



ATBI Quarterly

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



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The Heinz Center
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Notes from the Director

HOW YOU CAN HELP DLIA and THIS GREAT PROJECT!

NEW HAT AND TEE COMBO

Please go out and buy our newest product to support DLIA and the ATBI in the Smokies.

Thanks to the hard work of one of our

long-term board members, Bill Lucey, the Great Smoky Mountains Association and Terry Maddox, DLIA has a new, beautiful product to offer. Purchasing the DLIA hat and T-shirt combo, which can be found at any of the Smokies' gift shops or on-line at

www.smokiesstore.org, helps to support this great project.



USE GOODSEARCH and GOODSHOP

The next time you use a search engine or shop on-line, try Goodsearch and/or GoodShop, choose Discover Life in America as your non-profit to support, it will result in a small donation. Using either of these options adds no additional cost for you. **Click on GoodSearch or GoodShop for browsing and shopping to support DLIA!**



DONATE YOUR TIME OR MONEY!

Another very important way to help us is to make a financial contribution and/or donate your time as a volunteer with DLIA. We need help with all sorts of volunteer jobs, and your financial support helps us continue to help the Park document life.

Todd P. Witcher
Executive Director
865-430-4757



Conference Registration Information Enclosed

DLIA-ATBI Conference 2009- BIGGER AND BETTER THAN EVER!

Please join us for our 13th Annual DLIA-ATBI Conference at the River Terrace Resort and Conference Center in Gatlinburg, December 10, 11 and 12, 2009. We are very excited to have noted scientist Dr. Daniel Simberloff as our keynote speaker. This year's conference will have something for everyone with updates from ATBI's across the country, research presentations, field trips, teacher workshops, photography workshops, a photography contest, silent and live auctions, and much, much, more! Please see enclosed registration information.

HIKE TO MT. LECONTE AND STAY OVERNIGHT AT THE LODGE!

August 15 - 16, 2009

The fee, which raises money for DLIA and the Smokies ATBI, is \$295 per person and includes:

- A guided hike up Alum Cave Bluff Trail with Andrea Price. Andrea is an experienced guide that will give natural history, local human history, plant life information and much more!
- Lunch on the trail
- Evening sunset ATBI program @ Clifftops
- Set of handmade DLIA Notecards
- While lodging with us, dinner and breakfast will also be provided

SPACE IS LIMITED!

Reservations are required!

For more information or to reserve a spot e-mail Heather at

heather@dlia.org or call (865)430-4756

There are shared sleeping arrangements at the Lodge, so bring a friend or you will definitely leave with a new one!

TAXA TALLY

New to Science =
898

New to the Park =
6,350

Becky Nichols
Park Entomologist

DISCOVER LIFE IN AMERICA

Summer 2009

DLIA SUMMER INTERN EXPERIENCE-Alex Kumar

I first learned about DLIA from board member Kevin FitzPatrick who spoke quite highly of this organization. Needless to say, I came to Twin Creeks with very high expectations which were, amazingly, far surpassed. This internship gave me experience in photography, research, and running a non-profit. I was

privileged to work one-on-one with professional photographers, use a state of the art image scanner, as well as a photomicroscope, and live in a place with a myriad of photographic opportunities. I also got individual research experience with top professors and researchers who specialized in everything from slime molds, to snakes, to cad-

disflies. Finally, I experienced the ins and outs of running a non-profit. I learned about fundraising, advertising, and dealing with bureaucracy. However, most importantly, my internship gave me the opportunity to work with some of the nicest and most genuine people I could ever hope to meet. I will leave DLIA not only with great work experience but also with friends and connections that will last a lifetime.



Alex Kumar

Database and Technology Update-Chuck Cooper

“Microorganisms rule the world.” This quote, from one of our 2009 inventory project leaders, speaks volumes about the importance and enthusiasm about this summer’s All Taxa Biodiversity Inventory (ATBI) research supported by Discover Life in America mini-grant funds. We look forward to receiving data from the following 2009 inventory projects.

- Tardigrades - - Dr. Paul Bartels 13,538 specimens taken to date. This is the last year of field work.
- Water Mites - - Dr. Ian Smith 12 sampling areas are planned for 2009, and an August Workshop.
- Leafhoppers - - Dr. C. H. Dietrich Includes leafhoppers, treehoppers, cicadas, spittlebugs, & planthoppers.
- Cliff-dwelling Plants - - Dr. G.L. Walker Inventory of new Park land adjacent to Calderwood Lake.
- Beetles & Moths - - Dr. John Moulton Renewed inventory using the latest trapping methods.
- Moth Flies - - Greg Curler Continued search for fascinating little flies in the family Psychodidae.
- Plant Virus - - Dr. Sead Sabanadzovic Undescribed plant viruses are the subject of this research.
- Stream Microbes - - Dr. S. M. Clinton Search for microorganisms of flowing waters.
- Mushrooms - - Dr. A. Miller Cup, sponge, brain, and some club-like fungi (mushrooms) inventory.

**DLIA Volunteers
Heather MacCulloch**

DLIA Friends and Supporters,

biodiversity days, springtail Saturday, and our various other events that have taken place this summer. They have all been great successes. Please mark your calendars for our forthcoming events, DLIA's 1st Annual LeConte Lodge overnight on Aug. 15, a fern foray on Sept. 5, and our water mite workshop on Sept. 19. I also appreciate everyone's patience as we are making the change to an electronic newsletter. I have had an incredible response from many friends that are making the change to our e-newsletter in lieu of the paper version.

It's hard to believe that another summer is almost gone! I would like to thank everyone who has participated in our fern forays, DLIA's

Finally, the annual ATBI Conference is rapidly approaching! Please take a look at the enclosed materials. We are gearing up for another very successful conference with a wide variety of sessions and workshops for scientists, educators, and friends and volunteers of the ATBI. Please don't hesitate to call me with any questions! Looking forward to seeing you all in the Smokies!

Thysanoptera(Thrips)– Robert Twiggs, DLIA Summer Intern

Thysanoptera, also known as thrips, are small insects That range in size from 0.5 to 14 mm. About half of the 5,000 known species feed on fungus or fungal spores. The other half feed on leaves, flowers, and a small portion is actually predacious.

Thrips use their small size to hide in crevices in plants and feed. This causes a problem for biocontrol of pest thrips because very few biological control species are small enough to reach the thrips and large enough to eat them. Producers often have to resort to limited use of pesticides.

Thrips life cycles are quite short. It can take less than a week for an egg to mature to an adult. The larval stage, lasting anywhere from 2 to 5 days,

is the only stage in which a thrips can acquire a plant virus, and if it does, it can transmit the virus to many plants the rest of its adult life.

Not all thrips are “bad.” There are several predacious thrips that feed on crop-destroying insects. Thrips can be quite abundant in flowers as well, and their bodies, even though they are small, can hold a large number of pollen grains. Botanists usually do not recognize their significance as pollinators. Charles Darwin even complained about thrips hampering his experiments on larger pollinators!

Since the ATBI began we have found 46 new thrips records in the Park. There were no species recorded prior to ATBI.

Robert Twiggs

Facts:

*Other common names for thrips are: thunderflies, thunderbugs, storm flies, and corn lice.

*Thrips first appeared in the fossil record over 250 million years ago.

*Even a single thrips larva can significantly reduce the value of a nectarine.

*Thrips are so small that a large gust of wind can carry them 1,300 miles.

Source: Encyclopedia of Insects: Thysanoptera, Laurence Mound



BREEDLOVE, DENNIS and ASSOCIATES, INC.-Corporate Sponsor Spotlight

Breedlove, Dennis and Associates, Inc. (BDA) is a professional environmental and natural resources consulting firm founded in 1976. Since its inception, BDA has established a reputation for solving the most difficult environmental problems through the application of good science, knowledge of the regulations, and the ability to communicate with regulators and clients. With offices in Winter Park, Tallahassee and Brooksville, Florida, BDA services clients throughout the southeastern United States. DLIA takes this opportunity to recognize and thank one of our corporate sponsors for their continued support of this one of a kind project. Mike Dennis, one of the owners and founders of BDA, is a DLIA board member. We truly appreciate this outstanding company's sponsorship.



CALENDAR OF EVENTS 2009

Mark these events on your calendar and stay tuned for more details and other programs. Check out our website's events listing at <http://www.dlia.org/dlia/calendars/events.shtml> for updates and changes.

Thursday, July 30, 2009: "Smokies' ATBI Update" at Anna Porter Public Library, 6 pomp, Gatlinburg, TN

Monday, June 1 through Monday August 31, 2009: Exhibit "Celebrating Ferns of the Smokies" at Anna Porter Public Library in Gatlinburg, TN.

Saturday, August 8, 2009: DLIA Day at Mast General Store, Knoxville, TN.

Saturday and Sunday, August 15 and 16, 2009: DLIA Mt. LeConte Excursion and Overnight. Call for more information.

Tuesday, September 1, 2009: Exhibit "Documenting Life" opens at the Western North Carolina Nature Center in Asheville, NC and runs through December.

Saturday, September 5, 2009: Fern Foray at Purchase Knob, meet at Big Creek at 9:30 a.m. Call to register.

Saturday, September 19, 2009: Water Mite Workshop, 9 a.m.—3 p.m. Sugarlands and Twin Creeks. Call for more information.

Thursday, October 1, 2009: Exhibit "Documenting Life" opens at Sugarlands' Visitor Center in Gatlinburg, TN and runs through December.

Saturday, October 17, 2009: DLIA Volunteer Appreciation Potluck at Cosby Pavilion, Noon - 3 p.m. Call to register.

Thursday, December 10 through Saturday December, 12, 2009: DLIA/ATBI Conference. Call for more information.

To learn about DLIA's volunteer opportunities and to sign up for activities, contact Heather at 865-430-4756 or Heather@dlia.org.

WISH LIST:

- | | |
|----------------------------------|--|
| 1) Microwave oven for office | 2) Camera lens— Canon Digital model EOS40D |
| 3) Silent and Live auction items | 4) Newer computers for the office |
| 5) Refrigerator for office | 6) TV/DVD Player for exhibits |
| 7) PowerPoint projector | 8) Portable projector screen |

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Discover Life in America

1316 Cherokee Orchard Road

Gatlinburg, TN 37738

865-430-4756

www.dlia.org

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