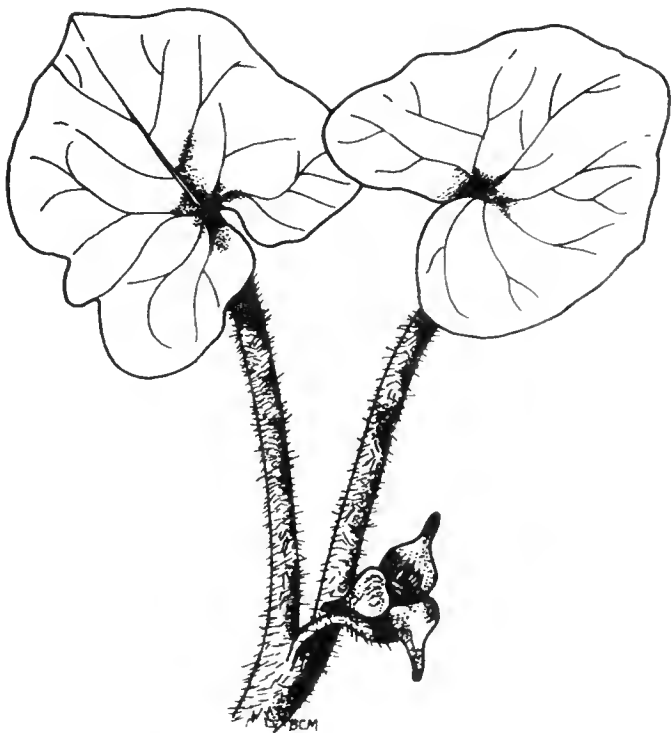
Active	\$5.00	Institutional	\$10.00
Associate	\$2.50	Life	\$100.00

Mail to:

Tennessee Native Plants Society
c/o Department of Botany
The University of Tennessee
Knoxville, Tenn. 37916

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TENNESSEE NATIVE
PLANTS SOCIETY
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The University of Tennessee
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Wild Ginger

Asarum canadense L.

Preferring cool, moist woods, this low-growing herb produces highly aromatic roots and underground stems. These were used as a substitute for Jamaica ginger in Colonial America. The rhizome was prepared as an antiseptic, tonic, and decongestant. Standard Appalachian use has been as a root tea to relieve stomach gas.

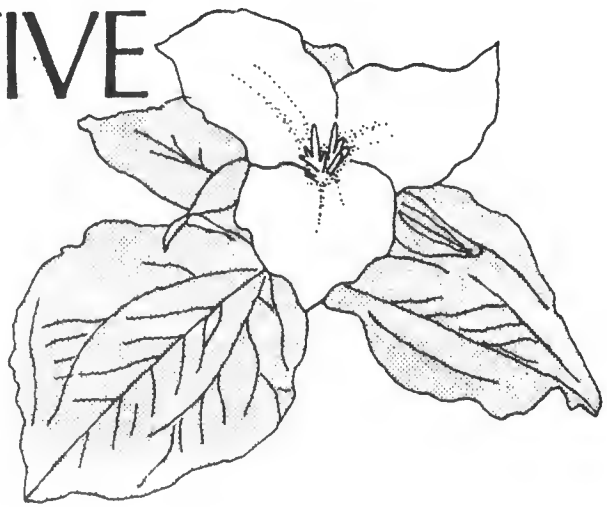
Artist: Barbara C. McBride

Appalachian Medicinal Herb Notes

Distributed by the Tennessee Native Plant Society to support conservation of Tennessee's wild flora.

TNPS c/o Department of Botany, The University of Tennessee, Knoxville, TN 37916

TENNESSEE NATIVE PLANT SOCIETY NEWSLETTER



Vol. 5, No. 3
June 15, 1982

MESSAGE FROM THE PRESIDENT

This time of the year the early spring flora begins to fade. Those plants which time their vital events to occur before the forest canopy leafs out have about finished their blooming and setting of seeds. Field trips to the woods become a little drab - until the rich growth of nettles of summer liven things up again with their tiny stinging hypodermic needles.

Now its time to move out to the meadows and roadsides to catch the early show of summertime open-air riot of color. I took a fast trip to northern Ohio this weekend to my daughter's college graduation. Practically all interstate, but even they can be really beautiful in this part of the country. Tennessee I-75 has huge pillows of white Umbellifers and showy patches of a deep-yellow, escaped Coreopsis mixed with the clovers, sweet clovers, crown vetch, and many more. Kentucky thinks they want to spray and eliminate the huge nodding thistle, Carduus nutans. But from the way I have watched it march across the interstates of Tennessee the last few years, they have a job on their hands. The spray crews have left huge patches of gnarled twisted plants, but lots of small patches of bright magenta future seed sources remain. Ohio is apparently just enough farther north that by Columbus not much shows but greens, a few of last years' cattail tassles in wet depressions, and a touch of buttercup here and there. But the black locust, done in by late frost here, appears better adapted to central Ohio, where they now are in full bloom.

We can improve the roadside color show partly through positive encouragement by plantings and seeding, such as the admirable efforts of the garden clubs on the new I-640 around Knoxville. But we can also improve our roadsides just by not cutting them so often, so the wildflowers have a chance to complete flowering and seed production before they are mowed down. I have seen the first of the new Tennessee Parkway System road signs around east Tennessee and imaginative roadside maintenance will certainly be one of the keys to success of this program.

See you at the Beersheba Springs meeting.

A. Murray Evans

*****TRIP DATE CHANGE*****

I can't quite believe I've done this, but after making a big joke of the wrong date for the Hiwassee River Valley field trip in the last newsletter, I've still got it wrong. The date for Gene Wofford's field trip - Hiwassee River Valley and Ruth's Golden Aster - IS October 9, 1982. No more jokes; and who says professors aren't absent minded.

A. Murray Evans

-----JULY FIELD TRIPS-----

RARE AND ROADSIDE PLANT PLOTS
TVA RESERVATION, NORRIS

Date: Saturday, July 10, 1982
Time: 9:00 a.m. EDT
Organizers & Leaders: Leo Collins and Judith Powers, TVA, Norris, TN 37828; Tel., office 615-632-6450, home 615 494-0830
Meeting Place: Visitor's Center, TVA, on Rt. 441, about 1.5 miles below Norris Dam, Anderson Co., TN.

This trip features weeding, and caring for, as well as learning about, the rare plant plots, possibly collecting seeds for our seed bank, a hike along the Clinch River, time permitting, and also discussions and possible decisions about a future safe home for these collections. Bring garden tools - cultivator and hoe, etc.

-----SECOND JULY FIELD TRIP-----

TENNESSEE CONEFLOWERS

Date: Saturday, July 24, 1982
Time: 10:00 a.m. CST
Organizer & Leader: Dr. Paul Somers, Tel., work 615/742-6547; home 615/385-3482
Meeting Place: Cedars of Lebanon State Park. Take Lebanon exit 231 from I-40, go south about 5 miles to park, entrance on left.

For the first hour, there will be a description of the recovery plan for the Tennessee coneflower, followed by a field trip to the local cedar glades. From 4 to 6 in the afternoon, those interested can join in a clean-up effort at one of the four coneflower sites in the state (Rutherford County).

-----AUGUST FIELD TRIP-----

ARNOLD ENGINEERING DEVELOPMENT CENTER (AEDC) NATURAL AREAS

Date: Saturday, August 14, 1982
Time: 9:30 a.m. CDT (10:30 a.m. EDT)
Organizer & Leader: Mark Moran, AEDC Forester; tel., 615/455-2611, ext. 7477; and Dennis Horn, 222 Crestwood Drive, Tullahoma, TN 37388, tel., work 615/455-2611, ext. 7547; home 615/455-5742
Meeting Place: Parking lot outside AEDC Main Gate. Take I-24 exit (approximately 3 miles southeast of Manchester) marked USAF-AEDC, go south on the access road approximately 2 1/2 miles to the main gate, turn right and go approximately 100 yards to the parking lot (which is off to the right as the guard station is approached).

Trips Planned: A visit to the AEDC Goose Pond Natural Area is planned for the morning field trip. A number of unusual coastal plain aquatic plants should be found in the wet open portion of this area. After lunch, another nearby area of interest will be visited. Choices for the afternoon field trip include:

1. AEDC Sinking Pond Natural Area - An upland swamp climax forest with karst formations and large overcup oaks (Quercus lyrata) in the wet sections.
2. AEDC Westall Swamp - Another upland swamp containing a nearby pure stand of water tupelo (Nyssa aquatica).
3. May Prairie State Natural Area - An area visited by TNPS 3 years ago, but where rare and unusual plants are numerous.

The interests of the group participating will help decide which one of these three areas will be visited in the afternoon.

*****NOTICE TO THE TRIP LEADERS*****

Please send to the Newsletter Editor an interesting and informative trip report of your trip. We want to entice more and more people to participate, so make our readers feel as though they really missed something (without bending the truth however).

WHERE HAVE ALL THE CONEFLOWERS GONE?

In the limestone cedar glade habitat of Central Tennessee grows one of this Country's rarest wildflowers. The Tennessee coneflower, as Echinacea tennesseensis is commonly called, is known from only four small populations. Each of them consists of no more than a few hundred individuals occupying less than half an acre. It was one of the first plant species to be listed as Endangered by the U.S. Fish and Wildlife Service. To date, only 51 species have received this designation. The reasons for listing were primarily the limited distribution and the obvious threats to them from human activities in the area.

Housing and industrial development and the use of ORV's (off-road vehicles), are the chief threats to the species' existence. In recent years, two sites were totally destroyed by housing construction. Also, the successional changes that naturally occur on the open glades represent another threat to the long term survival of the Tennessee coneflower.

The historical distribution is limited to just a half dozen sites, all located within 14 miles of one another. Was the range and abundance of this species ever much greater, we wonder? Its closest relative is a coneflower of the midwestern prairies, E. pallida var. angustifolia, which extends as far east as Arkansas and western Louisiana. Whatever connections might have existed between the midwestern coneflowers and our Tennessee endemic populations disappeared a long time ago, we presume, and the subsequent isolation of the Tennessee populations allowed them to diverge in an evolutionary sense from their ancestors, as they adapted in more specific ways to the unique habitats of the harsh glade environment. The visible differences between the two geographic variants are not great, but evidence of their distinctness comes from other sources, such as the observation of Dr. Lawrence McGregor of Kansas State University, who discovered that they would not interbreed, and that Tennessee plants were incapable of surviving the midwestern winters when grown alongside native coneflowers that did just fine.

So botanists think they've got something unique and worthy of preservation here in Tennessee. The Tennessee Heritage Program, part of the Department of Conservation, has taken the lead in trying to improve the chances for its survival. In cooperation with the U.S. Fish and Wildlife Service, a Recovery Plan for the Species is being prepared by myself and three other botanists, Drs. Elsie Quarterman, Robert Farmer, and Thomas Hemmerly.

Our approach will be to establish management agreements with landowners and to conduct further research on the species. Also, we will attempt to establish new populations on State-owned land. Plants are now being grown at TVA's nursery in Norris and at Cheekwood Botanic Garden. We intend to use seed generated by these plants for starting new populations in glade habitats and eventually for distributing to interested gardeners.

Also, we will be searching for any undiscovered populations that might exist in the wild. If you know of or happen to discover any pink-petaled flowers growing on outcrops of limestone, please report them to the Heritage Program (741-3852). Two of the existing populations were discovered in recent years, one by a member of Cheekwood, and another by a member of the Tennessee Native Plant Society. Amateurs can help with this, but we hope that those interested will contact us, so that we can direct them to areas needing inspection. To avoid the taking of plants and seed from natural populations, we are not publicizing known sites. We can verify any potential cone-flowers you find by making a site visit or by examining a photo. Taking specimens is not necessary, especially from sites that are already known.

Paul Somers

GOOD NEWS FOR THE
ESA REAUTHORIZATION

● Thanks to a well organized effort by the conservation community, the Endangered Species Act has survived repeated attempts by special interest groups to cripple it during Congressional hearings. Both the Senate and House bills are relatively strong as recently approved by full committees. Most of the changes are considered to be minor and aimed mainly at making the Act work more efficiently. It is hoped that this will speed up the listing process, as well as conflict resolution section of the Act.

This is not the time to relax, though. Our Congressmen and Senators need to hear from us. Senator Baker is co-sponsoring the Senate bill (#2309) and Senator Sasser seems to be leaning our way, but they should be thanked and encouraged to remain steadfast in support of the Act. Further efforts to weaken the Act are expected to come when debate begins on the floors of Congress. The positions of Tennessee Congressmen on the nearly identical House bill (#6133) are unknown. They need to hear from us. The coalition of 31 conservation organizations that are coordinating the effort to secure a strong ESA in 1982 support these bills, and they encourage all of us to write our Senators and Congress people immediately, requesting their sponsorship of the bills.

One instance where the coalition does disagree with the present version of the bills concerns the "Exemption process" established by the 1978 amendments to the Act during Tellico Dam controversy. The '78 amendment set up a 7-member cabinet-level committee to make the final decision on whether an exemption should be granted when irresolvable conflicts arise, and also a 3-member review board, which is charged with determining whether certain statutory requirements have been met (e.g., whether the action agency consulted in good faith and adequately tried to identify any endangered or threatened species which is likely to be affected by proposed activities) and to prepare a report to the cabinet-level committee. The proposed bills would turn over the review board responsibility to one person, either the Secretary of Interior (now James Watt, need I remind you) or the Secretary of Commerce, depending on the case appealed. The present 3-member board includes an administration law judge, someone who would be expected not to hold a bias. The law is stronger without this change, so you might urge that they amend the bill to restore the original language.

Also, when you write, remember to ask for full funding for the Endangered Species Act. Past annual funding has amounted to what the Army spends on 12 bulldozers, and under the Reagan/Watt administration, State cooperative agreement funding has been eliminated. Tennessee's non-game program (TWRA) lost nearly \$100,000 when this happened. The present bills call for funding the ESA at three-fourths of current levels. Ask for more.

Paul Somers

Editor's note: Paul called to ask that these 3 additional concerns of the Friends of the Earth be mentioned when writing to your legislators. Of greatest concern is an amendment which gives project sponsors the power to decide if its project jeopardizes a listed endangered species. At present, the Fish and Wildlife Service makes determinations and a change would destroy the protective powers of the Act. Secondly, urge your senators and representatives to vote for a 3-year authorization. Thirdly, House Bill #6133 provides access to the consultation process by private permit or licensed applicant. It would allow a private applicant access to the exemption process if he receives a "jeopardy" opinion for his project.

*****CEDAR GLADES FIELD STUDIES*****

The Biology Department and the Office of Continuing Education of Middle Tennessee State University have an extensive summer of field workshops at the Cedars of Lebanon State Park. They are on Fridays and Saturdays, June 11 through October 23, and include wildflowers, birds, geology, folk life, dye plants, camp cookery, edible plants, environmental awareness, orienteering, photography, etc. Write or call the Office of Continuing Education MTSU, Murfreesboro, TN 37132 (tel. 615/898-2462).

-----TNPS NOTEPAPER-----

Our own special notepaper is available for \$2.50, postage paid, from Mrs. Tom Siler, 4201 Alta Vista Way, Knoxville, TN 37191. Each packet contains 12 folded notes and 12 envelopes, three each of four different designs. Make check payable to me or TNPS.

Nancy J. Siler

*****DEADLINE FOR MID AUGUST - MID OCTOBER ISSUE IS JULY 15*****

Send Materials to: Lorene L. Sigal, Environmental Sciences Division,
Oak Ridge National Laboratory, P.O. Box X,
Oak Ridge, TN 37830. Phone: (615) 574-7266

-----FAMILY OF THE MONTH-----

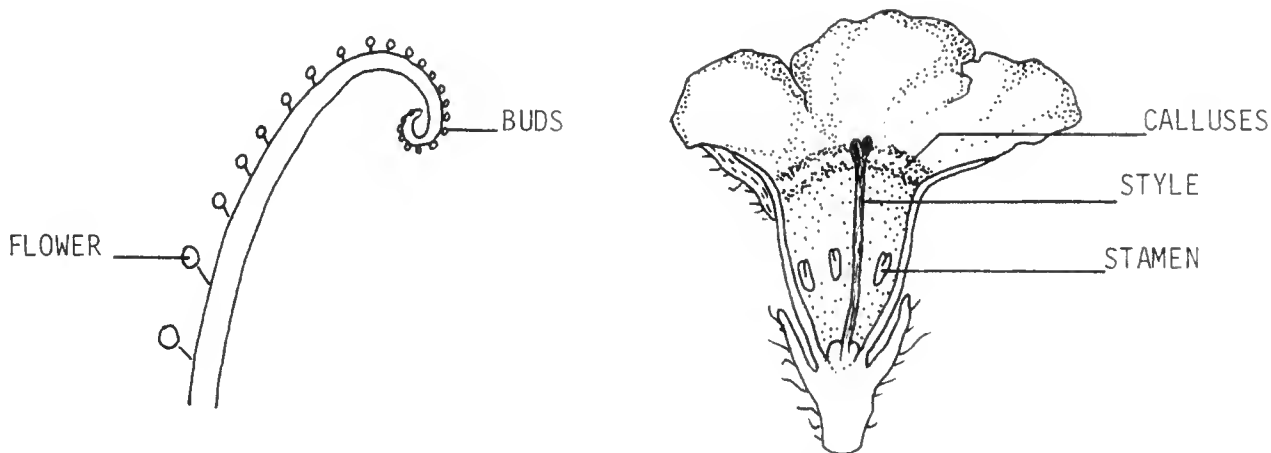
BORAGINACEAE - THE FORGET-ME-NOT FAMILY

This month's family is distinctive yet seldom showy. In Tennessee, it is composed of harshly hairy annual or perennial herbs with round stems. The leaves are alternate, simple, smooth-margined or with shallow teeth. Basal flowers of the inflorescence bloom first, followed progressively by those toward the tips. The inflorescence thus uncurls reminiscent of blossoming fiddleheads. Flowers are usually radially symmetrical although occasionally, bilaterally symmetrical. The five sepals are distinct or basally united. The five petals are united, usually for most of their length, and appendages or calluses are frequently present at the throat. Five stamens are attached to the corolla tube. The ovary is superior, topped by a single style. Fruit usually of four nutlets, each smaller than a "BB".

Probably our most well-known representative of this family is the Virginia bluebell (*Mertensia virginica*), a perennial herb whose striking blue blossoms enliven many alluvial woods. Hound's tongue (*Cynoglossum officinale*), a plant of open woodland slope, is named for its rough, tongue-shaped leaves. Marbleseed (*Onosmodium* spp.) prefers open areas of thin soil over limestone or shale. Three types of marbleseeds are known from Tennessee and all are listed as rare plants. Other members of the family are to be looked for in weedy situations, such as roadbanks, fields, waste places, and dry open woods.

The uncurling flower stalk is usually the first clue to the Boraginaceae. Next, look for the coarse hairs, five fused petals, and appendages at the corolla throat. Each member of the family needs not display all these characters. Nevertheless, any plant with several of these traits is a likely candidate for the family.

Joseph L. Collins



DIAGRAMMATIC VIEW OF INFLORESCENCE BRANCH

-----A REPORT ON THE SWEET CONEFLOWER IN TENNESSEE-----

The sweet coneflower, Rudbeckia subtomentosa Pursh, is a relatively tall (often more than three feet), coarse perennial found mostly in the midwestern prairies by rarely extending eastward into Tennessee and Kentucky. The late summer and fall-flowering plants are spectacular, each bearing numerous branches and heads. Bright yellow rays up to three inches in length surround the dark, purple-brown disk which has a slight anise odor when crushed. The leaves are rough, and some or all of the lower ones are trilobed.

The species was first found in Tennessee in 1943 by Dr. Royal Shanks and Mr. Alfred Clebsch. There were no subsequent finds and in 1978 the Committee for Tennessee Rare Plants included this as one of our possibly extirpated species. The original Tennessee site was in Montgomery County within the Tennessee extension of the "Big Barrens" of Kentucky. This region of oak barrens, upland wet woodlands, and prairie remnants is known to harbor several prairie species but is now mostly under tith, in pasture, or within the more than 100,000-acre Fort Campbell Military Reservation.

In 1979 I located a large stand of the sweet coneflower near the southern boundary of Ft. Campbell. In August 1981, with the help of officials from the Ft. Campbell Environmental Protection Office, I was able to search some of the Reservation back areas which are generally off-limits to casual wanderers and plant collectors. We found Rudbeckia subtomentosa in various locations of both Montgomery and adjacent Stewart Counties as well as in Christian Co., KY. Scattered stands and individual plants were observed on roadsides, along open creek banks and drainage ditches, and in thin woods and thickets. Best growth was observed in wet, often weedy fields. It appears that land use patterns there maintain the open fields which allow for persistence and spreading. Several heads with mature achenes were collected in November 1981 and have been forwarded to the seed exchange program.

In summary, the sweet coneflower grows in some abundance in Montgomery and Stewart Counties but known sites are all limited to the Ft. Campbell Military Reservation. I suspect that other northern counties, especially west of Tennessee River, may also support populations and it might be sought there.

Edward W. Chester

Rudbeckia subtomentosa



1982 DUES

- Active - \$5 Regular membership with voting rights and Newsletter. Covers one person or an entire family, but carries only one vote per membership. Additional voting rights for couples or families would come through additional Active memberships.
- Associate - \$2.50 Includes the Newsletter and participation in all activities, except voting rights.
- Institutional - \$10 Includes Newsletter, participation in all activities and one vote. For libraries, governmental agencies, parks, recreation areas, consulting firms, other business firms, etc.
- Life - \$100.00 Same as the Active memberships, but a one-time payment; the funds to be invested; the annual income to be used for current expenses and growth.

MEMBERSHIP RENEWAL/APPLICATION FORM

(Check your address label on reverse side and if incorrect indicate necessary changes below).

Name _____ Phone _____

Address _____

(Indicate below TNPS programs you would like to work on)

_____ Publicity: writing, photography

_____ Membership

_____ Conservation: plant mapping, roadside revegetation

_____ Assist with field trips

_____ Other, please specify: _____

ANNUAL MEMBERSHIP DUES

Active	\$5.00	Institutional	\$10.00
Associate	\$2.50	Life	\$100.00

Mail to:

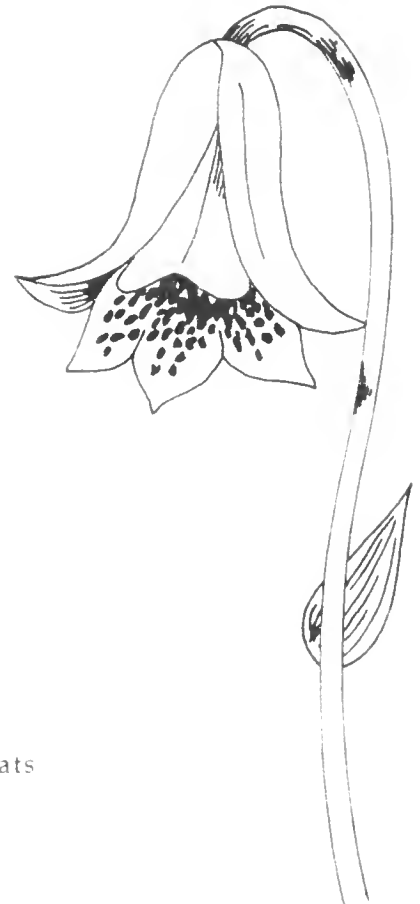
Tennessee Native Plants Society
c/o Department of Botany
The University of Tennessee
Knoxville, Tenn. 37916

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PLANTS SOCIETY
% Department of Botany
The University of Tennessee
Knoxville TN 37916

Gray's Lily

This tall (1 meter) endangered species is found in high mountain meadows and moist woods along Tennessee's eastern border. Flowers bell-shaped, nodding, petals deep red externally, lighter red within, becoming yellow towards base, with numerous purple spots.



Tennessee Native Plant Notes

Designed and distributed by the Tennessee Native Plant Society to support conservation of Tennessee's wild flora.

TNPS c/o Department of Botany, The University of Tennessee, Knoxville,
TN 37916

Gray's Lily
Lilium grayi Wats

Spence ✓

Spence } 2-0-82

SEPTEMBER FIELD TRIPS

Number 38111

*****ROAN MT. NATURALISTS RALLY*****

Date: Friday - Saturday, September 10-12, 1982
 Contact: Further information and description folder available from the Carter County Chamber of Commerce, P.O. Box 190, Elizabethton, TN 37643; or call Ed Scheil (615) 292-6125
 Meeting Place: All field trips will depart from the Roan Mt. Motel on U.S. Hwy 19E.

The rally starts with dinner, Friday evening at 6:30 p.m. at the Cloudland Elementary School in Roan Mt., followed by a talk by J. Wallace Coffey, author/naturalist, on "Winter Birds of Prey."

Saturday morning field trips start at 7:00 p.m. for the bird trip, and 8:30 a.m. for the botany and geology trips. Dinner Saturday night is at 5:00 p.m. at the Cloudland High School with an after-dinner talk on the vegetation of Roan Mt. by Jennifer Garwood, naturalist/botanist at Roan Mt. State Park. Titled, "Roan Mt.: A Trip Through the Past." Sunday morning field trips are from 8:30 a.m. to 12:00 p.m.

*****MISSISSIPPI RIVER BOTTOMS*****

Date: Saturday - Sunday, September 25-26, 1982
 Time: 8:00 a.m. CDT, both days
 Contact Person: Larry Wilson, Memphis Pink Palace Museum, 3050 Central Ave., Memphis, TN 38111, Tel., 901/454-5607, (work.) (home) 901/458-8724
 Meeting Place: North parking lot, Pink Palace Museum, 3050 Central Ave. Meet for car pooling. Take I-40 (local traffic) to Highland Street exit. Left on Highland to Central Ave. (at 4th light). Right on Central to Lafayette St. (before 2nd light). Fourth drive on left on Lafayette is Museum north parking lot.

Bring insect repellent and swamp clothing (either boots or tennis shoes that can get wet). Pack snacks, water, and lunch to be eaten in the field. Saturday program will visit areas in the Mississippi and Cosumatechic River bottoms. Sunday program will be in Hatchie River bottoms. All trips will focus on oxbow lakes and floodplain timber areas.

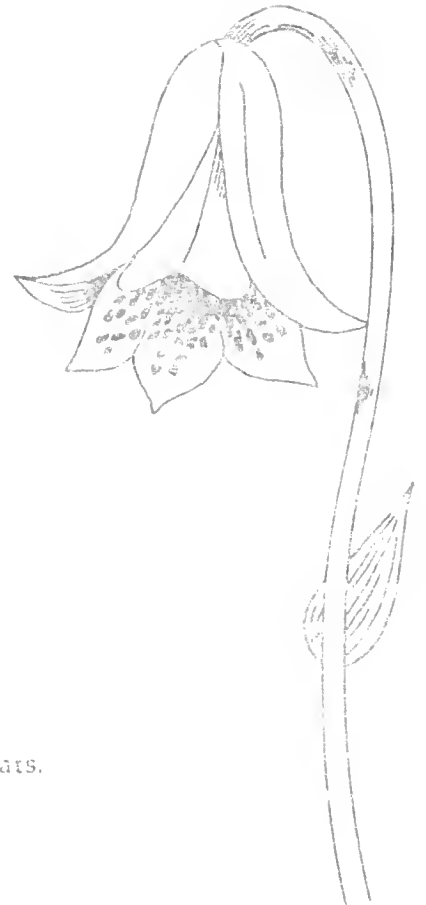
TNPS and/or Wildflower Society members in the Memphis area have agreed to furnish sleeping accommodations for out-of-town members who can attend. If possible, contact Larry before September 11 for housing assignments.

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Gray's Lily
Lilium grayi Wats.

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TN 37916

TENNESSEE NATIVE PLANT SOCIETY NEWSLETTER



Vol. 5, No. 5
October 15, 1982

MESSAGE FROM THE PRESIDENT

A couple of things have come up since last I wrote that are of interest to the membership.

Awhile back, several members of the Society (who are also with TVA) and I met with Pat Thurman, Landscape Architect, and Dale White, Regional Landscape Superintendent, with the Department of Transportation. They have initiated projects to plant highways with wildflowers and to control roadside mowing to enhance and encourage wildflowers in selected trial situations. Maureen Cunningham, who worked with Rob Farmer on his land reclamation studies and the wildflower plots at TVA-Norris, was with us. We discussed ways in which TNPS, TVA and the Department of Transportation might cooperate in these projects. The DOT had planted a few areas to wildflowers, and we visited one of these at the I-75, I-640 interchange in Knoxville. Seeds of about eight species were planted in May of 1982, and much to our pleasure numerous plants were already in bloom and setting seed. I, frankly, was quite surprised at how well they were doing considering how late the seeds were sown. We talked about the possible involvement of TNPS in helping DOT set up demonstration plots on highway rights-of-ways to experiment with mowing conditions, types of sowing practices, etc. The primary purpose of the meeting was to generate interest, and we certainly accomplished our purpose. The DOT is definitely proceeding with plants to increase and encourage wildflower displays along our highways, and I feel that TNPS can show support in substantive ways, as well as advice and moral support. We will try to keep informed.

Later I met with a delegation from the Knoxville Garden Club to discuss the possibility of encouraging the University of Tennessee to use part of the Expo property along Second Creek as a native plant display and educational area. This is the creekside area that the Expo has developed with brick plazas and bridges and is a rather pleasant area. It is thick with honeysuckle; the slopes are steep; and it is also the area which flooded badly in the heavy storms this summer, so it is not without liabilities, but it has potential. We understand that the University is interested in keeping it as a natural area and maintaining the paths and plazas. A naturalized native plant display for esthetic and educational purposes could be very appropriate for the area. Both the Botany Department and the Office of the Vice Chancellor for Business and Finance (which is coordinating Expo with UT) have been receptive to exploring the idea. At this time, disposition of territories and facilities at Expo is still in a state of flux, but we hope to stay informed and possibly to have some input to the final plans. For those of you with opinions, either pro or con, or ideas or services that might be appropriate to these issues, contact me, or the Head of the Botany Department, or the Office of the Vice Chancellor for Business and Finance, 405 Andy Holt Tower, University of Tennessee, Knoxville, TN 37996.

A. Murray Evans

-----NOVEMBER FIELD TRIP-----

FROZEN HEAD STATE NATURAL AREA

Date: Saturday, November 20, 1982
Time: 9:00 a.m. EST
Organizers & Leaders: Dr. Murray Evans, Botany Dept., Univ. of Tenn., Knoxville, TN 37996-1100; Tel., office 615/974-2256, home 615 588-1128
Meeting Place: Visitor's Center, F. H. Natural Area, about 3 miles east of Wartburg on Rt. 62 and then about 4 miles NE of Rt. 62 on road marked to the Natural Area. This is in Morgan Co., between Oak Ridge and Wartburg, and can be reached from Oak Ridge on Rt. 62, or from I-40 via Rt. 27 at Harriman to Wartburg and east on 62.

This is a winter hike; bring lunch, good walking shoes, warm clothes, and rain gear. There are several trails of differing length. We will decide by group concensus which and how long.

*****FIELD TRIP REPORTS*****

BEAR CREEK IN MAY

Clear skies and mild late-spring temperatures provided ideal conditions for the nine participants of the Bear Creek field trip on 29 May. Located in Stewart County, northwestern Middle Tennessee, and about midway between the Cumberland and Tennessee Rivers, the north-facing slopes, bluffs, ridges, and streambanks support one of the best examples of old growth woodland in that part of the State. The area has been owned by TVA since 1964 and is under consideration as a National Landmark by the NPS. The herbaceous vegetation was luxuriant but mostly past flowering. However, several dozen species were found and in many cases, fruiting material proved to be both interesting and new for several of the group. Some of the rarities observed in abundance included blue cohosh (Caulophyllum thalictroides), black snakeroot (Cimicifuga rubifolia), goldenseal (Hydrastis canadensis), synandra (Synandra hispidula), valerian (Valeriana pauciflora), and ginseng (Panax quinquefolius). Overall the day was pleasant, botanically enriching, and the comradeship superb. Most importantly, the Bear Creek region, with its region biological and historical (i.e., Civil War) heritage, is in public ownership and will remain relatively undisturbed.

Edward W. Chester

SAVAGE GULF IN JUNE

Our June Annual Meeting at Beersheba Springs was another pleasant experience for some thirty members from across the State. Three leaders and many helpers assisted in managing three hikes on Saturday. The easiest walk (led by Tom Patrick!) went to Savage Falls and covered about two miles of upland habitat with a pause at the thirty-foot falls. One of the botanical highlights of this trip was the sighting of the inconspicuous green adder's-mouth orchid, Malaxis unifolia. Another more strenuous journey, under the direction of Paul Schmalzer and Ranger Sandy Suddarth, went down into the virgin tract and returned to the Ranger Station via the newly completed South Rim Trail. Besides the charm of the large trees, a lively timber rattlesnake joined this group for lunch among the big boulders along the stream. The final hike proved to be quite lengthy and a little wet toward the end! Under the guidance of Dennis Horn with Murray Evans, this hike covered eight miles from the South Rim of Savage Gulf down the Old Coach Road and up through the Stone Door. Survivors of this trip also reported seeing a rattler! Back at the old hotel, following a scrumptious country dinner, a slide show on the native orchids of Tennessee was presented. Contributions from many members made this presentation informative, picturesque and exhaustive. All 44 of the known orchids in the State were mentioned. A handout on orchids was distributed with both formal and trivial names and is still available from the TNPS office.

The following day, we joined the South Cumberland Recreational Area Supervisor, John Christhof, for a hike to Buggy Top Cave and the Carter Mountain Natural Area just south of Chattanooga. Some of us actually travelled through the cave and out a secondary opening. It is well worth a trip. Part of the trail passes through dryish, limestone woods, where purple coneflowers (Echinacea purpurea) and yellow coneflowers (Ratibida pinnata) were just beginning to bloom.

Tom Patrick



TENNESSEE CONEFLOWERS IN JULY

Paul Somers reports that the July field trip to view coneflowers was a botanical success but that the attendance was low, only six people came. Paul presented a slide program on the "recovery plan" for the Tennessee coneflower and then the group visited a glade at Cedars of Lebanon State Natural Area. They especially enjoyed seeing the attractive displays of Sabatia angularis (rose pink) and Oxalis priceae, an endemic wood sorrel. The coneflowers were blooming nicely at the home of Ruth and Mac McMillan and at the Rutherford County site, where the group spent some time cleaning up the area.

Paul Somers

FAMILY OF THE MONTH

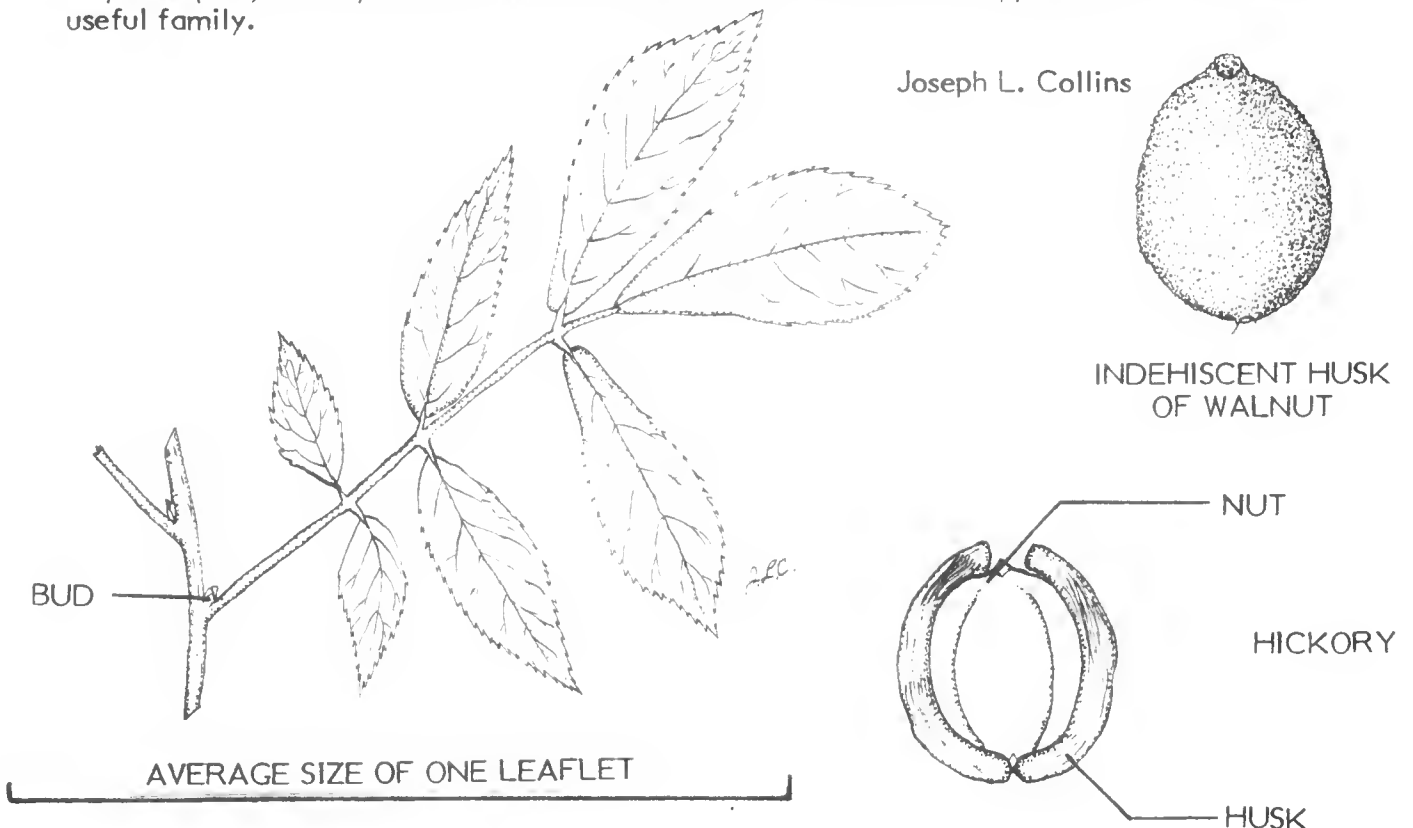
JUGLANDACEAE - THE WALNUT FAMILY

The Juglandaceae comprises two genera in our area: Juglans, the walnuts; and Carya, the hickories and pecans. This small family of monoecious trees is characterized by alternate, pinnately-compound, deciduous leaves, and the familiar nut-and-husk of the fruit.

For clarity, let's restate the above description. There are only trees in this family, no herbs, shrubs, or vines. Monoecious means that male and female flowers are separate, but on the same plant. Alternate indicates that the leaves are attached singly on the stem, as contrasted with an opposite or whorled arrangement. Compound leaves (see sketch) are those composed of individual leaflets rather than a single leaf. The principle clue to whether one is looking at a leaf or a leaflet is the location of the bud. A bud occurs at the base of a leaf, never at the base of a leaflet. Pinnately-compound means that the leaflets are attached to the leaf stalk at more than one point. Contrast this condition with palmately-compound (e.g., buckeye) where the leaflets are attached to the petiole at one point, like fingers of a hand attached to the palm.

The fruits are of two types. Walnuts have an outer husk which is indehiscent, that is, it does not open along a seam or suture. Hickories and pecans, on the other hand, have husks which open along definite lines. Within the husk of both types is a hard nut which in turn houses the seed or meat (see sketch).

The family is highly prized for its edible nuts and valuable timber. Those who are partial to pecan pies, hickory smoked hams or fine walnut furniture can appreciate this small but useful family.



JIMSONWEED

Datura stramonium, better known as Jimsonweed or Jamestown weed can be seen growing in rich soil, barnyards and along roadsides from June to September. The generic name traces back to the old Arabic word tatoriali. Stramonium is of Latin origin, its meaning unknown, and it is also the name of the dried leaves of the jimsonweed as used in pharmacy. The common name, Jamestown weed, came from Virginia's first settlement, where the English colonists first encountered this poisonous, narcotic plant. The green prickly fruit, the size of a small apple, gave rise to yet another name - thorn apple.

Robert Beverly, in his account of the early history of the Virginia colony, reports that in 1676 a body of soldiers was sent to Jamestown to suppress Bacon's Rebellion. Short of fresh rations they collected young jimsonweed which they cooked as a potherb. The consequences of eating this weed was reported by Beverly in these words:

... they turn'd natural Fools upon it for Several Days; One would blow up a Feather in the Air; another would dart Straws at it with much Fury; and another stark naked was sitting up in a Corner, like a Monkey, grinning and making Mows at them. In this frantik Condition they were confined, lest they should in their Folly destroy themselves; though it was observed, that all their Actions were full of Innocence and good Nature. A Thousand such simple Tricks they play'd, and after Eleven Days, return'd themselves again, not remembering any thing that had pass'd. -- (R. Beverly, History of Virginia)

(From Flowers and Plants by Robert Shosteck, 1974, New York Times Book Co.).

Pat Parr



TENNESSEE NATIVE PLANT SOCIETY NOTEPAPER It isn't too early to think about Christmas. Our own special notepaper at \$2.50 a box, postage paid is perfect for stocking stuffers. Place your orders with Mrs. Tom Siler, 4201 Alta Vista Way, Knoxville, TN 37191. Each packet contains 12 folded notes and 12 envelopes, three each of four different designs. Make check payable to Nancy J. Siler or TNPS.

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The University of Tennessee
Knoxville, TN 37916

Jimsonweed, Jamestown Weed
Datura stramonium L.

Although deadly poisonous when used incorrectly, this species is used in the Eastern Mountains to treat wounds and kill pain as well as smoked in pipes to relieve asthma. In Europe it has been used to treat pulmonary diseases, nervous disorders and nymphomania.

Artist: Barbara C. McBride

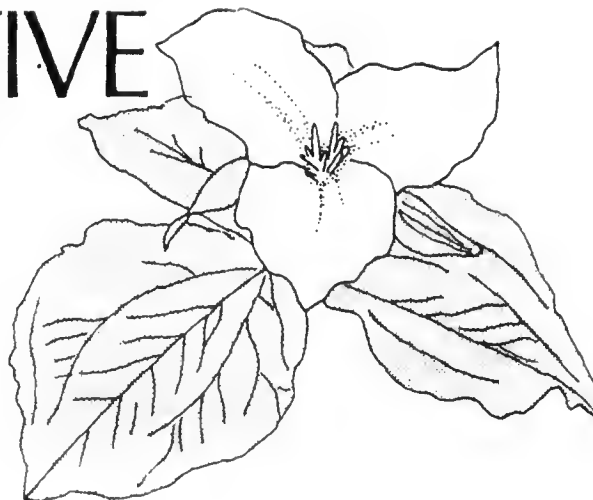


Appalachian Medicinal Herb Notes

Distributed by the Tennessee Native Plant Society to support conservation of Tennessee's wild flora.

TNPS c/o Department of Botany, The University of Tennessee, Knoxville, TN 37916

TENNESSEE NATIVE PLANT SOCIETY NEWSLETTER



Vol. 5, No. 6
December 15, 1982

MESSAGE FROM THE PRESIDENT

It's the end of the year and things are shutting down outdoors. We took a hike to Frozen Head State Natural Area last Saturday and only three humans braved the out-of-doors. In all fairness to the human contingent, there wasn't much other wildlife out either; I don't recall seeing many squirrels, or the like. It was hunting season, and the deer all knew better. We saw and heard a few birds; a pileated woodpecker and a red-tailed hawk among others. But there were plants in abundance, although not as showy as they are much of the rest of the year. We looked at ferns and talked about how much the grape fern looks like the Sweet Cicely, but that's no problem because the Sweet Cicely wouldn't be out at this time of year. Then to make a liar out of me, there were lots of fresh young bright green leaves of the Sweet Cicely all over the place, ready to tough it out for the winter. I am always fascinated by all the plants that send up young tender-looking shoots in the fall, thereby having a head start for the next spring. The mechanisms for adapting seemingly tender tissues to sub-freezing temperatures must be impressive. The Meadow Spike-moss (*Selaginella apoda*) was abundant in a wet depression at the edge of the parking-picnic area. It is delicate and bright green; the leaves are only a few cells thick, yet it can withstand warm days in the bright sun alternating with cold nights, sometimes well below freezing and even imbedded in ice when these depressions fill and freeze. Fern gametophytes are only one-cell thick small green tissue-paper scraps of plant. They lie flat on the ground where variations in the local "microclimate" are moderated by the earth; but it is still impressive to consider that these tiny organisms of relatively few cells live and function through the winter. What are the mechanisms by which the water in these cells either does not freeze, or freezes in such a way that the cells are not ruptured and destroyed? Apparently some plants store up excess sugars and/or salts in their cells which lower the freezing point. Others may control freezing so that when the cell sap does freeze it does so slowly and in small crystals that do not damage the cells. Others may produce special fatty substances (lipids) which are part of the all-important cell membranes and which also may depress the freezing point. There are undoubtedly other freeze controlling mechanisms which plants have evolved. What's more, the above is a pretty rough secondhand description, as I am no plant physiologist. My thanks to Dr. Beth Mullin of our Botany Department for bringing me up to date.

At the end of our hike, we sat at the picnic tables in the parking lot and contemplated the steep hillside across the road and creek on which the Emory River Land Company is seeking a strip mine permit. If this permit is approved the mine is going to be visible from about 50% of the Frozen Head Natural Area and the lower end of Flat Fork through the picnic areas will inevitably be subject to siltation from runoff from the mine. This seems in direct contradiction to Tennessee strip mine law protecting the integrity of state management and scenic areas. Members are encouraged to write requesting denial of this permit to: Mr. Charles Howell, Commissioner, Department of Conservation, 701 Broadway, Nashville, TN 37203, with copies to Mr. Don Charpio, Director, Division of Parks and Recreation and Mr. Austin Gaines, Director, Division of Surface Mining; both also at the above address.

It is past time for elections of officers and directors for the new year. A nominating committee is being formed, and we hope to have a slate of candidates and ballots sent out by special mailing shortly so that we can get our terms of office back in line. Ballots and voting go with active, honorary, life and institutional members, but not associate members.

As a reminder - 1983 dues are due. Our dues year runs from January to December. We have current members who are paying delinquent dues at the end of the present year and are being credited for this year. Next year's dues are still due. We also have new members who are joining towards the end of this year, like now, and we are crediting them with next year's dues. There are some obvious imbalances, but we have to start and stop somewhere.

Hope you had a good Thanksgiving and are looking forward to a fine Christmas.



A. Murray Evans

AUSTRALIAN NATIVE
PLANTS CONTACT ●

We have been contacted by a native plant enthusiast from Victoria, Australia who would like to exchange native plant seeds. He is trying to acquire plants of North America. We have sent him a copy of our seed list, but if there are members who would like to take advantage of a personal contact in Australia to exchange native plant information or seeds write to: Dr. William Cochrane, "Woodbine", Queenscliff Road, R.M.D. Drysdale, Victoria 3222, Australia.

TENNESSEE NATIVE PLANT
SOCIETY NOTEPAPER ●

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*****FIELD TRIP REPORTS*****

FROZEN HEAD STATE NATURAL AREA IN NOVEMBER

A small group of only three, but we lucked out on the weather. Most people obviously thought we wouldn't; which, considering the look of the morning and the weather reports, was a reasonable guess. It didn't rain. We hiked up the Spicewood Branch Trail, which is on a rich north facing mountain side with lots of diverse tree species and ground cover on deep forest soils and lots of small streams. We climbed the windy bleak fire tower on top for good views of the country side, the strip mines and the Brushy Mountain prison, and then descended by the South Old Mac Mountain Trail. This trail is on the south facing slope, with dry shale soils and primarily oak-hickory forest. It was about a nine-mile round trip. Both trails were interesting botanically and well worth the trip, even in this less than showy season. We identified the tree canopy species by scuffing through the fresh fallen leaves. Lots of people missed a good one.

A. Murray Evans



ARNOLD'S ENGINEERING DEVELOPMENT CENTER (AEDC) NATURAL AREAS IN AUGUST

Ten participants including the leaders braved the heat and insects to visit two Natural Areas in Coffee County. Mark Moran gave a brief account of the Forest Management program here at AEDC prior to a short walk around the perimeter of Goose Pond. Several interesting plants were observed, such as Virginia Chainfern (Woodwardia virginica), Bartonia virginica, and whorled pogonia (Isotria verticillata). Tom Patrick ventured out into the open wet area, found ankle-deep water, and several aquatic coastal plain species including pickeral weed (Pontederia cordata), Xyris iridifolia, swamp loosestrife (Decondon verticillatus), and an arrowleaf species (Sagittaria graminea) with grasslike leaves.

After a leisurely lunch at Shoney's, most of the group stayed for a short hike through the May Prairie State Natural Area near Manchester. The composites were just beginning to put on their show of yellow. The rare Snowy Orchis (Platanthera nivea) was fading as was the False Asphodel (Tofieldia racemosa). The site of Trillium pusillum, a plant first observed earlier this year, was relocated at May Prairie by Larry Smith, ecologist for the Tennessee Heritage Program and Dennis Horn of Tullahoma. This tiny Trillium is listed by the Tennessee Heritage Program office as an endangered plant in Tennessee.

Dennis D. Horn

-----FAMILY OF THE MONTH-----

PINACEAE - THE PINE FAMILY

Members of the pine family are evergreen, monoecious trees with firm, narrow leaves and woody cones. Four genera of the family are native to Tennessee: Pinus, the pines; Picea, spruce; Tsuga, hemlocks; and Abies, fir.

The cones differ greatly from one genus to the next as well as between male and female cones of the same species. The male is typically quite small although as much as one-inch long in some pines. It is rapidly deciduous after shedding pollen. The female cone is likewise small when young typically about one-half inch long, and receives pollen at this state. These enlarge, become woody, and are what normally comes to mind when one thinks of "pine cones."

Mature female cones of fir are erect or upright on the stems unlike those pine, hemlock, or spruce, which are pendant (see sketches).

Pinaceae is economically important for its well-formed, evergreen ornamentals, its light, easily worked lumber, and its "naval stores." The latter term signifies those products, such as rosins, wood tars, and turpentine, obtained from species of pine.

Joseph L. Collins



VIRGINIA PINE



FRASER FIR

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- Institutional - \$10 Includes Newsletter, participation in all activities and one vote. For libraries, governmental agencies, parks, recreation areas, consulting firms, other business firms, etc.
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Pipsissewa, Spotted Wintergreen
Chimaphila maculata (L.) Pursh.

An evergreen perennial which seldom reaches over 8 inches tall, this plant is used as a diuretic, tonic, astringent, and blood builder, and is alleged to treat skin eruptions and rheumatism. The plant is usually employed in a tea made from the leaves.

Artist: Andrea H. Higdon

Appalachian Medicinal Herb Notes

Distributed by the Tennessee Native Plant Society to support conservation of Tennessee's wild flora.

TNPS c/o Department of Botany, The University of Tennessee, Knoxville, TN 37916