

From: Mariah Meek
Subject: Postdoctoral opportunity in conservation biology and population genomics

The Meek Lab at Michigan State University is looking for a highly motivated postdoctoral scholar to study population and conservation genomics in fish and other species. The lab uses field studies and next-generation sequencing to address fundamental ecological questions that are directly relevant to the conservation and management of threatened species. We study biodiversity at the level of the genome, transcriptome, and epigenome. Some major questions being addressed in the lab are:

1. What is the genomic basis for thermal tolerance and local adaptation? We aim to understand if there are differences in gene expression patterns among fish from populations with different thermal histories, and if so, what are the regions of the genome associated with differences in phenotypic response to thermal stress. The information gained from this study will be invaluable for understanding the molecular basis for local adaptation and its relation to climate change resiliency planning, and in designing management actions that sustain imperiled species into the future.

2. How do human activities affect genetic diversity and local adaptation? We are interested in understanding how anthropogenic forces, such as hatchery propagation, fishery stocking, and habitat alteration, are influencing diversity patterns and fitness in the wild. This understanding will allow us to better design propagation techniques and target habitat restoration activities to protect the genetic diversity needed for populations to persist into the future.

3. What controls complex life history patterns? Salmonids are an excellent model for looking at the molecular control of life history, due to their variation in migration timing and propensity to migrate. We are integrating across genetic, transcriptomic, and epigenetic pathways in steelhead and Chinook salmon to understand the molecular basis for this life history diversity.

Please look at our website (meeklab.com) to get a more complete picture of the work we do. The post-doc will have the opportunity to work on one or several of the ongoing projects in the lab, based on interest and fit. There is also potential for developing new projects, based on the candidate's interests. We are a very interactive lab and are looking for an excellent scientist, who cares about conservation, and is a good collaborator. The Meek lab strives to be a safe space and support diversity in STEM.

The initial hire is for one year with an additional year of funding contingent upon satisfactory progress. The position will be based in the Department of Integrative Biology at Michigan State University. Start date is negotiable and position is open until filled.

Qualifications

Applicants should have a PhD in ecology, evolution, genetics, bioinformatics, or related fields. We are looking for a creative and talented scientist with a good publication record and excellent organizational and communication skills. We are especially interested in candidates with a strong computational background and previous experience with next-generation sequencing data analysis. Experience working in the Unix environment is essential and familiarity with one or several programming languages is highly desirable.

How to apply

Interested candidates should apply through the MSU Applicant Page at https://urldefense.proofpoint.com/v2/url?u=http-3A__careers.msu.edu_cw_en-2Dus_job_496482_research-2Dassociatefixed-2Dterm&d=DwIFaQ&c=Ngd-ta5yRysqeUsEDgxhcqsYYY1Xs5ogLxWPA_2Wlc4&r=e2OJ1azRFn8ihJzb2HxZT0AqoiqLvxfeeTyN59ZLoI&m=YnFz1jkIazDjCNSTgjsUB5-wwzQpWfWRyJqg9QX4n9E&s=N2PZ5h27PZE9XtJN1OF1MkWFZEIloYwjIs5-J50qgyM&e= . Please feel free to email (mhmeek@msu.edu) before applying to ask questions, putting "Postdoctoral opportunity" in the subject line. Required application material:

- 1) Brief cover letter describing research interests and motivation
- 2) CV
- 3) Names and email addresses for 3 references
- 4) 2-3 published papers or manuscripts in preparation