

Life Discovered

Spring issue, April 2014

Two billion hits

This past November 2-3, 2013, Discover Life convened partners from as far afield as the UK, from organizations as diverse as Audubon Society, USGS, various museums and universities, nature centers, and others. Together we celebrated having surpassed two billion hits on our website, which is pretty remarkable considering we just had our first billion hits party two years prior. We also did a lot of strategic planning for Discover Life's NEXT two billion hits. We hope you'll join us for that event, which will likely be happening soon the way things are going. Discover Life is growing exponentially, thanks to the support and participation of our many friends and colleagues.



Travel back in time with us...

The world's natural history museums contain billions of specimens that have been collected for over 200 years. They can help us understand the natural history of the past, study current changes, and predict and manage the future of life on Earth. But we need the help of the public to process them.

To enable this endeavor, we recently created a new tool for crowdsourcing called Time Machine. Currently we are processing images of herbarium specimens from the New York Botanical Garden. When you enter the time machine, you will see an image of a specimen with its label. Because the labels may be difficult to read, we included a magnifying glass feature so that users can see small type and handwriting. Participants in the time machine enjoy the adventure of imagining traveling alongside collectors in their adventures of days gone by. It can be addictive!

If your museum or herbarium would like to share images of your collections to import to this crowd-sourcing tool, please let us know.

Please help us capture data by participating in our new Time Machine. It's fun! Join the adventure! Go to www.discoverlife.org/timemachine ... and please, spread the word!

A lovely letter from a bee hunter in California

We recently received a wonderful letter from Linda Dahlberg, a Discover Life contributor in California, that we'd like to share with you. Linda started collecting bee photographs as part of Bee Hunt, and it led her to discover that the life in her own backyard contains surprises that even hymenopterists didn't know about. Thank you, Linda!

I have uploaded my Xylocopa varipuncta mosaic gynandromorph whose name is only slightly larger than the bee itself! It was so exciting to find this beautiful bee. I was told the photos were unique and I could sell them but none of the scientific photo sites wanted to talk to me because I am not a scientist so too bad, you get them for free.

I just want to take a moment to thank you, Pick, and Discover Life. As you may remember from previous correspondence about counting bees... I work in an office part time. Time is limited. The mornings/weekends spent taking photographs are about all I can manage. Working alone, observing, and sharing the results all have turned out to be my passion.

When I first started uploading pictures to Discover Life I knew very little. Learning more each day, as the saying goes, I understand how little I really do know! When Pick invited me to assign a value to photos which I deemed worthy of inclusion in the database I took it very seriously. Indeed, it gave me a mission: to make sure I contributed

good quality pictures with accurate titles.

I am just now catching up with uploading photos from 2013... I want my DL album to contribute information about where these critters were found. And, in the case of the gynandromorph, share the unusual.

Speaking of unusual, at this point I would like to tell you about a bee which I would dearly love to upload into the database... It was very exciting when she first appeared. Doug Yanega identified her for me and told me the feds were "all abuzz" -never before seen in my garden, nay, in this hemisphere! After an exciting few weeks in which Dr. Michener confirmed the bee's identification, I was all ready to tell the world but the feds asked for the whole story to be embargoed. Then a few months later I saw another one, and they are basically now



established, although I have only seen the two... In case I have piqued your curiosity, I have attached **the subsequent paper we wrote**. Correction: the subsequent paper Martin Hauser and Doug Yanega wrote. They kindly plugged me in because I found the bees. Martin is my "fly guy" and Doug is my "bee guy" - invaluable and generous friends whom I got to know after I started my association with Discover Life. I drove to Doug's museum at UC Riverside to donate the gynandromorph which we subsequently re-donated to Nipam Patel at Cal for his gynandromorph butterfly research.

None of this would have come about had I not been encouraged by Discover Life to keep doing what I so enjoy -- looking for, photographing, and learning about insects.

All of which leads me to one final point. All the photos in my Discover Life album are from our small garden in front of our house. No lawn. All flowers, a couple trees. I have no academic background, just an interest in seeing and learning. Being able to contribute to Discover Life has given me a structure and a discipline I would not otherwise have had.

Thank you so much.

Discover Life Community -- News and Notes

Discover Life is all of us -- staff, partner researchers, museums, nature centers, colleges and universities, individual naturalists... Here are some of the things we've all been up to.

Travels and partnerships

Pick and Tori have been logging a lot of frequent flyer miles lately, building partnerships with other organizations that study large scale ecology and monitor changes in natural history.

Pick serves on the advisory board for Conabio (www.conabio.gob.mx) which is a species monitoring project in Mexico. Conabio monitors a Mesoamerican biological corridor from the Yucatan peninsula to Chiapas. We are hoping to help them integrate data via Discover Life. Recently Pick traveled to meet in Mexico with the folks at Conabio to advance this integration.

The following week, he and Tori traveled to Boulder to meet with NEON, the National Ecological Observatory Network (www.neoninc.org). NEON monitors biotic and abiotic factors at 60 terrestrial sites in 20 different ecoregions, called "domains." Each domain represents a region with similar climate, soil type, vegetation type, and other ecological factors. Currently, technicians at NEON sites monitor a handful of organisms as "sentinel organisms." Like canaries in a coal mine, these sentinel species are meant to be indicators of change. We are hoping to integrate data from NEON with our moth monitoring protocol.



Summer internships

Freddy Geiser, who served as a Discover Life intern last summer, has caught the mothing "bug!" He will return this summer, this time with a friend, Nate Daniels. Freddy and Nate will join Tori Staples, Cameron Prybol, Pick, and others in continuing our Sandy Creek moth monitoring project. Welcome back, Freddy, and welcome to Nate! We hope you enjoy your early morning mothing and we look forward to seeing your moth photos.

Sandy Creek Moth Monitoring

Tori Staples, Cameron Prybol, Freddy Geiser, Jim Geiser, and others have been monitoring moths at Sandy Creek Nature Center since February of 2013. The graph shows the species accumulation curve. We are monitoring on weekends only (thus the gaps each week), but already we have identified 533 species. It's a steep curve, and it's quite possible that the Sandy Creek site will eclipse the 1123 species at the Blue Heron site. If you're in Athens



and would like to join us for either of our moth monitoring projects, please contact Outreach Coordinator Nancy Lowe: email nancy@discoverlife.org.

