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BIOBLITZ SETS NEW SPECIES COUNT RECORD FOR U.S.

During the 24-hour period 3:00 p.m., June 3 to 3:00 p.m., June 4, 2016, a BioBlitz led by UConn biologists produced the highest one-day total species count on record in the United States, and set a new benchmark for BioBlitz events worldwide.

Beginning on Friday, scientists and community participants collected and identified specimens within a five-mile radius of Two Rivers Magnet Middle School in East Hartford, CT. By 3:00 p.m. the following afternoon, scientists tallied a total of 2,765 species – breaking the previous BioBlitz record set in 2001– and documented more than a dozen species in the state for the first time.

Scientists and members of the public joined in the one-day event, which was led by UConn biologists. (Photo courtesy of Sydney Clements)

"The purpose of BioBlitz is to discover as many species as possible in a 24-hour period," says professor of ecology and evolutionary biology David Wagner, who organized the event. "It's a way to get people interested in discovery, and to appreciate the incredible plant and animal wildlife that exists outside their own back door."

The 2016 Connecticut BioBlitz was one of more than 250 BioBlitzes held this year nationwide in honor of the 100th anniversary of the National Park Service, an initiative sponsored by the Service and the National Geographic Society.

But while a majority of events took place at national parks and wild lands, the Connecticut BioBlitz brought together scientists, students, and community members at an urban educational facility.

"By having it in East Hartford, Wagner says, "we could make the educational components of the event available to more people, some of whom rely on public transportation."

Wagner recruited more than 170 scientists from across the United States and Canada for the event, thanks to funding provided by the Richard P. Garmany Fund at the Hartford Foundation for Public Giving.

"These resources made it possible for us to bring in scientists from farther away who could identify more species, and to gather an incredible amount of expertise in a single room," he says.

One of the experts was parasitologist and Board of Trustees Distinguished Professor of Ecology and Evolutionary Biology Janine Caira, who was also one of 35 professors, graduate students, and undergraduate students from UConn at the event.

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BIOBLITZ SETS NEW SPECIES RECORD

Species Count (Total 2,765)

Algae 184
Aquatic and Other Insects 87
Arachnids 111
Beetles 320
Birds 100
Bryophytes 74
Diptera 183
Fish 29
Fungi 120
Hemiptera 87
Herps 17
Hymenoptera 197
Lepidoptera 442
Lichens 36
Mammals 31
Mollusks 25
Parasites, Minor Invertebrate Phyla, and Protozoans 116
Plant Pathogens 49
Vascular Plants 557

"Setting this BioBlitz within the city limits of East Hartford, rather than Connecticut's most pristine wild lands, allowed us to pursue a completely different paradigm that put primacy on education and outreach," he says. "That's what makes our record-setting number so impressive."

A BioBlitz camp hosted 21 middle and high school students, who helped gather specimens and assisted scientists with the species count. The event included educational presentations and exhibits, such as a raptor show, live insect zoo, caterpillar lab, and other hands-on activities for kids.

For Veronica Bueno, a Ph.D. student in Caira's parasitology lab and a first-time BioBlitz participant, the high point was engaging with some of these young scientists-in-training.

"What's nice about working with the kids is that, whatever you ask them to do, even just to hold something for you, it makes them feel like scientists and that they're part of something," says Bueno. "We see a lot of ourselves in these kids."

The 2016 Connecticut BioBlitz was sponsored by the Center for Conservation and Biodiversity and Department of Ecology and Evolutionary Biology in the UConn College of Liberal Arts and Sciences; the Connecticut State Museum of Natural History; Connecticut Science Center; Connecticut Department of Energy and Environmental Protection; and CREC Two Rivers Magnet Middle School. The event was made possible by a grant from the Richard P. Garmany Fund at the Hartford Foundation for Public Giving.

— Adapted from a June 9, 2016 ***UConn Today*** article by Bri Diaz, CLAS

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ALUMNI NOTES

Jessica Budke (Ph.D. 2011) accepted a tenure-track position in the Ecology and Evolutionary Biology Department at the University of Tennessee Knoxville; she will also serve as the Director of the University of Tennessee Herbarium.

Chris Martine (Ph.D. 2006) David Burpee Chair in Plant Genetics and Research at Bucknell University has been promoted to Professor. Chris also service as the Director of the Manning Herbarium at Bucknell.

GRANTS AND AWARDS

Janine Caira, Jane O'Donnell and Bernard Goffinet were awarded a $499,850 NSF grant for their proposal: *"CSBR: Ownership Transfer: Securing the future and accessibility of the Carl W. and Marian E. Rettenmeyer army ant guest collection."*

Gideon Hartman, PI, Anthropology, **Margaret Rubega,** Co-PI, EEB were awarded $45,126 in a UConn Research Excellence Award for their proposal: "*Where Have All the Birds Gone? Using Stable Isotopes to Solve the Mysterious Decline in Migratory Insectivorous Bird Populations."*

Stephen Swallow, PI, Agricultural & Resource Economics, Charles Towe, Co-PI, Agricultural & Resource Economics, **Chris Elphick,** Co-PI, EEB, Timothy Vadas, Co-PI, Civil & Environmental Engineering, Pengfei Liu, Co-PI, Agricultural & Resource Economics were awarded $49,716 in a UConn Research Excellence Award for their proposal: "*Ecosystem Services across Gradients of Human-Driven Degradation: An Interdisciplinary Pursuit Regarding Thresholds, Hysteresis, Restoration, and Economic Benefits."*

Mike Willig, CESE/EEB, Luquillo LTER Program grant received an additional 3 years of funding for his proposal: *"Understanding Change in the Ecosystems of Northeastern Puerto Rico."*

Michael Finiguerra, Assistant Professor in Residence, received the UConn Avery Point Excellence in Teaching Award.

Mark Urban and Jonathan Richardson received the 2016 Presidential Award for the best paper published in *The American Naturalist* during 2015. "*The evolution of foraging rate across local and geographic gradients in predation risk and competition." American Naturalist* 186:E16-E32

Austin Spence, Ph.D. student in Morgan Tingley's lab has been awarded an NSF Graduate Research Fellowship. EEB Ph.D. students Jason Lech (Mike Willig's lab) and Lauren Stanley (Yaowu Yuan's lab) both received Honorable Mentions.

Anna Sjodin, Ph.D. student in Mike Willig's lab has been awarded a Tinker Foundation Field Research Grant.

EEB undergraduate researchers received awards at the end of the Spring 2016 semester: **Cristina Macklem,** Margaret F. Ertman Award; **Nick Arisco,** Connecticut Museum of Natural History Award; **Alison Koontz**, Outstanding Senior in EEB Award.

ALUMNI NOTES

Richard Piacentini (M.S. 1984), Director of the Phillps Conservatory announced that their Center for Sustainable Landscapes was selected by the American Institute of Architects as one of the Top 10 green projects for 2016. https://landscapearchitecturemagazine.org/current-issue/april-2016/

Thomas Mione (Ph.D.1992) was awarded the 2016 Dean's School of Engineering, Science, and Technology's Outstanding Research Award from Central Connecticut State University.

RESEARCH COLLECTIONS NEWS

NSF Grant Supports Biodiversity Research Collection

The "Collections in Support of Biological Research" program at NSF awarded $499,850 to Drs. Caira, O'Donnell and Goffinet for a three year project entitled "Ownership Transfer: Securing the future and accessibility of the Carl W. and Marian E. Rettenmeyer Army Ant Guest Collection."

The motivation for this project comes from the recent donation of the Carl W. and Marian E. Rettenmeyer Army Ant Guest Collection (AAGC) to UConn and its transfer to the Department of Ecology & Evolutionary Biology's state-of-the-art Biodiversity Research Collection Facility (BRCF). This amazing collection is the result of over 50 years of fieldwork by the Rettenmeyers in Central and South America. The AAGC comprises ~2 million specimens of New World army ants, representing 114 species, and 1,200 colonies, as well as ~100,000 specimens of a spectacular diversity of their myrmecophile guests, including hundreds of species of mites, beetles, flies, wasps, springtails, and bristletails. The AAGC also contains ~1,000 type specimens of 200 species. The collection is complemented by extensive and detailed field data and 5,000 Kodachrome slides. With the assistance of an experienced team of UConn programmers, the AAGC will, through this project, realize its full potential as a valuable on-line resource for the study of complex host/symbiont systems. Perhaps most importantly, this project will ensure a secure future for the AAGC.

Over its duration, this project offers a diversity of opportunities for High School, undergraduate, and graduate students to participate in the documentation and preservation of this amazing collection. The project will also involve development of several public exhibits focused on sharing the wonders of the collection more broadly. To follow the activities and discoveries visit us on Facebook, and for activities open to the public visit: antu.uconn.edu