



HEXAPOD HERALD

July 31, 2018

Study Abroad

Ecuador and Galapagos set perfect stage for education



Pictured above are the students during one of the daily hikes through the tropical rainforest in order to observe the amazing insects, plants and animals found in the area. *Photo by Linden Pederson*

The group visited with an indigenous tribe in the Amazon where they learned about traditional medicinal plant use, made chocolate from cacao beans and got in some target practice with a blow dart gun. All the students agreed that this was a learning opportunity they will never forget.

Studying abroad became an exciting reality for 14 UGA undergraduate and graduate students as they spent three weeks in the rainforests and Amazon region of Ecuador and the Galapagos Islands studying and observing tropical insects, plants and animals. Dr. Marianne Shockley taught Tropical Entomology and Research in Entomology in a setting that highlights the environmental and interspecies connectedness and the complexity of tropical ecology.

The students spent several days in the rainforests and cloud forests of Ecuador taking observation hikes to study an array of tropical plants and animals. Each night the students set up a mercury vapor light to examine the biodiversity of insects in the tropics and to collect specimens for personal photographic insect collections.

While in the Galapagos, the students visited the Charles Darwin Research Station and learned about their giant tortoise-breeding center and the entomological research opportunities available. It was a unique opportunity to observe the natural beauty and biodiversity where Charles Darwin's observations led to his theory of evolution.

Students also visited an indigenous tribe in the Amazon region and learned about the coffee making process from planting seedlings to tasting the finished product while in the Ecuadorian rainforest.



Students set up mercury vapor lights in the evening in order to observe the biodiversity of tropical insects and to add to their photogenic insect collections. *Photo by Kelly Tims*

From the desk of S. Kristine Braman ...

Summer means beach trips, cookouts, leisure time with friends and family and we all certainly enjoyed our share of those activities. But, for the entomology department, activity “heats up” on all fronts of the university mission of teaching, research and outreach during this time.

While many of our students are absent from campus for the season, many others work diligently conducting and continuing crucial field and lab research. For many students, summer is a time to get out of the classroom



and get their hands dirty and their brains fired up with research that will impact our communities, the state and the world.

Summer is also a great opportunity to pursue outreach in the community and across the state. We have hosted two weeks of Bug Camp where elementary aged students come to campus

and participate in fun activities that educate them about the insect world. Led by faculty and students, they learn about

different insects, their habitats and ecology. These eager youngsters bounce around campus, armed with nets as they search to capture insects for further study.

We also enjoyed hosting a group of Young Scholars from the Griffin Campus who spent time with us learning about research involving silkworms, mosquitoes, genetics and black flies. They also toured the comprehensive insect collection housed at the Museum of Natural Science. Thank you to our faculty and staff for taking the time to share your knowledge and encourage the interest of budding scientists.

And what would be a summer without a study abroad opportunity! This year students spent three weeks studying tropical entomology in Ecuador and the Galapagos Islands. Not only did the students study insects but they also learned about the indigenous people and their agricultural roots (especially coffee!)

So as summer winds down, we are getting ready for a new school year and looking forward to seeing our current students and meeting our new ones.

It is going to be a great year!



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NEW FACES IN THE DEPARTMENT

Jordan Breedlove joined Brett Blaauw’s Southeastern Peach Entomology Lab earlier this year as a Research Technician III. The Auburn University horticulture graduate assists Blaauw in the research of brown marmorated stink bugs, natural enemies of stink bugs, plum curculio and their natural enemies, San Jose scale, various thrips, sharpshooters, mites, grape root borer, grape berry moth, ambrosia beetle and Japanese weevils all in wine grapes, apples and peaches of Georgia and South Carolina. Jordan previously worked with Auburn University in entomology research specifically with spotted wing drosophila in blueberry and blackberry crops as well as brown marmorated stink bugs in cotton, corn and soybean.

In her “spare” time, Jordan enjoys gardening, canning and preserving, baking, hiking, traveling and spending time with her dog. She also plans to pursue a Masters of Plant Protection and Pest Management here at UGA “to better equip me for my job here with the Department of Entomology.” In the future, Jordan hopes to become more involved within the department by participating in conferences, clubs, Entomological Society and department events.



Jordan Breedlove



Westley Hester

Westley Hester recently joined the UGA Bee Lab team as a Research Technician I. Born and raised in Watkinsville, GA, Westley is a third generation beekeeper who is using his skills to assist with critical bee research and is looking forward to expanding his current knowledge in the field. He graduated from the Warnell School of Forestry and Natural Resources at UGA in December 2014 with a B.S. in Forestry and Natural Resources. In his spare time, Westley enjoys fishing, canoeing and anything else that allows him to be in the great outdoors. He has also accomplished the goal of hiking the entirety of the Appalachian Trail.

Moore chosen as CTL Teaching Fellow



Dr. Patricia Moore, Entomology professor, has been selected as a CTL Senior Teaching Fellow for the 2018-2019 academic year. This appointment includes a grant of \$2000 through the Center for Teaching and Learning to support her teaching program.

The goals of the program are:

To provide senior faculty with an opportunity to focus on undergraduate instruction;

To provide senior faculty with opportunities for the sharing of ideas with other dedicated, highly motivated and innovative teachers from other disciplines who may have similar interests and who face similar teaching challenges;

To provide senior faculty with opportunities for professional and personal renewal;

To provide funding for an instructional project designed to strengthen courses and teaching methods in each participant's academic department; and

To help reinforce an instructional environment that honors and recognizes dedicated teaching scholars; that values a synergistic relationship between teaching, research, and service; and that promotes a learning spirit on a large campus.

Lund Club elects officers, “new” retro t-shirt for sale

The Lund Entomology Club at the University of Georgia recently elected officers for the coming year. Officers are Sam Arsenault, president; Clesson Higashi, vice-president; Nathan Spaulding, treasurer; and Jamal Hunter, secretary.

President Sam Arsenault is pictured wearing the “new” retro t-shirt being sold as a fundraiser for the club. This shirt design is an updated version of a popular shirt sold a few decades ago. **The shirts are \$20** and can be purchased in the department in the Biological Sciences Building or by contacting one of the club officers. Sam—sva@uga.edu; Clesson — clessonh@uga.edu; Nathan — Nathan.Spaulding@uga.edu; Jamal — jhunter7@uga.edu.

The Lund Club is a service and social –oriented student organization composed primarily of graduate students in the Department of Entomology, but membership is also open to undergraduates and anyone else interested in the science of entomology, including faculty and staff.



President Sam Arsenault models new t-shirt for sale through Lund Club members.

Memorial Planned for Adriano Giorgi



We were deeply saddened to learn that Dr. Adriano Giorgi, an alumnus of our department, was killed in Brasil in April. He was a grad student with us *from* 2004 until 2009, studying coccinellid systematics.

At the time of his death, Adriano was a professor at the Universidade Federal do Pará (UFPA) in Brazil.

As a memorial to honor Adriano's life, we reserved a white oak tree along a manicured path at the Georgia State Botanical Gardens. A memorial plaque will be placed at its base. **To contribute** to Adriano's memorial, please visit the "McHugh Lab at UGA" webpage.

Thank you, Joseph McHugh

Morehead visits GA Museum of Natural History

UGA President Jere Morehead recently visited the Georgia Museum of Natural History. Entomology students Linden Pederson and Katelyn Luong work as UGCA interns and were on hand to welcome President Morehead and help answer his questions. Morehead spent time in the museum learning about the vast collection in order to consider the best way to showcase the exhibit to the public. Also pictured is intern John Branstetter.



Kelsey Coffman



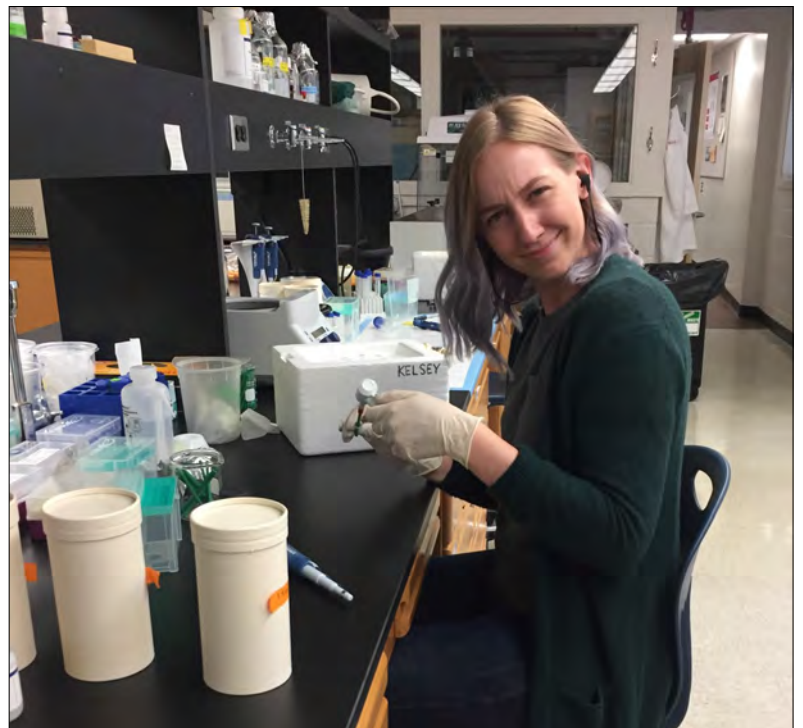
Born and raised in Missouri, I moved to Georgia after receiving a BS in Biology to start graduate school through the UGA Integrated Life Sciences (ILS) program. I rotated through multiple labs in different departments on campus and ultimately decided, albeit with no prior insect knowledge, that entomology was the place for me! In the last 3+ years, I've gained a deep appreciation for this field, the people who work in it, and the insects, of course. I like to think that some people are born bug-crazy... while others

(myself included) need a few intensive graduate entomology courses to see the light.

My dissertation research in the Burke lab focuses on the recurrent evolution of symbiotic associations between viruses and parasitoid wasps. I use a combination of molecular biology and genomic sequencing techniques to study how a novel poxvirus has transitioned from an insect pathogen into a symbiont. Through characterization of this unique example of viral symbiosis, I hope to gain insight on common evolutionary processes that have given rise to this phenomenon so many times. After obtaining my PhD, I plan to remain in academia and continue studying the evolution of insect-microbe interactions until the day I die.

One of my main interests outside of research is the promotion of women and equality in the sciences. With the UGA Women in Science organization, I've had the pleasure to help plan career development and community outreach events, attend a national women leadership summit, as well as mentor a female STEM undergraduate student on navigating her early career path in science.

Some of my other hobbies when not in lab (ha!) include competing on the UGA Linnaean team, playing soccer in a local co-ed league, meeting up with my friends for weekly pub trivia, and taking selfies with my cat, Heidi.



Kelly Murray

Fire ants first inspired Kelly Murray to consider entomology as a career after working with the insects during her time as a UGA Young Scholar on the UGA Tifton campus. She then attended UGA as an Ecology major, but added Entomology as a major after taking General Entomology and interning in the Collection of arthropods at the Georgia Museum of Natural History. After conducting research on a species of caddisfly in Trinidadian streams, “a fascinating taxon,” Kelly knew she wanted to continue studying aquatic entomology.

After spending time surveying the state’s fish and mussel populations as a seasonal technician for the Georgia Department of Natural Resources, Kelly was pleased to return to UGA Entomology to pursue graduate work with Dr. Darold Batzer and Dr. Joe McHugh.

“Our project is an assessment of long-term changes in aquatic invertebrate community structure in the Ogeechee River,” Kelly said of the project made possible by funding from Ogeechee Riverkeeper, as well as data and specimens collected from the Ogeechee River by researchers in the early 1980s.

Through collecting aquatic insects every month for two years, Kelly has found it rewarding to “observe seasonal shifts in taxa, the annual pattern of environmental changes on the river and differences between our cur-



Holding a stick insect while on a trip to collect caddisflies in Cuc Phuong National Park in Vietnam.



Kelly collecting samples of aquatic invertebrates from the Ogeechee River with Dr. Darold Batzer and undergraduate technician Nathan Driggers.

rent collections and those conducted three decades ago.” Once completed, Kelly will continue working with Ogeechee Riverkeeper to communicate our results to the public. Those who depend on the Ogeechee for both recreation and livelihood are very concerned about the effects of recent pollution and increases in human activities on the ecological functioning of the river. “Aquatic Insects of the Ogeechee River—A pictorial guide to common taxa” written by Kelly, Darold Batzer, Joseph McHugh and Luke Roberson is available to the public.

As a graduate student, Kelly has also begun cultivating an interest in caddisfly taxonomy and systematics both within and alongside her Masters research. This has included description and DNA barcoding of Ogeechee Hydroptilidae larvae and collecting and describing adult caddisfly species from Vietnam with Dr. John Morse at Clemson University. After graduation, Kelly plans to find a PhD program where she can study Trichoptera ecology and systematics.

Entomology Outreach



Student outreach is an integral component to the mission of the UGA Entomology department. Faculty and staff take time to educate our youth about the insect world and its many roles in the global environment. Pictured above are Dr. Gaelen Burke and Elmer Gray working with Young Scholars from the Griffin campus. In other photos, graduate student Alan Bosworth speaks to incoming students at Orientation about Entomology (the most popular exhibit!) and works with younger students at summer bug camps.

SNAPSHOTS

*A Proper
Tea
with
Christina
Tomter*



"Tea time is a chance to slow down, pull back and appreciate our surroundings" - Letitia Baldrige

2018 SPRING COMMENCEMENT



Graduates pictured above

Charles Braman, M.S. Entomology
Kate Phillips, B.S.E.S., Entomology
*Nivedha Balaji, B.S.A.B.,
Applied Biotechnology*
*Katie Lou Bennett, B.S.A.B.,
Applied Biotechnology*
*Nathan Likens, B.S.A.B.,
Applied Biotechnology*
*Olivia Barker, B.S.E.S.,
Entomology*
*Dzanina Lisinovic, B.S.A.B.,
Applied Biotechnology*
*Elizabeth Umanah, B.S.A.B.,
Applied Biotechnology*
*Elizabeth Osota, B.S.A.B.,
Applied Biotechnology*

University of Georgia Entomology graduates enjoyed a moment together celebrating their academic accomplishments during the College of Agricultural and Environmental Sciences Spring Convocation Ceremony. Entomology Department Head Dr. Kris Braman and CAES Dean Sam Pardue are pictured with the group.

**Congratulations
Graduates!!**

Hexapod Herald Subscriptions

The Hexapod Herald will be issued in **March, July and November** of each year. We ask that you share this issue with friends and neighbors, and anyone who is interested in UGA Entomology. Due to printing & mailing costs, a limited number of hard copies will be produced & mailed. Electronic subscription is preferred. To subscribe to the Hexapod Herald, contact us



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Or Call 706-542-2816.



Incoming students on campus this summer gathered around graduate student Alan Bosworth to get a close up look at one of our tarantulas and to learn more about the Entomology major at UGA.

Jena Johnson to teach photography at BugShot Alabama workshop

Our own, very talented photographer Jena Johnson will be one of the artists teaching at BugShot Alabama during the August 9-12 workshop this summer. Workshops are held in locations around the world to teach participants the many aspects of beautifully and accurately capturing the insect world with photographs. Jena is the Research Professional I/Lab Manager for Dr. Michael Strand's lab at UGA.

Jena, an entomologist educated at Clemson University, loves photographing insects because it allows her to share the hidden beauty of the insect world with others. Insects have always fascinated her. As a young child, Jena was mesmerized by the crawling motion of woolly bear caterpillars she held in a glass jar. When she first peered through a microscope and saw the magnified textures and colors of insects, she knew she would pursue a career involved with these animals.

The four-day workshop will be based at Solon Dixon Forestry Education Center, a site chosen because the biodiversity in Alabama is amazing. Topics will include macro and microphotography equipment, compo-



sition, lighting and flash, working with live insects, special techniques, field sessions, photo sharing and more.

For more information or to register to attend the workshop, go to www.bugshot.net.



Jena's photographs are featured on the new UGA Entomology Graduate School brochure. Her work can also be viewed at her website, Jena Johnson Photography.



Calendar Reminders

August 13 — Classes begin

August 13-15 — Eating Insects
Athens 2018 Conference

September 3 — Labor Day — UGA
Holiday

September 15 — Insectival!, Bo-
tanical Gardens

November 12-14 — ESA Vancou-
ver



We don't mean to bug you but . . .



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If you have any questions about making a gift to CAES, please contact the Office of External Relations at 706-542-3390 or email external@uga.edu.

*Happy Summer from
Everyone at UGA
Entomology!*



Thanks to Linden Pederson, undergraduate student and resident chalkboard artist, for keeping our students encouraged during finals!