

- Jorge Medina

News fEEB

Ecology and Evolutionary Biology Monthly Newsletter

September 2022 • Volume 5 • Issue 1 Author: Griffin Nicholson

EEB Seminar Series

Sep 19th – Marie Strader, Texas A&M University Biology Department, Organism-environment interactions involved in the response to global change



Sep 26th – EEB Postdocs

OSOS Coming in October

Open Source for Open Science Workshop (OSOS) 2022 will be happening this October 14th - 16th in the ILSB auditorium. OSOS is a free 2–3-day workshop which introduces participants to the use of free, open-source tools for data analysis, statistical analysis, and visualization, particularly via the statistical programming language R. No previous experience with programming or statistics is required or expected.

While OSOS is aimed at new graduate students in the life sciences, the event is open to all, including undergraduates, faculty, staff, etc, as long as they RSVP. Many previous attendees have found the OSOS workshop to be a great introduction to a new world of programming and data analysis, and many others have found it to be a great refresher of already acquired skills.

Dave Bapst is the organizer of the event and is looking for assistance! If you consider yourself semi-experienced and are interested in assisting with the instruction and running of the event, especially if you want to serve as a workshop aide who assists participants, please email him at dwbapst@tamu.edu



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Welcome to our new cohort of EEB PhD Students!

Get to know our amazing group of ten new PhD students!



Adeyinka Adeyemi is from Nigeria and did her undergraduate studies in Ibadan, Nigeria, graduating in 2018. She is supervised by Dr. Daniel Spalink in the Department of Ecology and Conservation Biology. She is interested in morphometrics, phylogenetics, ecology, and biogeography. Her dissertation research will focus on Sedges.

Oluwaseun David Ajileye is from Nigeria and completed his bachelor's degree in Biology from the Federal University of Technology Akure in 2018. He is supervised by Dr. Jessica Light in the Department of Ecology and Conservation Biology. He is particularly interested in Host-Parasite Coevolution, Vector-borne disease, and Genetic Diversity between small mammals and their parasites (tick species) and consequently understanding their relative roles in disease transmission.



Carolina Bertuoul completed her master's degree in Genetics, Conservation, and Evolutionary Biology at the National Institute of Amazonia Research in Brazil. She is advised by Gary Voelker in the Department of Ecology and Conservation Biology, and she is interested in molecular systematics, genome evolution, species diversification, and biogeography. Her research involves the usage of metagenomics data to study the effect of agrichemicals on wildlife birds.

Leonardo Collazos is advised by Dr. Joe Veldman in the Department of Ecology and Conservation Biology. He is from Peru and got his B.S. in Biological Sciences at La Molina National Agrarian University (UNALM) in Lima, Peru. He is currently interested in how disturbances influence tree species of dry forests and the ecological restoration approaches to recover degraded areas of these forests.



Isis Davis is advised by Dr. Lee Fitzgerald in the Department of Ecology and Conservation Biology. Her research interests are testudines hybridization (turtle hybridization) and community dynamics.

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Shannon Harris is advised by Dr. Mariana Mateos. She graduated with a B.S. in Genetics from the University of Georgia and a M.S. in Entomology from the University of Georgia. She got her start as an undergraduate researcher investigating cytoplasmic incompatibility and mate choice in *Drosophila subquinaria* and *D. recens*. For her master's degree, she investigated aggression and its connection to paternal care in *Nicrophorus orbicollis*. Her overall research interests are Evolution, Genetics, and Behavior.



Jackson Linde is from Gilbert, Arizona and is advised by Dr. Hojun Song in the Entomology Department. He loves stick bugs (the focus of his Master's research). His research here at TAMU will be focused on the using large-scale phylogenomics to create a more robust taxonomic framework for katydids. This framework will be used to better understand acoustic signaling evolution. Also, he will study the population genomics of Mormon crickets.

Skai Peterson graduated with a BA in biology from UC Santa Barbara. There he worked in a lab researching insect and invasive plant ecology, with a focus on *Diorhabda* beetles as biocontrol agents. He also conducted field research in California and Australia, studying systems ranging from ant-aphid mutualisms to coral recruitment. Through these experiences he developed a fascination with plant-insect interactions, community ecology, and sustainability. These interests led him to the lab of Dr. Anjel Helms, where he is researching plant-insect-nematode interactions and their implications for agriculture.



Shelbie Weaver completed her bachelor's and master's degrees at the University of Central Oklahoma where she studied the invasive Harris mud crab. She is currently advised by Dr. Mary Wicksten in the Department of Biology. Her research interests include decapod crustaceans, aquatic ecology, invasive species, and invertebrate zoology.

Bhagya Weththasinghe is from Sri Lanka and is advised by Dr. Daniel Spalink in the Department of Ecology and Conservation Biology. She graduated from the University of Colombo, Sri Lanka with a B.Sc. (Honors) in Plant Science. A huge influence in her interest in plant responses and adaptations has stemmed from wanting to understand how trees cope with changing climate and their interactions with biotic and abiotic factors.



Want to submit a story or announcement for the News fEEB?

Let us know by [clicking HERE](#)

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Volunteers Needed for Study

See the following ad from Jordan Salomon!

Hi y'all,

I am reaching out to invite volunteers for my triatomine choice assay experiments! This choice assay's main objective is to understand if triatomines have a preference for certain hosts, and if these preferences are influenced by the parasite *Trypanosoma cruzi* infecting triatomines. The implications of these experiments would provide insight into management techniques to prevent human and canine Chagas disease! The host options are dogs, humans, and chickens, therefore we are inviting you as human to participate and your dog (if you are so lucky to have one). Please consider joining our volunteer group. See the below images to help understand the experiments. Please note all of the barriers preventing contact between hosts and the triatomines (three layers of mesh, and a pitfall trap), there will be no contact between hosts and triatomines.

Please more specifically consider:

Prior to a dog sitting in a box we will collect a blood sample to screen with a rapid research test for Chagas disease exposure. This test is only a research tool, not an approved IFA Canine Chagas test. However, if positive on this research test the dog cannot proceed with our study and we will share information on how to follow up with diagnostic testing at TVMDL.

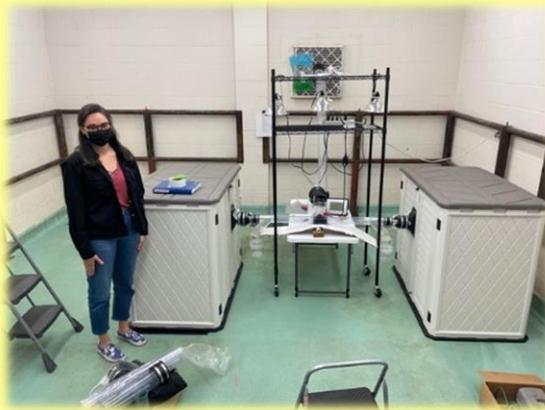
Dogs that use topical insecticide treatments every 30 days are not eligible to participate, but oral flea/tick medications are okay.

All hosts (dogs, chickens, and humans) will be in the same rooms while setting up the experiments and during the experiments. So if there are allergies, fears, or known reactivities towards these hosts please communicate that so we can prepare the room.

Hosts will be sitting in the dark box for up to an hour, therefore pups used to being in a crate or someone who is okay in small/dark spaces is preferred.

Feel free to contact me (jordansalomon@tamu.edu), with any questions/curiosities you may have. If you are interested in volunteering you or your pet please let me know and we can set up a time that I can give you an in person meeting to discuss the procedures in detail and go through the consent form. Thank you for considering!

All of our procedures have been approved by IACUC and IRB.



Dr. Kirk Winemiller, EEB Faculty, Professor and Interim Head in the Department of Ecology and Conservation Biology, is the PI of a new training grant from NSF:

Collaborative Research: Tract 1, IRES Sites: International Research Experience for Students in Freshwater Ecosystems at the Epicenter of a Neotropical Biodiversity, Guiana Shield.

CoPIs from Texas A&M are Dr. Kevin Conway and Dr. Leslie Kelso Winemiller, both in the Department of Ecology and Conservation Biology. The project is a collaboration with Stephen F. Austin State University, with Dr. Carmen Montaña the PI of a companion NSF grant. The project will immerse cohorts of undergraduate students from Texas A&M University and Stephen F. Austin State University in research on Neotropical biodiversity, instruction in ecological principles and methods, and application of research findings to address human impacts on ecosystem services in Guyana, South America.

Through both field and laboratory research, students will collaborate with US and Guyanese scientists to fill knowledge gaps regarding biodiversity and environmental conditions within streams, rivers and floodplain habitats in the Essequibo River Basin. In addition to developing students' technical skills and advancing scientific knowledge, these collaborations will foster professional relationships and contribute to a new generation of internationally engaged scientists.

The Guiana Shield ecoregion in north-eastern South America (extending across countries of Guyana, Brazil, Suriname, French Guiana and Venezuela) is known for exceptional aquatic and terrestrial biodiversity, including high levels of species endemism. Even so, this region remains poorly explored, and early indications are that hundreds of species remain undescribed. In Guyana, gold mining, logging, agriculture expansion, and petroleum extraction are increasing with impacts to freshwater ecosystems and biota. Gold mining is a particularly serious concern because it contaminates rivers and streams with mercury, which enters food webs and ultimately affects human health, especially in rural communities that depend heavily on inland fisheries.

During each of two years, six students will participate in a 5-week summer fieldtrip in Guyana. Students will employ methods for collection of environmental data, surveys of aquatic biota, taxonomy, and ecology of rivers and associated tributaries and wetlands. Field and lab activities will teach students about collaborative international research and allow them to understand how their contributions can influence conservation of freshwater biodiversity and management in support of important ecosystem services provided by aquatic ecosystems in the tropics.



Summer News and Grad Student Updates

Milton Torres-Ceron published a book chapter and journal article over the summer! His advisor and EEB faculty, Masami Fujiwara was the first author on the journal article.

Torres-Ceron, M. et al. 2022. Physical and Chemical Water Quality from a Hybrid System for Wastewater Reclamation for Agricultural Purposes. DOI: [10.1201/9781003277118-7](https://doi.org/10.1201/9781003277118-7)

Fujiwara, M., A. Simpson, M. Torres-Ceron, F. Martinez-Andrade. 2022. Life-History traits and temporal patterns in the incidence of coastal fishes experiencing tropicalization. DOI: [10.1002/ecs2.4188](https://doi.org/10.1002/ecs2.4188)

Amanda Beckman and **Breann Richey** published an invited review with **Gil Rosenthal**:

Beckman, A., B. Richey, G. Rosenthal. 2022. Behavioral responses of wild animals to anthropogenic change: insights from domestication. DOI: [10.1007/s00265-022-03205-6](https://doi.org/10.1007/s00265-022-03205-6)

Audélia Mehti spent the first two weeks of July 2022 at the Max Planck Institute in Konstanz, Germany, for additional training regarding her locust project. With her mentor Gregory Sword, they visited Iain and Einat Couzin's labs and initiated a future collaboration. Audélia was trained on a software that can simultaneously track hundreds of individuals without the need for any tags. She also learnt to perform locust brain dissections and got a glimpse of virtual reality experiments with grasshoppers.



Congratulations to **Vivian Peralta Santana** for winning second place in the entomology Up Goer 5 challenge. A challenge inspired by the XKCD comics, where researchers are challenged by having to explain their research only using the 1,000 most used English words.

Amanda Beckman and **Melanie Florkowski** were both awarded the OGAPS Dissertation Fellowship. **Amanda** was also awarded a Phil Gramm Fellowship.

Visiting Grad Students and Summer REU Students:

- For 5 weeks, Alexis from SIUE (Southern Illinois University of Edwardsville) was the first lab swap among BPRI - the Behavioral Plasticity Research Institute - a NSF-funded institute that aims to bring scientists together to investigate phenotypic plasticity of locusts. She worked on projects in the Song lab and collaborated with the Sword lab as well.
- Eliyashaib James came from Rutgers, New Jersey, to spend the hot Texas Summer in the Song lab. Eli was an REU (Research Experiences for Undergraduates) student and was working on several projects, including exploring whether the gregarious behavior within locusts is an innate response or is induced by the presence of conspecifics.
- The Fitzgerald Lab also hosted an REU student this summer, Gregory Brown from Ohio Northern University. Gregory traveled to New Mexico with EEB PhD student and Fitzgerald Lab member Griffin Nicholson conducting research on the impacts of invasive American Bullfrogs to native Chiricahua Leopard Frogs, a federally threatened species. Gregory also conducted an independent project investigating the efficacy of bullfrog playbacks in attracting bullfrogs to specific locations for bullfrog removal programs.

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