

Post-Doctoral Scholar Position in Community Ecology (Lizards, Insects)

Application review: Begins 1 December 2021, continues until position filled

Position start date: Flexible: Approx. March-May 2022

Position duration: Up to 3 years

Starting salary: \$54,000/year plus benefits, and travel funds to attend conferences.

Position location: Primarily at University of Texas at Arlington, Arlington, TX (Dallas Fort-Worth Metroplex), with approx. 3 months per year conducting field work in Puerto Rico, Jamaica and the Dominican Republic

Summary

The postdoctoral scholar will join a collaborative team of researchers elucidating how *Anolis* lizard niches evolve along dietary, habitat (vegetation structure), and temperature axes. The postdoc will be primarily based at the University of Texas at Arlington, but will collaborate closely with researchers in the laboratories of Martha Muñoz (Yale University) and Luke Mahler (University of Toronto). *Anolis* lizards form diverse communities on the islands of the Greater Antilles in the Caribbean. But why some species both dominate local communities, and are geographically widespread within individual islands, is unclear. As part of a three-year NSF-funded project, the postdoc will characterize species' geographic distributions, local abundances in communities, and niche breadths in three replicate adaptive radiations across Puerto Rico, Jamaica, and the Dominican Republic. In particular, the postdoc will lead the characterization of anoles' community structures and their dietary niches with respect to their insect prey, though will be involved in project activities related to the thermal and vegetation structural niche as well.

Specifically, the postdoc will be responsible for:

- Co-leading field expeditions of 6-10 researchers to Puerto Rico, Jamaica, and the Dominican Republic to:
 - quantify *Anolis* lizard abundance in standardized plot surveys across environments on each island
 - collect insect community samples using sweep nets, pitfall traps, and other methods
 - collect *Anolis* fecal samples for metagenomic barcoding dietary analysis
- Conducting analysis of *Anolis* dietary niches through metagenomic barcoding and sequencing of fecal samples at UTA. Additionally, the post-doc will work with undergraduate team members to:
 - Identify insects and assess total biomass and body size distributions across sites
 - Sanger sequence representative insects from field collections to build sequence-to-specimen library
- Managing resulting data
- Analyzing lizard dietary niche breadth in relation to lizard abundance, environment, and insect availability across sites
- Preparing scientific manuscripts
- Mentoring junior researchers

Additionally, the postdoc will be encouraged to develop independent ideas pertaining to *Anolis* lizards and/or insect community ecology in the system. The postdoc will collaborate closely with affiliated labs, and will be supported to travel to the University of Toronto for several weeks as a visiting scholar to work collaboratively on project activities and to develop skills in phylogenetic comparative analysis with the Mahler Lab.

Initial appointment will be for one year, with the expectation of extension for two additional years contingent on performance.

Requirements:

- PhD in ecology or related field
- Quantitative statistical skills and familiarity with analysis in R

- Excitement to conduct tropical fieldwork in a variety of environments, sometimes with minimal amenities
- Strong communication skills, and ability to work both as part of a team and independently
- Demonstrated capacity to develop, conduct, and complete projects, as evidenced by a publication record

Preferred, but not required skills:

- Experience with tropical field biology
- Experience in entomology and insect identification
- Experience with Illumina sequencing, especially metabarcoding
- Experience with field herpetology

Please provide: (1) a cover letter detailing your interest in the position, your qualifications, your general research interests, and relevant experiences; (2) a CV; (3) names and contact information of three academic references; and (4) 1-2 publications

Please submit these materials as a single pdf to Dr. Luke Frishkoff (luke.frishkoff@uta.edu) with the subject line: "Anolis niche postdoc".