



# Life Discovered

To share knowledge and improve education, health, agriculture, the economy, and conservation in the world

## Vol. 1, Issue 2: All Wings Considered: The Bird Issue

### Mark your Calendars!

- 6 September Discover Life Science Club: the inaugural meeting. Sandy Creek, Athens, GA 8:30-9:30pm
- 26 September Discover Life and the Museum of the Future: Planning Meeting North Carolina Museum of Natural Sciences Raleigh, NC
- 4 October Discover Life Science Club meeting. Sandy Creek, Athens, 8:30-9:30pm
- 1-3 November *Discover Life* two billion hits Party and Planning meeting. Athens, Georgia. All friends welcome!

Check our [events page](#) ([www.discoverlife.org/events](http://www.discoverlife.org/events)) for details!



Photo by Larry Thompson

Red-legged Honeycreeper  
(*Cyanerpes cyaneus*)



Green-violet Ear (*Colibri thalassinus*)

Photo by Larry Thompson

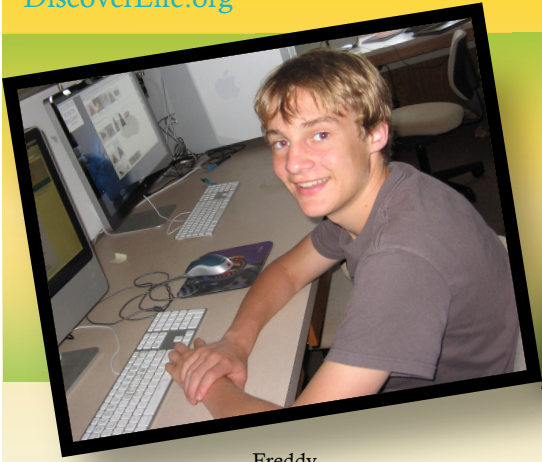
## Invitation to Celebrate, Plan, and Learn

A shindig is in order, and all our friends & contributors are invited!

*Discover Life* has plenty to celebrate. This summer, our Blue Heron moth observation site in Athens, Georgia, surpassed 1,000 species, and *discoverlife.org* will sail past two billion hits in August. It has been a huge year for us, and we want celebrate with all of you.

*Discover Life* will hold an event November 1-3, 2013 in Athens, Georgia. The celebration will include strategic planning and training sessions with the Encyclopedia of Life and many of our other partners. Please join us.

Keep checking [www.discoverlife.org/events](http://www.discoverlife.org/events) for updates about this and other events hosted by *Discover Life*. We look forward to meeting and thanking you in person for making *Discover Life* so successful.



Freddy



Angela



Margo

## Rising Scholars Volunteer at *Discover Life*

Meet Summer Interns Freddy, Angela, and Margo

**A**t *Discover Life*, we are nothing without our volunteers.

This summer, three brilliant, bold, delightfully nerdy, and dedicated high school interns kept *Discover Life* running while most collegians abandoned Athens. Margo, Freddy, and Angela pulled more than their own weight, which is why we decided to profile them in this issue of *Life Discovered*.

To our now former interns, we hope you learned as much from us as we did from you.

### **Freddy, 15, Clarke Central High School, Young Dawgs Program**

Freddy came to *Discover Life* fascinated by science. Bees are his passion.

Why bees? He loves the fact that honey is the only food that does not spoil. He is fascinated with how their anatomy looks close-up. "I think it's cool how queens can choose whether or not to fertilize an egg," he taught me. "I think it is interesting how a fertilized egg becomes a worker bee but an unfertilized becomes a drone."

Conversations with Freddy range from proper beekeeping and ancient Roman military maneuvers to cross-country running.

Freddy has no clear idea of what he wants to study in college, but he alternates between biology, ecology, and economics.

When faced with a summer full of free time, he began to look for a way to learn more about bugs. His father, Jim, director of the University of Georgia's *Young Dawgs* program, recommended an internship. Freddy took a look at the list of opportunities and chose *Discover Life* due to our work with moths.

"I expected *Discover Life* to be made up of a bunch of 'nut jobs' chasing around moths," Freddy shyly admitted. "And it is!"

"Moths are only a small part of *Discover Life*," he learned. "I did not know about how moths fit into overall environmental science. Working with *Discover Life* is a great opportunity to learn a lot about ecology and entomology. You get to work with passionate people that love their job, which is unique in its own way."

This summer Freddy regularly rose at four in the morning, accompanied *Discover Life*'s Sandy Creek site coordinator Tori Staples to the Walker Center, and photographed moths.

"The time is inconvenient," Freddy admitted, "but it is still worth it. I think people that don't contribute to *discoverlife.org* are missing out on so many cool moths that I see every time we are at Sandy Creek. I've never been disappointed, not once."

### Angela, 17, East Jackson Comprehensive High School, Young Scholar

Angela has no interest in becoming a scientist. She wants to be an environmental lobbyist to help bridge the knowledge gap between the science community and the rest of the world, which makes her fit right in at *Discover Life*.

Angela came to us in her second year as a Young Scholar. Last summer she worked with University of Georgia horticulturalists.

During the school year, Angela's interests range from political science to business leadership. She is a member of many school-sponsored clubs, such as student council, National English Honors Society, and the Future Business Leaders of America. She also plays volleyball and the flute.

Angela spent the wee hours of this past summer taking photos of moths with Tori, Freddy, and Margo at the Sandy Creek site.

"It wasn't as bad as I thought it would be," Angela explained. "It was fun to see everything alive around me. It was interesting to see a place as common as Sandy Creek, at the crack of dawn, with all that life around."

When Angela agreed to work at *Discover Life* this summer, she had no idea what to expect.

"I looked at [discoverlife.org](http://discoverlife.org) and saw a bunch of pictures of moths but had no idea what I was getting into," she admitted. "I found that these people work very hard to build a database to provide to the world. Also, moths typically come second to butterflies, but I've learned that moths can be cool, too."

Angela ended her time at *Discover Life* much how it began, with a broad appreciation for science and a passion for discovery.

"It gives you an opportunity to be a part of something big. Even when you take a single photo and upload it you can say, 'I'm a part of *Discover Life*.' It matters to me that I can say that."

### Margo, 17, Clarke Central High School, Young Dawgs Program

On any given day, one could find Margo tap dancing, writing, running, or studying animals.

"At first I hated science," she explained. "Then I took AP Biology. It was all about animals, and I love animals!"

Her mother, a friend of Freddy's father, encouraged Margo to apply to the *Young Dawgs* program for this summer. "I went along with it," she said. "I came ready to find out whatever I was going to find out."

For more about the Young Dawgs program, see <http://www.hr.uga.edu/uga-young-dawgs-program>

For more about the Young Scholars program, see <http://www.yssp.caes.uga.edu/>

At first, the idea of getting up before the sun to take photos of moths by lamplight in the middle of the woods at Sandy Creek was terrible.

"The first time I mothed, I was really excited, but then the fatigue came. It was still exciting to see all the moths," she confessed. "I was tired, but it was still fun!"

Like most *Discover Life* interns, Margo volunteered to get a taste of scientific work.

"I really wanted to do something cool," she explained. "I found out I might like a job in science, but maybe not insects. I like bigger animals. I think that science is a possibility for me."

For Margo, however, nothing can top her first experience mothing at Sandy Creek with Tori, Freddy, and Angela.

"I got to see live, real creatures," she explained. "I saw their real sizes and colors. The very first time I mothed, it was amazing. There were so many of them!"

*Discover Life is always looking for contributors and volunteers. If mothing at Sandy Creek with Tori, and whomever she has in tow, sounds exciting, contact her at [tori@discoverlife.org](mailto:tori@discoverlife.org) to start your own adventure. If you are interested in contributing or helping Discover Life in any capacity, contact Nancy Lowe at [nancy@discoverlife.org](mailto:nancy@discoverlife.org). As you can see, you do not have to want a career in science to discover life.*



Eastern Bluebird (*Sialia sialis*)

Photo by Larry Thompson

# Joint Project, Atlas of Living Australia

This summer, *Discover Life* worked with Gerry Cassis at the University of New South Wales to complete a databasing project called Species Interactions of Australia Database (SIAD) for the Atlas of Living Australia.

The project integrates data from the Australian Plants Names Index, Australian Faunal Directory, American Museum, and other sources to document and analyze species interactions across Australia. The University of New South Wales and University of Georgia host servers to store these data.

Gerry and Pick will next begin to build a database of insect species of Papua New Guinea. One of their goals is to develop a guide to the insect families of the world, of which there are approximately 1,000.

One of the best outcomes of this project is that Discover Life has added species interaction tools to its toolbox of integrated web functions. Not only can we now map species occurrences and graph their seasonality, we can now link species to each other, for example, herbivores or pollinators to their host plants. If you have records of species interactions in your databases, let us know. We can now import your databases, and thanks to the ALA project, we can now display species interactions on our species pages.

## ***Discover Life* Contributes to Article in *American Entomologist***

The latest issue of *American Entomologist* features an article on the outbreak of *Cissusa spadix* mentioned in the last edition of [Life Discovered](http://www.discoverlife.org/news/Discovered) (<http://www.discoverlife.org/news/Discovered> (<http://www.discoverlife.org/news/ newsletter/newsletter201304.pdf>). The article, "Dynamics of an Unprecedented Outbreak of Two Native Moth Species, *Cissusa spadix* and *Phoberia atomaris* (Lepidoptera: Noctuidae), on Oak Trees (*Quercus* spp.) in the Southeastern United States," written by David R. Coyle, John Pickering, Kelly A. Dyer, Fern R. Lehman, Jacqueline E. Mohan, and Kamal J.K. Gandhi, features data collected by *Discover Life* contributors. This is a great example of how *Discover Life* and citizen scientists impact the academic field. Check out the article [here](http://pick18.pick.uga.edu/pa/or/polistes/re/2012coyle/Coyleetal2013AmEnt.pdf) (<http://pick18.pick.uga.edu/pa/or/polistes/re/2012coyle/Coyleetal2013AmEnt.pdf>). Contributors, keep up the great work!

## ***Discover Life.org* has more visitors than ever in July!**

May is typically the biggest month for *Discover Life*, but not this year! In July, 728,000 IP addresses logged on at *DiscoverLife.org*, up from 445,000 in May. From those addresses, there were approximately 88 million hits on the site. By the end of August the site will have had over 2 billion total hits! Without the dedication of our contributors, this milestone would not be possible. *Thank you!*

## ***Discover Life* Celebrates National Moth Week**

In the last full week of July, the world celebrates moths. This year, *Discover Life* helped host events in Georgia and North Carolina to bring attention to the importance of moths in biodiversity and environmental research. At the Sandy Creek Nature Center *Discover Life* observation site at Walker Center, Athens, Georgia, Tori and Pick hosted a series of moth parties to recruit new volunteers for the project at the site.

At Umstead State Park in Raleigh, North Carolina, the *Discover Life* Moth Team gave presentations on using digital photography to monitor moth phenology, distribution, and abundance. At the event, Merrill Lynch contributed over 60,000 moth photographs that he has taken in recent years to Discover Life. Thanks, Merrill!!!

Check out *Discover Life*'s [www.discoverlife.org/events](http://www.discoverlife.org/events) page to keep up with upcoming opportunities to participate.

## ***Discover Life* Science Club to Meet at Sandy Creek**

On September 6, the first monthly meeting of the *Discover Life* Science Club will be held at Sandy Creek Nature Center in Athens, Georgia. The club plans eventually to have chapters in high schools and will encourage hands-on research projects to help build a solid scientific foundation in people of all ages. Freddie and Margo, two of our summer interns, are now recruiting members for a chapter that they are starting at Clarke Central High School. Visit [discoverlife.org](http://discoverlife.org) for upcoming Science Club events and opportunities to be more involved.

## ***Discover Life* and the University of Georgia**

*Discover Life*'s mothing project was featured on the front page of the University of Georgia's weekly *Columns* newspaper: "Night Watchers: *Discover Life* launches moth observatory at Sandy Creek Nature Center," June 17, 2013, Vol. 40, No. 38.

We were also featured on the University of Georgia's home page in an article entitled *About UGA: Moth Project Lights the Way to 'Discover Life'*. This includes a two-minute video about why we moth and Freddie yawns! See this fun at [http://www.uga.edu/about\\_uga/profile/moth-project-lights-the-way-to-discover-life](http://www.uga.edu/about_uga/profile/moth-project-lights-the-way-to-discover-life)

Barred Owl (*Strix varia*)

Photo by Larry Thompson



Photo by John Pickering



Photo by John Pickering

## Larry Thompson, *Discover Life* Bird Team

**T**here is more to life than moths!

*Discover Life* is excited to announce our goal to build and share a complete image database of the world's 9,000 bird species within the next five years.

To help with this, Dr. Larry H. Thompson, a retired biological researcher and major contributor to *discoverlife.org*, is building a team of bird enthusiasts who are handy with cameras and wish to share bird images via *discoverlife.org*. *Discover Life* will use this input along with the Global Biodiversity Information Facility's mapping data, which includes over 100 million bird observations from the Ornithology Lab at Cornell University, to build local guides and annotated checklists to all birds around the world.

Dr. Thompson has contributed images of more than 900 species of birds to our database since 2007. He came to Athens in April seeking Black Poll (*Setophaga striata*), Black and White (*Mniotilta varia*), and Cape May (*Setophaga tigrina*) warblers, all of them migratory like him. While in the

Classic City he dropped by the lab to tell us about his experience as a contributor to *Discover Life*.

"When I began I knew nothing," said Dr. Thompson.

A year ago he retired from the University of California-Davis Cancer Center. For 38 years he researched cell repair at the Lawrence Livermore National Laboratory. It was there that he helped establish the field of DNA Repair and first heard of *Discover Life* from a coworker. Now, he travels the world collecting diagnostic photos of bird species.

"At first I thought of *discoverlife.org* as a free place to archive photos in case my computer crashes," Dr. Thompson admitted. "Now I emphasize its scientific contribution. [*Discover Life*] contributors, by sharing their photos to keep a database, promote bird science."

Larry collects species like others collect trading cards. He has a running list, either in his head or

scribbled on a notepad, of the birds he has yet to capture.

"That was a new species for me," speaking of a Barred Owl he photographed the day of the interview. "I couldn't have asked for a better sighting."

Yet his work goes far beyond collecting. While he has pride in the quality of his photos, the number of species he captures, and the publication of his work, he maintains focus on his core mission: the conservation of endangered bird species.

"We are losing species at a much faster rate than we are uploading," he continued. "If you care about nature, you have to support it. That is my gospel. People need to support the environmental groups that are trying to protect birds and their environment."

Larry contributes half of his income to environmental groups and a substantial amount more to fund his trips and contributions to *discoverlife.org*.

“I travel a lot,” Larry admits, “but I try to pace it so I don’t stay away so long my cat runs off. At this point in my life, I’m very aware that if there’s somewhere I want to go, I need to go.”

Yet, he believes he still has a few good travelling years left in him.

There are many species Larry wants to capture, many countries yet to visit, but he accepts that he may not get to all of them. The hunt is, after all, a vital part of the work.

While Larry’s travels allow for a *Discover Life* album that is full of diversity, we need contributors of all types. The more contributors we get, the less we have to depend on jet setters like Larry for global data.

“If you are an eco-tour guide, you can use *discoverlife.org* to advertise your skills, or you can use the site simply to share nice, original photos,” Larry continued. “There is room for everyone.”

Next he will travel to Panama, then Texas. Sometime soon after, he will go home to California where he enjoys reading newspapers and books, hanging out with other bird enthusiasts, and listening to classical music. That is when he will edit thousands of photos.

“It takes a long time to edit,” he explained. “One day to take the shots, two days to edit, but that’s when I feel closest to the birds.”

That’s when I remember taking the photo; when I learn their name.”

*Peter Alden, Patty Gowaty, and Tom Stephenson are all on board the Discover Life Bird Team, yet we are looking for more people with a passion to photograph and document birds. If you are interested in becoming a part of this endeavor to make birds available to everyone, please contact Larry at*

*[thompson14ster@gmail.com](mailto:thompson14ster@gmail.com) or*

*Discover Life at*

*[dl@discoverlife.org](mailto:dl@discoverlife.org). Visit Larry’s*

*album:*

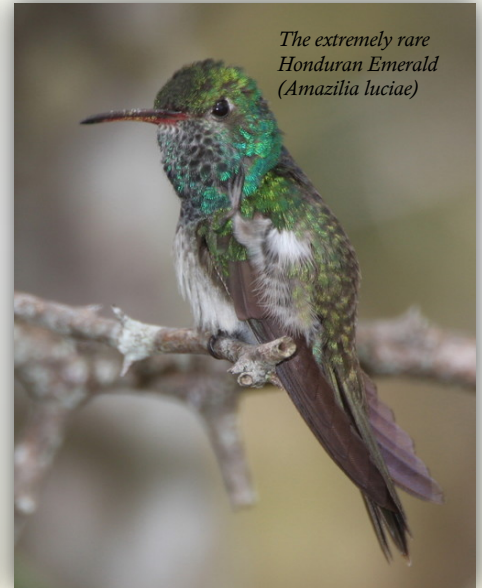
*[www.discoverlife.org/mp/20p?res=320&see=I\\_LHT/0030](http://www.discoverlife.org/mp/20p?res=320&see=I_LHT/0030)*



*Indigo Bunting (Passerina cyanea)*



*American Kestrel (Falco sparverius)*



*The extremely rare Honduran Emerald (Amazilia luciae)*

*All Photos by Larry Thompson*

**For more information go to [www.discoverlife.org](http://www.discoverlife.org)**

**For outreach, education, albums, and general information contact Nancy Lowe at [nancy@discoverlife.org](mailto:nancy@discoverlife.org) or (404) 272-4526**

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**... the newsletter, contact Anthony Sadler, editor, at [adsadler@uga.edu](mailto:adsadler@uga.edu)**