**Employer(s):**
Emory University and Utah State University

**Job title:**
Postdoctoral Research Associate in Quantitative Ecology and Data Science

**Job Description:**
We invite applications for a Postdoctoral Researcher in Quantitative Ecology and Data Science to join an interdisciplinary research team spanning Emory University, Utah State University, and the U.S. Geological Survey. This position offers an exceptional opportunity to lead cutting-edge research at the intersection of spatial ecology, population modeling, and global change ecology.

The successful candidate will spearhead the development of a novel modeling framework to advance our mechanistic understanding of how climate change drives species range shifts and reshapes biodiversity across landscapes. This framework will emphasize how extrinsic environmental drivers (e.g., climate and habitat) interact with species' intrinsic traits (e.g., dispersal and demographic) to alter the population dynamics of species and communities in space and time. This work sits at a critical frontier in ecology: translating the wealth of available biological data into process-oriented, predictive models that explain the eco-evolutionary dynamics of range shifts. Furthermore, insights gathered from this work will be used to inform conservation policy and management in a rapidly changing world.

While the position has a primary focus on North American birds — integrating trait databases and large-scale survey or citizen science datasets — we are equally enthusiastic about candidates with expertise in other vertebrate or invertebrate taxa, including reptiles, amphibians, mammals, fishes, and insects. Candidates with interests in related ecological and epidemiological processes, such as the spatial dynamics of wildlife disease, are also strongly encouraged to apply. We value intellectual flexibility and welcome candidates who will help shape the direction of this research program.

This position will be available for an initial duration of one year with potential for extension for a second and third year depending on performance. The anticipated start

date for this position is between July 1st and the Fall semester. Ideally this position will be hosted in person at Emory University in Atlanta Georgia, but remote work will be considered for exceptional candidates.

**Primary Research Duties:**

The postdoctoral researcher will take intellectual ownership of a research program focused on the spatial population dynamics of wildlife under climate change. Core responsibilities include:

- Building a novel conceptual framework of climate-induced range shifts
- Gathering and integrating datasets of species' intrinsic traits (e.g., behavior, morphology, life history, dispersal, genetics)
- Designing and implementing integrated spatial population models that synthesize large-scale observational and citizen science data with species-level trait and demographic databases.
- Developing model frameworks flexible enough to accommodate multiple taxonomic groups and ecological processes, including but not limited to range dynamics, spatial epidemiology, and biodiversity change.
- Publishing findings in high-impact peer-reviewed journals and communicating results to both scientific and practitioner audiences.

This position is embedded in a vibrant, interdisciplinary collaborative network. The researcher will:

- Join an interdisciplinary team with complementary expertise in quantitative ecology, conservation biology, and macroecology.
- Engage with a broader network of biologists, quantitative modelers, and conservation practitioners within the United States and internationally.
- Contribute to collaborative grant writing, project meetings, and joint publications with team members and external partners.
- Participate in and help cultivate a collegial, inclusive, and scientifically rigorous research culture.

We are committed to the long-term success and career development of our postdoctoral researchers. The position offers substantive support for:

- Attending and presenting at national and international scientific conferences and specialist workshops.
- Gaining experience in graduate student supervision and mentorship.

- Teaching opportunities at the undergraduate or graduate level, commensurate with the candidate's interests and career goals.
- Building an independent research profile, with encouragement to develop collaborative projects and pursue independent funding.
- Access to professional development resources and training available through both Emory University and Utah State University.

**Principal investigators:**

- Dr. J. Alex Baecher, Emory University Department of Environmental Science
- Dr. T.J. Clark-Wolf, Utah State University, Department of Wildland Resources
- Dr. Erica Stuber, U.S. Geological Survey UT Cooperative Fish and Wildlife Research Unit

**To Apply:**

**Submit all application materials here: https://careers-usu.icims.com/jobs/10101/job**

**Please include:**

1. A cover letter (no more than two pages) describing your research background, specific interest in this position, how your expertise aligns with the role, and how this position may aid in your own professional development
2. A current curriculum vitae
3. Contact information for three professional references (letters may be requested at a later stage).

**Minimum Qualifications:**

- A Ph.D. in ecology, evolutionary biology, quantitative biology, biostatistics, or a closely related field, completed prior to the start date.
- Demonstrated proficiency in statistical or mathematical modeling, particularly methods relevant to population dynamics, species distribution modeling, or spatial ecology.
- Strong programming skills in R, Python, or equivalent languages, with experience in handling and analyzing large ecological datasets.
- A track record of peer-reviewed publication commensurate with career stage.
- Excellent written and verbal communication skills in English.

- The ability to work both independently and collaboratively within a multidisciplinary team spanning academia, government agency, and NGOs.

**Preferred Qualifications:**

- Experience with integrated population models, hierarchical Bayesian models, or state-space models.
- Familiarity with citizen science or large-scale biodiversity databases (e.g., eBird, GBIF, Breeding Bird Survey, Bioshifts, BioTIME).
- Experience with species-level trait or demographic databases (e.g., AVONET, Comadre, AmphiBIO, PanTHERIA).
- Knowledge of climate-change ecology, macroecology, or conservation biology.
- Experience with high-performance computing environments.

**Salary:**

This is a full-time, Postdoctoral Research position with salary depending on experience (~$62,000-65,000 per year), and includes full benefits (13 paid holidays, 22 days of paid leave and 12 days of sick leave per year, competitive health benefits packages, and a fully-vested 14.2% employer retirement contribution). This position will be available for an initial duration of one year with potential for extension for a second and third year depending on performance.

**Application Deadline:**

04/31/2026 at midnight

Emory is an equal opportunity employer, and qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, protected veteran status or other characteristics protected by state or federal law.

For informal inquiries, please contact Drs. J. Alex Baecher (jbaecher@gmail.com) and T.J. Clark-Wolf (t.j.clark-wolf@usu.edu).