

Field Botany

Tennessee Naturalist Program Tier Two

TNP's Tier Two course Field Botany will present instruction in basic botanical morphology and terminology to facilitate identification of vascular plants in the field using dichotomous keys. All major plant groups -- woody and herbaceous broad-leaved plants, conifers, ferns, and graminoids -- will be covered. The 40-hour course will be taught in two 20-hour sessions, one in spring and one in fall, with each session composed of four, five-hour classes on Saturdays, 10:00 a.m. to 3:30 p.m. CDT (including a 30-minute lunch break). Different locations for each class are spread throughout the mid-state region to ensure exposure to a variety of community and vegetation types and equalize travel among outlying chapters to the extent possible. Guest lecturers or hike leaders will be featured in several classes. Class enrollment is limited to ten.

Required Materials

Quality 10x hand lens (doublet or triplet)

Guide to the Vascular Plants of Tennessee, Edward W. Chester, B. Eugene Wofford, Joey Shaw, Dwayne Estes, and David H. Webb, Eds., UT Press 2015 (available Mar. 20)

Recommended Materials

Plant Identification Terminology: An Illustrated Glossary [2nd Ed.] James G. Harris and Melinda Woolf Harris, Spring Lake Publishing, 2001

Wildflowers of Tennessee, the Ohio Valley, and the Southern Appalachians, Dennis Horn and Tavia Cathcart, Lone Pine Publishing, 2005

Field Botany, Spring Session (March - May)

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| Class One -- Montgomery Bell State Park [Dickson Cty] (Park Office, A/V room) | 3/28 |
| General plants review | |
| Botanical terminology | |
| Woody and herbaceous monocots/dicots | |
| Plant morphology -- form, foliage, flowers, winter twig 1 | |
| Dichotomous key instruction, practice (Jim Bailey Nature Trail) | |
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| Class Two -- Short Springs SNA [Coffee Cty] | 4/11 |
| Guest: Dennis Horn | |
| Terms and flower morphology review | |
| Forests -- canopy, understory, and spring wildflowers | |
| Field work with keys | |

Class Three -- Cedars of Lebanon State Park [Wilson Cty] 4/18
Plant morphology -- surface textures, fruits 1
Plant community factors -- climate, geology, topography, hydrology, soil, light
large-scale matrix communities -- forests, wetlands, grasslands, glades/rock
Pollination mechanisms and partners with guest: Steve Murphree
Field work with keys

Class Four -- Stillhouse Hollow SNA & Rattlesnake Falls [Maury Cty] 5/16
Spore producing plants -- non-vascular and ferns
Fern morphology
Graminoids morphology -- sedges
Field work with keys

Field Botany, Fall Session (August - October)

Class One -- Old Stone Fort State Park, May Prairie SNA [Coffee Cty] 8/29
Guest: Todd Crabtree
Graminoids morphology -- grasses and rushes
Open communities ecology
Community associations, fine-scaled groupings within ecological systems
Field work with keys

Class Two -- Warner Parks Nature Center, Hill Forest SNA [Davidson Cty] 9/19
Nuts and other fruits 2
Seed dispersal mechanisms and partners (wind, water, animals, fire)
Upland sites -- oaks and hickories and pines
Rare plants and conservation in Tennessee with guest Andrea Bishop
Field work with keys

Class Three -- Natchez Trace State Park/Forest Pin Oak Lodge [Henderson Cty.] 9/26
Guest: Claude Bailey
Aster family morphology and ID
Wetland sites -- indicator species
Invasive plants in Tennessee, EDDMapS
Field work with keys

Class Four -- Frozen Head State Natural Area [Morgan Cty] 10/9-10
[includes two-night stay at Cumberland Mountain State Park, Cumberland Cty]
Gymnosperms, winter twig 2
Forest communities
Field work with keys
Nine mile day hike (loop combo of easy to moderate trails)

Other Course Details:

The required text, Tennessee's new flora, is currently slated for release at the end of March. There is a chance it may not be available before the first class. This won't be a problem. I will keep registered students apprised of the situation and could likely arrange to have copies available for purchase at the first class and certainly by the second class, which is when it will be needed most. The Tennessee Native Plant Society, whose monetary contribution to the publication significantly lowered the retail price, will be selling copies -- \$40 for TNPS members, \$50 for the general public. It will also be available on Amazon for approximately \$35.

There will likely be other class handouts. Most class work will involve drawing, discussion, and hands on examination of plant material. Come prepared to take good notes. Where feasible, a stereo microscope will be made available to aid visual identification of plant structures. For field work, a quality hand lens, 10x doublet or triplet, is a must. These links will give you more information to aid the search for an appropriate model if you don't have one.

https://www.compleatnaturalist.com/mall/doublet_rg_10x.htm

https://www.compleatnaturalist.com/mall/hastings_triplets.htm

<http://www.ascscientific.com/lens.html>

For the final class of the course, there will be a two-night stay at Cumberland Mountain State Park (Friday and Saturday) with an all-day hike of several trails in Frozen Head State Natural Area (approx. nine miles total on easy to moderate trails), taking us through several different forest community types on Saturday. We'll do our class discussions on Friday evening after dinner. Cumberland Mountain has a nice buffet restaurant (southern cooking). Two cabins, one sleeps eight, one sleeps four) have been reserved at a total lodging cost of \$50.64 per person. Meals are separate. I will check to see if a box lunch is possible for the day hike.

Efforts were made to keep the locations as close to major interstates as possible to facilitate travel from more distant parts of the state and take advantage of state parks with lodging (inn or cabins). All have camping. There are hotels in Manchester, Columbia, and Nashville close to sites with no indoor lodging options. The class start time of 10:00 a.m. CDT should give most people the option to drive that morning if preferred. Parks with a lodge also have a restaurant where we could eat lunch. Park inn and cabins reservations may be made online at each park's homepage.

Aside from the proposed Frozen Head hike, most of the field work will not involve a great deal of walking, though a few miles is certainly likely for those classes that will be all field work. Sites may be wet, uneven, steep, slippery, etc. Appropriate footwear/clothing, sun protection, insect protection (especially ticks), and plenty of water will be important. Except for severe weather, expect to be in the field rain or shine. I plan to visit each site in the days before class and will let everyone know what to expect. Several classes will feature a guest lecturer or field trip leader. Bio info is below.

Make-up classes: This is our first Tier Two course, and there is no current plan to offer this course again next year. At this time, it should be assumed that a missed class cannot be made up, though you will receive any class materials. We don't have certification associated with

these courses, so a missed class carries no penalty beyond missed information. There is also no volunteer requirement with Tier Two courses.

The fee is \$250 payable in full at the first class (check only). If we develop a way to register online through our Web site before then, you'll be able to pay with a credit card.

Contact Margie Hunter, mhunter55@comcast.net to register.

Guest Hike Leaders and Presenters

Dennis Horn -- co-author of *Wildflowers of Tennessee, the Ohio Valley, and Southern Appalachians* sponsored by Tennessee Native Plant Society; founding member of TNPS; contributing author *Guide to the Vascular Plants of Tennessee* (UT Press 2015); self-taught botanist; retired engineer (Arnold Engineering Development Center, Tullahoma, TN)

Steve Murphree -- Professor of Biology, Belmont University (Nashville, TN), and entomologist; instructor Tennessee Naturalist Program (Owl's Hill Chapter) World of Invertebrates class; author of articles for *The Tennessee Conservationist* magazine

Todd Crabtree -- State Botanist, Tennessee Department of Environment and Conservation, Division of Natural Areas, Natural Heritage Inventory Program; TNPS board member and hike leader

Claude Bailey -- Associate Professor of Biology, Jackson State Community College (Jackson, TN); former State Botanist for Tennessee; co-author *A Fifth Checklist of Tennessee Vascular Plants* (BRIT 2009); contributing author *Guide to the Vascular Plants of Tennessee* (UT Press 2015)

Andrea Bishop -- Recovery Biologist, Tennessee Department of Environment and Conservation, Division of Natural Areas, Natural Heritage Inventory Program; contributing author *Guide to the Vascular Plants of Tennessee* (UT Press 2015); author of articles for *The Tennessee Conservationist* magazine

Primary Instructor

Margie Hunter -- TNP founding board member, Tennessee Native Plant Society board member, Tennessee Exotic Pest Plant Council board member, TNP instructor for "So You Want To Be a Naturalist: Naturalist Skills and Service," "Geology and Ecology: Foundation and Context," and "Forbs, Ferns, Fungi and More: Herbaceous Plants in Tennessee." Author of *Gardening With the Native Plants of Tennessee: The Spirit of Place* (UT Press, 2002). Completed 2014 Field Botany course at Austin Peay State University under Dr. Dwayne Estes.