

2008 NYGLPF Small Grants

Each year, the New York DEC uses its share of the Great Lakes Protection funds to offer a series of small grants to address Great Lakes-related issues. The call for these projects is usually issued in the late summer or fall. Proposals are limited to under \$10,000 and the decision on the successful recipients is reached after review by the Great Lakes Research Consortium and Great Lakes Basin Advisory Council. Successful Proposals for 2007-2008 were:

Tracing the invasion pathway of *Hemimysis anomala* into Lake Ontario and beyond

Principal Investigator: Amy B. Welsh, Department of Biological Sciences, State University of New York at Oswego, Oswego, NY 13126

Abstract *Hemimysis anomala* (Crustacea: Mysidacea) is a recent invader to the Great Lakes and little is known about its invasion pathway throughout the Great Lakes. A recent study used genetics to track the spread of *H. anomala* throughout the Ponto-Caspian region, as well as a population in Lake Michigan. Conclusions from that study showed that the Lake Michigan population derived from the Danube. However, preliminary studies conducted here at SUNY-Oswego indicate that the Lake Ontario population does not originate from the Danube. We are proposing to continue this work to confirm the origin of *H. anomala* in Lake Ontario and determine whether multiple introductions have occurred throughout the Great Lakes. We will be collaborating with the U.S. Geological Survey and the Department of Fisheries and Oceans Canada to obtain samples from areas throughout the Great Lakes. Completion of this project will help further the goal of the NYGLPF to assess the impacts of likely changes in the Great Lakes environment, specifically future impacts of invasive species.

Characterization of subsistence fishing in Monroe County

Principal Investigator: Katrina Smith Korfmacher, PhD, Community Outreach Coordinator, Research Assistant Professor, Environmental Health Sciences Center
601 Elmwood Ave., Box EHSC, University of Rochester Medical Center
Rochester, NY 14642

Abstract: This collaborative pilot project will conduct an initial characterization of the consumption of fish taken from Lake Ontario within Monroe County (primarily within the Rochester Embayment). University of Rochester (UR) faculty and staff will conduct a literature review of similar efforts in other communities, develop an Advisory Council to inform the research including representatives of government, community, and academic institutions, and develop, pilot test, and review survey protocols. UR will hire and supervise two interns - one graduate student and one community member - to participate in field work (angler surveys) during the summer

months. Results will be analyzed to determine the demographic, cultural, and geographic patterns of subsistence fishing in Monroe County. Based on the findings, the researchers will recommend directions for further research and/or educational efforts.

Aquatic Invasions in the Great Lakes: Responding to Pathogens

Principal Investigator: Mark Bain, Assoc. Prof. Aquatic Systems Ecology, Natural Resources, Cornell University, Ithaca, NY 14853

Abstract: The Great Lakes have been changed forever by species invasions, and many started with commercial ships. Introduced pathogens capable of infecting aquatic species and humans have recently grabbed public attention from the more familiar invaders like fish and mussels. Viral Hemorrhagic Septicemia (VHS) has been killing fish in several Great Lakes locations, is thought to have been introduced by ballast water in transport ships, and is now being spread by recreational boaters and fisherman (live fish bait). Pathogen invaders are poorly understood, alarming to the public, and provoking a disorganized and ineffective government policy response. This proposed study will collect fish and water samples in New York's Great Lakes to detecting VHS, analyze associations of VHS with different shore and harbor settings, and demonstrate practical surveillance methods for pathogens. These study tasks are critical contributions to an emerging regional collaboration to solve the problem of ship-mediated invasive species in the Great Lakes with natural resources agencies, the maritime industry, and the expected regulatory authorities.

Riverwatch Water Quality Monitoring and Outreach Internship

Principal Investigator: Robbyn Drake, Buffalo Niagara Riverkeeper, 1250 Niagara St, Buffalo, NY 14213

Abstract: The Buffalo Niagara RIVERKEEPER is seeking funding for a graduate internship to support two key programs. In partnership with SUNY and Rochester Institute of Technology, the internship will advance the Riverwatch program by assisting in the collection of water quality monitoring data and in the development of new communication tools for expressing research results to key stakeholders about the condition of the rivers. Secondly, the internship will address an important environmental justice issue facing the Buffalo and Niagara watersheds in the Citizen Action program. The intern will develop and execute a survey to gather baseline data about the consumption of sick and contaminated fish by recreational anglers in minority and underrepresented communities in western and southern neighborhoods of the City of Buffalo. Survey results will be used to develop written guidance to inform RIVERKEEPER and partners as to knowledge gaps and misinformation held by anglers and to improve messaging to this user group. Both projects directly align with the data collection and public communication objectives of the Great Lakes Protection Fund and implementation of the Buffalo River Remedial Action Plan.