

Graduate Research Opportunities in Quantitative Fisheries Assessment and Management

A cohort of at least three MS / PhD students is being recruited to work with fisheries science faculty affiliated with the Quantitative Fisheries Center (QFC), Department of Fisheries and Wildlife (FW), or Department of Integrative Biology (IBIO) on research projects related to Great Lakes fisheries management. Target start date for students is fall 2022 but we would consider accommodating students interested in starting spring or summer 2022. These fully funded positions, up to 2.5 (MS) or 5 (PhD) years, will provide students with diverse opportunities to conduct research on a variety of topics focused on improving the management and assessment of fish populations. During the first year, students in the cohort will be funded centrally by the QFC and will assist with ongoing QFC research, consulting, and education projects, while working with QFC, FW, or IBIO fisheries science faculty to identify a major professor and thesis/dissertation research project linked to the QFC mission of improving fisheries management in the Great Lakes basin.

QFC, FW, and IBIO fisheries faculty have expertise in a variety of areas, including fish population dynamics, stock assessment, management strategy evaluation, decision analysis for natural resources management, statistics and mathematical modeling, quantitative ecology, aquatic toxicology, aquatic food web ecology, genetics, and landscape limnology. Projects supported by the QFC must be relevant to state/provincial/tribal fishery management agencies in the Great Lakes basin. The aim is to recruit multiple students who will matriculate through the program as a cohort and benefit from interactions with each other.

Responsibilities: Students will develop an MS/PhD research project related to the QFC mission and funded programs, but with substantial flexibility for innovation, take relevant course work, and satisfy other requirements of graduate studies. Research assistant duties will include support on a range of consulting, research, and online course development projects. Examples of ongoing QFC projects include development of assessment and simulation models for Lake Huron prey fishes, evaluation of assessment models used for lake trout and lake whitefish, technical support for a stakeholder panel evaluating and recommending fishery management strategies for percids in Lake Erie, application of otolith microchemistry methods to evaluate Chinook salmon movements, assistance in implementing and updating model-based data summaries used to manage the Lake Michigan salmonine community, and assistance in development of course materials for online non-credit classes in quantitative fisheries for working professionals. Other ongoing projects by QFC, FW, and IBIO fisheries science faculty can be found on respective webpages. RA duties will include data analysis and modeling, potential laboratory work for sample preparation, report/publication/thesis writing, giving oral presentations, and interacting with agency and academic partners.

Stipend and Benefits: The starting monthly stipend will be \$2,150 (MS) or \$2,250 (PhD), for a 12-month position. Work for paid duties is expected to be 20 hours per week, but students typically work at least an additional 20 hours per week on course work, thesis/dissertation research, and other educational tasks.

Qualifications: Successful applicants will have background/aptitude/interest in population dynamics, mathematical modeling of fish populations and communities, statistics, and / or decision analysis. Positions require the ability to communicate in writing and verbally with a variety of agencies and collaborators and a bachelor's or master's degree in related field with competitive GPA and GRE scores.

Applying: To express interest please send a copy of your CV or resume, a letter of interest describing your qualifications for the position and how it fits your career goals, names and contacts of at least three references, and transcripts and GRE test reports (unofficial copies are ok initially) to kfrobins@msu.edu. [Note formal application will eventually require these to be sent directly from the institutions to MSU via the application portal]. We will begin reviewing applications in November 2021 with an objective of identifying students for offers by early January 2022. Potential advisors include MSU faculty members Drs. Travis Brenden, Kelly Robinson, Jim Bence, Cheryl Murphy, John Robinson, Brian Roth, Chris Vandergoot, and Elise Zipkin, as well as several agency or university affiliates. For information about the Quantitative Fisheries Center, including list of agency and university affiliates, please see <https://www.canr.msu.edu/qfc/>