

YOU'RE INVITED!

Discover Life in America's
~ 2nd annual ~
Salamander Ball

A special event of the 2011 ATBI Conference!

Friday evening, April 8th | Ripley's Aquarium of the Smokies

LIVE MUSIC | SALAMANDERS OF THE SMOKIES
BEAUTY PAGEANT | KID'S AREA WITH GAMES...
AND FREE COPIES OF THE FEATURED BOOK TO
KIDS UNDER 12! | UNIQUE LIVE AUCTION | HEAVY
HORS D'OEUVRES AND BEVERAGES | DANCING |
RIPLEY'S
AQUARIUM SCAVENGER HUNT

Tickets included in conference registration
fee, or separately \$75 / adults. Kids 12 and
under free!

Contact DLIA for more information!



DISCOVER LIFE IN AMERICA
1316 Cherokee Orchard Road
Gatlinburg, TN 37738

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(865) 430-4756

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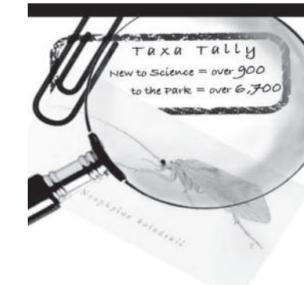
We're on the Web!
See us at:
www.dlia.org

CALENDAR OF EVENTS 2011

- February:
19—DLIA Event, Nantahala Outdoor Center (NOC), Gatlinburg, TN
- March:
1 – Exhibit Opens at Knoxville Area Transit (KAT) Station, Knoxville, TN
26 – Earth Hour, NOC, Gatlinburg (DLIA booth)
- April:
7—9-DLIA/ATBI Conference, Glenstone Lodge, Gatlinburg, TN
8 -Salamander Ball, Ripley's Aquarium, Gatlinburg, TN
13 – 16 Association of Southeastern Biologists (ASB) Conference, Huntsville, AL (DLIA booth)
23 – Earth Day Event, NOC, Gatlinburg, TN
26—1—Wildflower Pilgrimage, Gatlinburg, TN (DLIA booth)
- May:
21 –Citizen Science Day at Purchase Knob
22-International Biodiversity Day-"Biodiversity and Forests"
- June:
5- Firefly Event
10 and 11 – Firefly Event
11- Firefly Festival
22- 25- Biodiversity Days in the Smokies
- July:
16 – Fern Foray (TBD)
- August:
6 – DLIA Event, NOC, Gatlinburg, TN
- September:
3 -4 –Biodiversity hike and overnight to Mt. LeConte and LeConte Lodge
4 – Fern Foray (TBD)



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In partnership with Great Smoky Mountains National Park • Great Smoky Mountains Association • Friends of the Smokies

SPECIAL CONFERENCE EDITION

**CLIMATE CHANGE AND BIODIVERSITY:
APPROACHES, ANALYSIS, AND SYNTHESIS**

Keynote Dr. Tom Lovejoy
April 7, 8 and 9, 2011
Glenstone Lodge—Gatlinburg, TN

Discover Life in America is proud to present the 14th annual All Taxa Biodiversity Inventory Conference this Spring. The conference will be held over three days - the 7th, 8th, and 9th of April, 2011 - in beautiful Gatlinburg, Tennessee at the Glenstone Lodge. Although the main focus of the event is the presentation of scientific information, the conference will also include field trips in the Smokies, nature hiking and photography, silent and live auctions, book signings, and general good times.

The conference is open to all. This year, in light of pressing global events, we have decided to take an in-depth look at how the intricate web of biodiversity is tied to climate. More specifically, we hope to examine the possible effects of global climate change on the complexities of life in the natural world so that we as scientists and citizens may make wiser and more informed decisions regarding the future.

We are thrilled and fortunate to have Dr. Tom Lovejoy as the keynote speaker for the 2011 Conference! Dr. Lovejoy's resume includes: Chief Biodiversity Adviser to the President of the [World Bank](http://www.worldbank.org), Senior Adviser to the President of the [United Nations Foundation](http://www.un.org), and President of the Heinz Center for Science, Economics, and the Environment. He introduced the term *biological diversity* to the scientific community in 1980.



You are invited to join the many supporters and admirers of Great Smoky Mountain National Park in our celebration of the discovery of biological diversity. The Great Smoky Mountains Salamander Ball is a masquerade ball and fundraiser for Discover Life in America. This event is for adults and children of all ages!

- ✓ Live music
- ✓ A Smokies' salamander beauty pageant
- ✓ Hors d'oeuvres and beverages
- ✓ An aquarium scavenger hunt
- ✓ A unique live auction
- ✓ Kid's area with games and crafts

**GREAT SMOKY MOUNTAINS
SALAMANDER BALL**
April 8, 2011
Ripley's Aquarium of the Smokies

For a more detailed schedule, registration forms, or to volunteer, see conference info at www.dlia.org. Please contact Heather MacCulloch, at Discover Life in America, with questions: 865-430-4756 or e-mail at heather@dlia.org.

Notes from the Board Chair- Charles Maynard

Thank you for your interest in and support of Discover Life in America. Another year with DLIA means identifying more new species in the Smokies (and often to science), enabling more students to learn about the vast diversity of life, promoting more opportunities for growth and development as an organization. The new year brings plenty of possibilities and challenges. Discover Life in America is in its fourteenth year of the All-Taxa Biodiversity Inventory in Great Smoky Mountains National Park. Literally hundreds upon hundreds of people have been involved in collecting, identifying, data entering, and supporting the effort. I am always fascinated by the new information, the incredible pictures, the amazing stories of life in this wonderful place we call the Smokies. However, we would have accomplished nothing without dedicated people who search, support, and give. It is critical to learn about all the forms of life in these ancient mountains. Our own existence depends on determining the connections to all other life. E. O. Wilson in his book, *The Creation*, uses the image of the earth as a single organism with humanity as the brain. This idea intrigues me. I certainly want to know about my own body. If I don't know my own body, then how do I know if I am healthy or not? How can I improve my health? The ATBI is taking our pulse, our temperature, our blood pressure, and our vital statistics. The ATBI is NOT an effort to study something that is somehow "out there." We are learning about our *own life*. I hope that you will join us in this exciting effort in 2011.

Data and Technology Update: 2011 Conference Mini-grant Presentations- Chuck Cooper



Left, Chuck Cooper and below some beautiful Crayfish worms



Our ATBI researchers probe into the habits (and habitats) of some very interesting forms of life. Have you ever asked yourself, "How does a crayfish clean the algae and other organisms off its back?" The answer is that it doesn't. Instead, a little-known type of worm called a Branchiobdellidan does this job for it. This is a relationship called symbiosis. It is not parasitism. In this case, it is a mutually beneficial arrangement in which the worms get a supply of food and the crayfish gets a free cleaning. Dr. Stuart R. Gelder and graduate student Bronwyn W. Williams, crayfish worm researchers from the University of Maine and the University of Alberta, respectively, will be among several scientists giving talks at the 2011 ATBI Conference. Topics of other mini-grant presentations and posters will include water mites, soil algae and slime molds, flatworms, plant viruses, bear bacteria, and fish parasites. This past year's group of organisms deserves, and in fact, requires, a closer look. I hope that you will join us in celebrating and experiencing these miniscule, yet important creatures through the excellent conference talks of this year's assemblage of scientific investigators.

What we still need to Study! - Nematodes



What is a nematode? You have met nematodes before without even knowing it: nematodes, also called roundworms, live in terrestrial and aquatic ecosystems in every climate on earth. They belong to a huge group of creatures called pseudocoelomates, which are invertebrate creatures with three body layers and no vascular blood system. Scientists have described 28,000 species, although they think as many as 1,000,000 could exist.

Why should we care about nematodes? Nematodes are an evolutionary success story: from lake to sea, desert to icecap, and lowland to the highest mountain tops, they outnumber every other animal, both when counted as individual organisms and as different species. On the sea floor, 90% of the life researchers find is made up of nematode species! They are also incredibly adaptable to changing environmental conditions, being able to shut down their metabolism during extreme drought, freezing temperatures, or anaerobic conditions to enter a state of cryptobiosis.

A quote from nematode specialist Dr. Thomas Powers emphasizes the importance of understanding these amazing organisms, particularly when climate, ecosystems, and other species within the Smoky Mountains are changing:

"[N]ematodes are routinely characterized as the most diverse and abundant multicellular animal on the planet. Wherever you look there are nematodes. Yet the ubiquity of the organism has not led to widespread understanding of the processes that structure nematode communities. For example, [we have yet to investigate] simple questions such as, "How many species would you expect to find in the spruce-fir forest? How does the nematode community in the spruce-fir forest compare to the hemlock forest? What happens to the nematode community when a major component of the plant community (fir/hemlock) disappears? Given the overall high diversity of other organisms in the park, would we expect to find an equivalent high level of nematode diversity? Do the relic plant species harbor relic nematode species? What role do the insect associated nematodes play in regulating insect populations?"

Sources: "Nematode." Wikipedia. Accessed 20 January 2011. <http://en.wikipedia.org/wiki/Nematode>

CONFERENCE HIGHLIGHTS
Registration Form Enclosed

Day 1:

Great Smoky Mountains Science Colloquium:

Presentation topics include:

- Soil Charcoal and Past Climate
- Canopy and Understory Phenology of Tree species and Implications for shade tolerance
- Genetic diversity of flowering dogwood (*Cornus florida* L.) in the Great Smoky Mountains National Park
- Evaluate Changes in Spruce- Fir Forests to Identify Impacts of Exotic Insect and Climate Change
- Mercury bioaccumulation in park salamanders
- Spatial, temporal, and taxonomic variation in biodiversity in Great Smoky Mountains National Park



Field Trips including:

- Smokies' Birding
- Wildflowers of the Smokies
- Nature Photography with Dave Fitzsimmons
- Salamander Capital of the World
- Nightlife in the Smokies



Day 2:

Opening Sessions include:

- Dr. Tom Peterson –Chief NOAA- Global Climate Change and Biodiversity Update!
- Smokies' ATBI Science Talks –From Ants to Watermites and everything in between!
- Phenology 101
- Biological Expeditions to Ravens Fork
- National ATBI profile
- Water Bears: The Final Chapter



Dave Fitzsimmons Nature Photography- The conference is lucky to host several photography workshops with this world renowned photographer!

Evening Sessions:

- Keynote Address – Dr. Tom Lovejoy
- Salamander Ball



Day 3:

Sessions include:

- International ATBI profile
- Encyclopedia of Life



Field Trips and Workshops include:

- Climate Change in the Smokies
- Hunting Bears (Tardigrades) with a Microscope

Volunteer Coordination- Heather MacCulloch



It's that time again! DLIA Conference TIME!!! The Annual Conference is set to kick off April 7-9, 2011 at the Glenstone Lodge in Gatlinburg. As we gear up to host this huge event, we of course look to you, our volunteers and supporters, for help. We have an array of areas where you can help, both before and during the conference. Prior to the conference, we need help with getting people registered, and obtaining silent and live auction items from the community for our big fundraising event, the Salamander Ball. During the conference, we need help at the registration table, we need "chaperones" for the field trips (someone who is in charge of making sure all attendees of each field trip are accounted for before and after the trip), and much, much, more. We also have our Salamander Ball, which is a separate event happening at the same time as the conference. For this event, we need volunteers to work with the event planner on food, music, ticket sales, invitations, auction, etc. If you are interested in helping with this wonderful, fun, event – conference and ball – please contact either Heather MacCulloch @ 865-430-4756 or heather@dlia.org OR Todd Witcher @ 865-430-4757 or todd@dlia.org. We look forward to working with you and watching the Annual DLIA Conference become a GREAT success!!!



DISCOVER LIFE IN AMERICA'S 14TH ANNUAL ATBI CONFERENCE:
CLIMATE CHANGE AND BIODIVERSITY: APPROACHES, ANALYSIS, AND SYNTHESIS
GREAT SMOKY MOUNTAINS NATIONAL PARK

April 7, 8 and 9, 2011
Glenstone Lodge- 504 Historic Nature Trail-Gatlinburg, TN 37738
1-800-362-9522

Name _____ Affiliation _____
(as they should appear on name badge)

Address _____ City _____ State _____ Zip _____

Phone _____ Email _____

REGISTRATION TYPES	RATES	AMOUNT
*Early Bird Full Conference (all inclusive-Ball, Field Trips and Keynote) <i>early registration</i> (postmarked or faxed before March 17) (\$25 discount for student/teacher/retiree)	\$195	
*Full Conference registration (all inclusive-Ball, Field Trips and Keynote) (\$25 discount for student/teacher/retiree)	\$225	
One-Day <i>early registration</i> (postmarked or faxed before March 17) circle one April 8, April 9	\$95	
One-Day registration circle one April 8, April 9	\$ 110	
Smokies' Science Colloquium (Thursday) only	Free	
Field Trip Only, April 7 – Birding in The Smokies (7 a.m. -Noon)	\$25	
Field Trip Only, April 7 – Nature Photography w/ David Fitzsimmons (8 a.m. –Noon)	\$25	
Field Trip Only, April 7 – Wildflowers of the Smokies (1 p.m. – 4 p.m.)	\$25	
Field Trip Only, April 7 – Salamanders of the Smokies (1 p.m. – 4 p.m.)	\$25	
Field Trip Only, April 7 – Nightlife in the Smokies (7 p.m. – 11 p.m.)	\$25	
Guest for Salamander Ball (April 8 at Ripley's Aquarium)	\$75	
Keynote Address (Dr. Tom Lovejoy-April 8 at Ripley's Aquarium) only	\$25	
TOTALS		
*To reserve a spot on a field trip call or email Heather(heather@dlia.org)		

Check, payable to Discover Life in America enclosed

Credit card payment (Check one) VISA Master Card-Card number _____
Name on card _____ Signature _____ Exp. Date _____

Will pay at the door (early registration rates still apply)
Complete this form for each attendee, and mail it with check or credit card information to:
DLIA, 1316 Cherokee Orchard Road, Gatlinburg, TN 37738
Call or fax it with your credit card information to: **865-430-4756 or fax 865-436-1728**

REFUND POLICY: Registration fees can be refunded on or before March 17, 2011. Thereafter, you may send a substitute participant as long as you send a written request to do so. Both the substitution and cancellation must be requested in writing. NO REFUNDS AFTER MARCH 17, 2011.

Lodging information: Glenstone Lodge-1-800-362-9522- Ask for "DLIA Conference rate "of \$75/night + tax.