

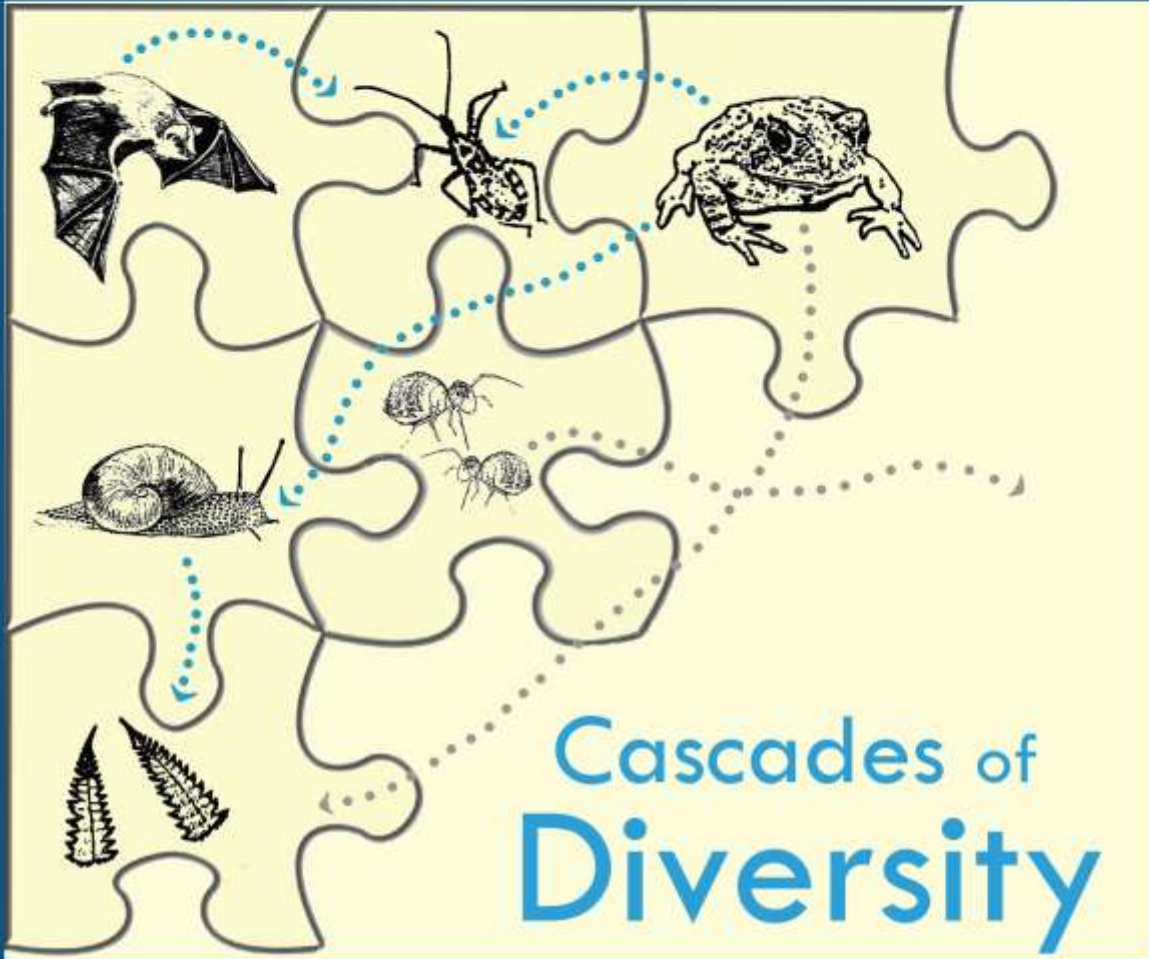
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DLIA
Discover Life in America

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ATRI Conference

March 20-22 • Park Vista Hotel • Gatlinburg, TN



Keynote speaker

Merlin Tuttle



This year, Discover Life in America is thrilled to introduce Merlin Tuttle as our 2014 conference keynote speaker. Dr. Tuttle has dedicated his life to the study and conservation of bats since his days as a student in Knoxville. After receiving his Ph.D. in Ecology and Evolution from the University of Kansas, Dr. Tuttle went on to hold many positions in both academia and within conservation groups. He founded Bat Conservation International, a leading voice in bat advocacy and research, and has been an invited speaker at America's most prestigious institutions – from Harvard and Princeton Universities to the National Geographic Society and Smithsonian.

Tuttle has traveled the world for more than 50 years studying and photographing hundreds of species of bats, from bizarre to beautiful. His extraordinary photographs show bats pollinating flowers, catching prey, courting mates, and rearing young. They have been published and exhibited worldwide, including in five National Geographic articles. His latest work, exploring unique floral morphology in bat-pollinated plants, is scheduled to appear in the March 2014 issue.

and join us for

“An Evening with the Bats”

East Tennessee History Center, 601 S Gay St., Knoxville
5-7pm Saturday, March 22



Learn more about the fabulous world of bats through our keynote's high-speed photographs from Ecuador, Cuba, and Costa Rica, and discover the techniques and tales behind the images. Reception includes food, drink, and a signed copy of National Geographic -- featuring our keynote's fifth article -- to the first 100 guests.

Tickets available at dlia.org, or at the door.



There is not a more enjoyable experience that I've ever encountered in all of my world travels than just sitting out at the entrance of Bracken Cave and watching twenty million bats fly overhead.



- Merlin Tuttle, 2008 Interview with
the Conservation History Project of Texas

Conference Field Trips

See main schedule for time and meeting location. Trips are Thursday, Friday, and Saturday. Field trips have limited space; please reserve in advance.

- ❁ **Field Trip A: Tuckaleechee Cave Tour: Cave Ecology and Conservation with Matt Niemiller** This field trip will focus on the fauna of Townsend's historic cave -- the "Greatest Site Under the Smokies." Attendees will experience an up-close and personal introduction to local geology, hydrology, and cave ecology, including the unique evolutionary strategies organisms employ in a world of complete darkness.



- ❁ **Field Trip B: Bryophytes of the Smokies with Kenneth McFarland** Starting at Greenbrier Ranger Station, this outing will explore the mosses, liverworts, and hornworts blanketing the forest floor, rocks, and trees along Injun Creek. Please bring a 10x hand lens to examine these miniature plants up close. All levels of experience welcome!



- ❁ **Field Trip C: Spring Wildflowers with Dan Pittillo and Steve McGaffin** In the unpredictable weather of early spring, plants can't afford to be choosy. On this wildflower tour, participants will examine the diversity of both spring flora and their associated pollinators to answer the question, why do some have only one insect visitor and others many?



- ❁ **Field Trip D: Birding and Bird Diversity in the Smokies with Charles Smith** This expedition emphasizes not only finding avian residents, but observing them too. Attendees from beginner to advanced will learn techniques for birding by ear, discuss natural history of different species, and observe the broader habitat these Smoky denizens call home.



- ❁ **Field Trip E: Schoolyard ATBI with Tiffany Beachy and Steve McGaffin** Interested in conducting a schoolyard BioBlitz but just aren't sure how to make it happen? We'll show you the steps by actually conducting a mini-BioBlitz with the local elementary school. Participants will have the opportunity to learn the process while facilitating the activity with students.



2014 ATBI Conference

Daily Schedule

T = Technology/Data Synthesis S = Science E = Education A = ATBI Toolkit

Thursday

Focus: GSMNP Science Colloquium, Field Trips, and Opening Reception

8am - 4pm	Conference Registration Exhibit, Poster, and Vendor Set-up Silent Auction Opens	Lobby, Exhibit Hall
9am - 5pm	Field Trip A: Tuckaleechee Cave Tour: Cave Ecology and Conservation * <i>Matt Niemiller (U. Kentucky)</i>	Meet in Lobby for carpool
9am - 4:00pm	Great Smoky Mountains Science Colloquium <i>(See p8 for schedule)</i>	S Mountain View (Main)
12 - 1pm	Lunch on your own at the Park Vista's restaurantes or other great Gatlinburg eateries!	
1 - 5pm	Field Trip B: Bryophytes of the Smokies * <i>Kenneth McFarland (UT)</i>	Meet in Lobby for carpool
1 - 5pm	Field Trip C: Spring Wildflowers * <i>Steve McGaffin (Knoxville Zoo, DLIA)</i> <i>Dan Pittillo (Western Carolina U., ret.)</i>	Meet in Lobby for carpool

Dinner on your own (hors d'oeuvres during evening events)

5 - 7pm	Opening Reception: "Business After Hours" <i>DLIA, and co-hosted by the Gatlinburg Chamber of Commerce **. Heavy hors d'oeuvres and beverages</i>	Meet at Twin Creeks Science Center
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* See p3 for field trip descriptions. Limited space; please reserve in advance.

** See p10 for event advertisement



Friday

Focus: ATBI Updates, Research Reports, and Reception

Silent Auction, Posters, Exhibits, and Vendors open All Day (*see p9*)

7 - 10am	Field Trip D: Birding and Bird Diversity in the Smokies * <i>Charles Smith (Cornell U., ret., DLIA)</i>	Meet in Lobby for carpool
8am	Conference Registration Open Silent Auction	Lobby
9 - 9:15am	DLIA and Park Welcome <i>Pat Parr (DLIA Board Chair)</i> <i>Pedro Ramos (GSMNP)</i>	Mountain View (Main)
9:15 - 9:30am	Update: Smokies' ATBI <i>Todd Witcher (DLIA)</i>	Mountain View (Main)
9:30 - 10:00am	Update: Park Air Resources <i>Jim Renfro (GSMNP)</i>	S Mountain View (Main)
10:00 - 10:30am	ATBI Science Presentations <i>15-minute intervals</i>	S Mountain View (Main)
	Introduction - ATBI Science <i>Mike Dennis (DLIA Science Committee Chair)</i>	
	Crayfish of the Great Smoky Mountains National Park: Natural History and Conservation <i>Zach Loughman (West Liberty Coll.)</i>	S
10:30 - 10:45am	Break	
	Is Great Smoky Mountains National Park a Biodiversity Hotspot for Nematodes? <i>Tom Powers (U. Nebraska)</i>	S
	ATBI Mapping Program: Where Do All These Species Live? <i>Tanner Jessel (UT)</i>	A
	Thicket of Diversity ATBI <i>Mona Halverson (Big Thicket National Preserve)</i>	S



Illustrations by Leigh Anne Carter

Friday (Cont'd)

- 11:30am - 12:30pm The Ecology of Cave Life in East Tennessee **E** Mountain View
Matt Niemiller (U. Kentucky) (Main)
- 12:30 - 1:30pm **Lunch on your own** at the Park Vista's
 restaurantes or other great Gatlinburg eateries!
- 1:30 - 4:30pm **Concurrent Sessions**
- 1:30 - 3:30pm Nature Photography with your phone: **T** Mountain View D
iPhonography Paul Hassell (Light Finds)
- 1:30 - 2:00pm TVA Bat and Cave Conservation **S** Mountain View
Holly LeGrand (TVA) (Main)
- 2:00 - 2:15pm Microsoft Enterprise and ArcGIS Tech- **A** Mountain View C
 nologies to Support Data Discovery and
 Management of GSMNP Biological Data
 Collections *David White (Clemson U.)*
- 2:15 - 2:30pm Myxomycete Diversity at the Big Thicket **S** Mountain View
 Natural Preserve (Main)
Kate Winsett (U. Southern Indiana)
- 2:30 - 2:45pm Bat Surveys on the Oak Ridge Reservation **S** Mountain View C
Kitty McCracken (ORNL)
- 2:45 - 3:00pm **Break**
- 3:00 - 3:15pm Changes in Winter Activity of Bats in Great **S** Mountain View C
 Smoky Mountains National Park, TN Due to
 White-Nose Syndrome *Riley Bernard (UT)*
- 3:15 - 4:00pm Cave Ecology and White-Nose Syndrome **S** Mountain View C
Cory Holliday (The Nature Conservancy)
- 3:30 - 4:30pm White-Nose Syndrome (WNS) and Bat **S** Mountain View
 Conservation in 2014 *Peggy Shute (USFWS)* (Main)

End concurrent sessions

Dinner on your own (hors d'oeuvres during evening events)

- 6:00 - 9:00pm **Keynote Address and Reception with** Ballroom 4
Merlin Tuttle
Heavy hors d'oeuvres and cash bar

Silent Auction Ends

Edward Jones
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Saturday

Focus: ATBI educator workshops, Poster Session, and Knoxville Event with the Keynote

8:30am - 12:00pm	Field Trip E: Schoolyard ATBI * <i>Tiffany Beachy (Tremont)</i> <i>Steve McGaffin (Knoxville Zoo, DLIA)</i>	E Meet in Lobby for carpool
9:00 - 10:00am	Biodiversity in Southern Appalachia over the past 7 Million Years: the Gray Fossil Site and Beyond <i>Blaine Shubert (East Tennessee State U.)</i>	S Mountain View (Main)
10:00 - 10:30am	NSTA Citizen Science Book Series <i>Susan Sachs (NPS)</i>	E Mountain View (Main)
10:30 - 10:45am	Summary of a Multi-Year Spring Migration Study of Indiana Bats from Four Tennessee Caves, 2009-2013 <i>Copperhead Consulting</i>	S Mountain View (Main)
10:45 - 11:00am	Break	
11:00 - 11:30am	Poster Session (see p9)	S Exhibit Hall
11:00am - 12:30pm	Crayfish in the Curriculum and the Classroom <i>Zach Loughman (West Liberty Coll.)</i>	E Mountain View (Main)
12:30 - 1:30pm	Lunch on your own at the Park Vista's restaurants or other great Gatlinburg eateries!	
1:30 - 2:30pm	Citizen Science: Electronic Naturalist <i>Steve McGaffin (Knoxville Zoo, DLIA)</i>	A Mountain View (Main)
2:30 - 3:30pm	Electronic Field Trips: The Next Big Thing! <i>Emily Guss (NPS)</i>	T Mountain View (Main)
5:00 - 7:00pm	Evening with the Bats Event with Merlin Tuttle** East Tennessee History Center, Knoxville	

* See p3 for field trip descriptions. Limited space; please reserve in advance.

** See p2 for event description.

- 9:00am Welcome and Introductions *Paul Super (NPS)*
- 9:10am Health of Adult Fraser Fir as Assessed by Foliar Function *S. Douglas Kaylor and Jennifer A. Franklin (UT)*
- 9:30am *Sasajiscymnus tsugae* and *Laricobius nigrinus*: Are the Beetles Making a Hard Day's Night for Hemlock Woolly Adelgid? *Greg Wiggins et al. (UT)*
- 9:50am Interactions between an Invading Asian Earthworm and Native Species of the Great Smoky Mountain National Park *Anita Juen (U. Innsbruck, Austria)*
- 10:10am Frequency Dependence for *Microstegium vimineum* Through Time: Invasion Persistence or Community Integration? *Chelsea Cunard and Richard Lankau (U. Georgia)*
- 10:30am Break**
- 10:45am Fire Promotes Pollinator Visitation: Implications for Ameliorating Declines of Pollination Services *Michael Van Nuland et al. (UT)*
- 11:05am Multi-Severity Fire Effects and Predicting Burn Severity in Xeric Oak-Pine Communities in Great Smoky Mountains National Park *Scott Abba and Laura E. DeWald (Western Carolina U.)*
- 11:25am Lunch**
- 12:50pm Using Spacecraft, Aircraft, and Field Observations to Identify Patterns in Bird Distribution Following Changes in Fire Management *Eli T. Rose and Theodore R. Simons (North Carolina State U.)*
- 1:10pm Indiana Bat Roost Habitat Selection in Great Smoky Mountains National Park and Surrounding Areas *Joy O'Keefe and Susan Loeb et al. (Indiana State U.)*
- 1:30pm Effects of Fire Management Practices on the Amphibians and Reptiles of Great Smoky Mountains National Park *Kevin Fouts et al. (U. Georgia)*
- 1:50pm Setting the Baseline: Elevational Distributions of Salamanders in Great Smoky Mountains National Park *John Crawford (Lindenwood U.)*
- 2:10pm Break**
- 2:25pm Oh the Damage Done: Assessing Patterns of Wind Damage in the Great Smoky Mountains National Park *Jeffrey B. Cannon, Christopher J. Peterson, and Jeff Hepinstall-Cymerman (U. Georgia)*
- 2:45pm Estimating Enhanced Fujita Scale Levels Based on Forest Damage Severity *Christopher M. Godfrey (U. North Carolina)*
- 3:05pm Investigating Orographic Precipitation Processes in the Southern Appalachians *Anna Wilson, Greg Cutrell, Douglas K. Miller, and Ana P. Barros (Duke U.)*
- 3:25pm Measurement Uncertainty in KE-I Relationships for Soil Erosion Studies: an Evaluation Using PARSIVEL Disdrometers in a Mountainous Region *Marta Angulo-Martínez and Ana P. Barros (Duke U.)*
- 3:45pm Coupled Prediction of Flood Response and Debris Flow Initiation During Warm- and Cold- Season Events in the Southern Appalachians *Jing Tao and Ana P. Barros (Duke U.)*
- 4:05pm Conclusion: Farewell**

Poster Session

✧ Posters available in the Exhibit Hall throughout conference
Open session with the authors Saturday, 11 - 11:30am.

- ✧ **Nematodes** | Tom Powers (U. Nebraska)
- ✧ **Springtails** | Ernie Bernard (UT)
- ✧ **Crane Hollow Nature Preserve ATBI** | Heather Stehle (Crane Hollow Nature Preserve)
- ✧ **Invisible Threat** | Sterling Fisher (Gatlinburg Pittman HS)
- ✧ **Vintage ATBI Posters** | DLIA



Smoky Mountain **news**



Attendee Information

Conference Location

The Park Vista | 705 Cherokee Orchard Road | Gatlinburg | 865-436-9211

Dining

Snacks and refreshments will be provided during breaks. All other major meals will be the responsibility of the attendee. The Park Vista Hotel's two restaurants, Firefly's and the Vista Grill, will be open during their regular hours to serve breakfast, lunch, and dinner. Other meal choices are readily accessible just a short walk from the lodge in downtown Gatlinburg.

Internet access

If you carry a personal computer, wireless internet is available through the Park Vista Hotel. Public computers are available within driving (but not walking) distance at Gatlinburg's Anna Porter Public Library.

Parking


On-site parking is available for attendees staying at the Park Vista Hotel. For those staying elsewhere, there will be a few extra spaces at the Lodge and pay-to-park lots close by. Trolleys will be available for transit around town.

Thursday, March 20, 2014



DLiA

Discover Life in America


Join us for Business After Hours
Hosted by Discover Life in America

 Twin Creeks Science and Education Center
1316 Cherokee Orchard Road
5:00 - 7:00 pm

*A chance to see the Science Center and win great door prizes.
Enjoy delicious food by Hilton Garden Inn
and local beer from Smoky Mountain Brewery*

Please RSVP no later than Tuesday, March 18
by calling Jennie, (865) 436-0505 or email: jennifer@gatlinburg.com
RESERVE ONLINE at gatlinburg.com/chamber (Click 'Members Only')



BUSINESS after hours
GATLINBURG CONVENTION & VISITORS BUREAU
CHAMBER DIVISION



Wildlife Business Group/Getty Images/Corbis/Jupiter Images/istockphoto.com

We thank DLIA for keeping research, discovery and *wonder* alive in the Smokies.

TW & Claire
Garrett

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KNOWLEDGE

The central graphic features the company name 'BDA BREEDLOVE, DENNIS & ASSOCIATES, INC.' in a bold, serif font. The letters 'BDA' are significantly larger and colored in a dark green. Surrounding the text are various illustrations: a person in a hard hat and safety vest, a woodpecker on a tree trunk, a bird of prey, two storks, a colorful topographic map, a lily pond with lily pads and flowers, and a large green leaf. The words 'TECHNOLOGY', 'SCIENCE', 'EXPERIENCE', and 'KNOWLEDGE' are placed around the central imagery.

THANK YOU!

From the DLIA Team to all our Attendees,
Speakers, Sponsors, Park Administration and
Staff.