

# FIELD TRIPS 2014

**THURSDAY, MARCH 20, 2014**

9 a.m. - 5 p.m.

## **Field Trip A: ALL DAY – Tuckaleechee Cave Tour: Cave Ecology and Conservation – Matt Niemiller**

Tuckaleechee Caverns in Townsend, Tennessee, is known as the "Greatest Site Under the Smokies." This field trip will focus on the various species of animals that inhabit this historic cave in East Tennessee, delivering an up-close-and-personal experience of local geology, hydrological processes and cave biology of the cave system. We will discuss the structure and function of cave ecosystems as well as the ecology, evolution and conservation of the unique and often endemic organisms that live in a world of complete darkness, such as salamanders, spiders, beetles, and more.

**Dr. Matthew L. Niemiller** is currently a postdoctoral researcher in the Department of Biology at the University of Kentucky. He received his B.S. and M.S. from Middle Tennessee State University and his Ph.D. from the University of Tennessee, Knoxville. He was a Donnelley Postdoctoral Fellow at Yale University. Dr. Niemiller studies the ecology, evolution and conservation of cave life. He has published more than 25 articles and book chapters on subterranean biology, as well as a field guide to cave life in Tennessee, Alabama and Georgia. He also is the coeditor of *The Amphibians of Tennessee* and *The Reptiles of Tennessee* published by the University of Tennessee Press.



1 p.m. - 5 p.m.

## **Field Trip B: HALF DAY – Bryophytes of the Smokies – Ken McFarland**

Discover the miniature plants blanketing the forest floor, rocks, and trees: mosses, liverworts and hornworts. Learn how to recognize these three groups and different species of each. Starting at Greenbrier ranger station, we'll explore the diversity of these plants along Injun Creek Trail. Experienced naturalists as well as those just curious about these verdant small plants are welcome. Bring a 10X hand lens.



**Kenneth McFarland**, Ph.D., is a senior lecturer in the Division of Biology at the University of Tennessee, Knoxville. He administers and teaches the introductory botany course and manages the research and teaching greenhouses for the biological sciences. Ken has been involved with the Annual Wildflower Pilgrimage since 1976, serving as Chair from 1995 to the present. With research interests in morphology, taxonomy, and ecology of bryophytes, he has conducted research in the Smokies, Southern Appalachians and mountain ranges of the Western U.S., Mexico, Brazil, and Columbia. He teaches one-day classes on bryophytes for the Smoky Mountain Field School and has taught at the Cullowhee Native Plants in the Landscape Conference.

1 p.m. - 5 p.m.

## **Field Trip C: HALF DAY – Spring Wildflowers – Dan Pittillo and Steve McGaffin**

The unpredictable, often cold weather, coupled with the limited availability of pollinators and the small number of days during which it's warm enough for them to fly, means that spring wildflowers require considerable help for successful fertilization. First, spring wildflowers can't afford to be choosy when confronted by limited pollinators and cold weather. Most wildflowers are visited and successfully pollinated by a variety of small insects, particularly solitary bees and flies. Some species, like false rue anemone (*Isopyrum biternatum*) and spring beauty (*Claytonia virginica*), are visited by 20 or more pollinators. The wildflowers that rely on a single pollinator typically form extensive colonies. Join our experienced leaders to explore some of the park's great wildflower displays and learn about what might pollinate these spring ephemeral flowers.

**J. Dan Pittillo** is a retired professor of biology at Western Carolina University. He taught biology courses for 40 years, primarily in botany and natural history. He received several awards, including the Governor's Conservation Achievement Award as Environmental Educator of the Year in 2012. He delights in floristic projects and is now engaged with Keith Langdon in searching unexplored geological formations of Great Smoky National Park and is documenting the flora of the Blue Ridge Parkway. His late wife, Jean F. Pittillo, also a botanist, is memorialized in the Pittillo Family Natural Preserve.

**Steve McGaffin**, Curator of Education at Knoxville Zoo, has been interpreting natural history in a variety of settings since 1987. Addicted to citizen science, he is a coordinator for the Knoxville Zoo FrogWatch USA Chapter, state coordinator for the Tennessee Butterfly Monitoring Network and a member of the steering committee for the North American Butterfly Monitoring Network. While volunteering to help with bird banding, he likes to look for dragonflies because (don't tell the birders) they're so much cooler. At home he likes to collect data for the National Phenology Network. He has been on the DLIA Education Committee since 2011.

#### **FRIDAY, MARCH 21, 2014**

7 a.m. – 10 a.m.

#### **Field Trip D: Birding and Bird Diversity in the Smokies – Charles Smith**

This field trip is intended for participants of all levels, from beginner to advanced. It's about bird study, not just bird watching. The pace will be relaxed, and we'll take time to study the birds we see and discuss their natural history. Plenty of time will be allowed to answer participant's questions about birds. An emphasis will be placed upon identifying and learning songs and calls in the field. Though the focus will be birds, we won't ignore ferns, wildflowers, trees, butterflies, and other natural history subjects we see. We'll visit the area around the Sugarlands Visitor Center and walk the Fighting Creek Nature Trail (1.25 miles, relatively flat). Meet at the Sugarlands Visitor Center parking lot, rain or shine. Wear comfortable walking shoes and bring binoculars (7 or 8 power), if you have them.



**Charles R. (Charlie) Smith** is a native Tennessean, having grown up and studied natural history near Roan Mountain in Northeast Tennessee. His first visit to The Smokies was in 1965. Studies at East Tennessee State University and Cornell University provided his formal background in natural sciences. He is a Life Member of the Tennessee Ornithological Society and of the Great Smoky Mountains Association. At Cornell, he held teaching, research, and administrative positions (including Executive Director of the Laboratory of Ornithology) for more than 35 years. Locally, he serves on the Board of Directors for DLIA and studies plants, birds, and butterflies in The Smokies during the summer.

#### **SATURDAY, MARCH 23, 2014**

8:30 a.m. - Noon

#### **Field Trip E: Schoolyard ATBI – Tiffany Beachy and Steve McGaffin**

Interested in conducting a schoolyard BioBlitz but just not sure how to make it happen? We'll show you how easy it is by actually conducting a mini-BioBlitz with students from a local elementary school. Meet at the hotel for a brief introduction to schoolyard exploration, and then pile into the Tremont van with us to venture out to Pi Beta Phi Elementary for a morning of fun with students! You will have an opportunity to learn the process while facilitating the activity with kids.

**Tiffany Beachy**, Citizen Science Coordinator at Great Smoky Mountains Institute at Tremont, was born and raised in Roanoke, VA. She earned her BS in Wildlife Science from Virginia Tech in 2003 and her MS in Wildlife Science from the University of Tennessee, Knoxville in 2008, where she studied Cerulean Warblers. She lived the life of a bio bum for a while and has participated in avian research in Tennessee, Canada, Mexico, the Galapagos Islands of Ecuador, Venezuela, and Missouri. (Steve McGaffin bio located above.)

