



Great Lakes Research Consortium

Research, Education and Outreach on behalf of our Great Lakes

2016 Program Activity Summary



From the director...Dr. Greg Boyer

The Great Lakes Research Consortium is an organization of eighteen colleges and universities in New York, with nine affiliate campuses in Ontario, dedicated to collaborative research and education on the Great Lakes. We are pleased that in partnership with NYSDEC we were able to increase our small grant program allocation to \$25,000 per proposal to encourage additional campus collaboration. In 2017 we are also looking forward to working with member campuses to enhance our buoy program, and investigate the need for convening another mentoring workshop for new Great Lake faculty.

New York Great Lakes Protection Fund Small Grants

Analysis of a Large Multi-Lake Dataset to Advance Understanding and Management of Harmful Algal Blooms in New York State

PIs: David A. Matthews, Upstate Freshwater Institute and Kimberly L. Schulz, SUNY-ESF
Collaborators: Scott A. Kishbaugh (NYSDEC), Nancy J. Mueller (NYS Federation of Lake Associations, Inc.)

Harmful algal blooms (HABs) are an increasing threat to water quality of both small and large lakes and the health of lake users within the Great Lakes Basin. The Citizens Statewide Lake Assessment Program (CSLAP) has collected limnological data on more than 100 lakes a year since 2000, and has included HAB sampling since 2011. This proposal will utilize the CSLAP data, supplemented with additional available data, to identify factors associated with HABs across these diverse systems.



Assessing causes and impacts of thiamine deficiency in salmonid fish from Lake Ontario

PI: Jacques Rinchar, Department of Environmental Science and Biology, SUNY Brockport
Collaborators: Brian Lantry (USGS), Steve LaPan (NYSDEC)

Thiamine deficiency leading to early mortality syndrome is a reproductive disorder affecting salmonid species in the Great Lakes. The objective of this project is to evaluate how diets of salmonids in Lake Ontario can affect thiamine concentration in their eggs that could potentially lead to early mortality syndrome.

NY Great Lakes Protection Fund Small Grants - continued

*Testing a metabarcoding approach to
food web analysis: application to mysid
diets in Lake Ontario*

PI: Matthew Hare, Department of Natural
Resources, Cornell University

Collaborator: Lars Rudstam (Cornell
University)

Mysids are one of the major zooplankton
predators in Lake Ontario and other
Laurentian Great Lakes and consistently
identified as a key component in food web
models of these lakes. This project will test
multiple assays to determine methods
yielding the most comprehensive and
accurate data on mysid diet. Testing will
include experimental mixtures of common
mysid diet taxa and gut contents from
experimental feeding trials.

GLRC at the Great NYS Fair



In 2016 the GLRC again partnered with
New York Sea Grant and the Great New
York State Fair to bring the buoy and ROV
program to fair attendees. Along with clean
and safe boating information, the GLRC
buoy was in the reflecting pool with live
24/7 weather being broadcast from the
fair. A live network connection/monitor
was also available for fair goers to locate
buoys near their favorite boating location.

GLRC Internship Program

The Great Lakes Research Consortium offers
an internship program that attempts to
match students with researchers looking for
student help. Recent GLRC interns are:

Evie Brahmstedt, St. Lawrence University,
with Michael Twiss, Clarkson University.
Stacy Furgal, SUNY ESF, with Brian Lantry,
USGS-Oswego and Gordon Patterson,
Michigan Technical University.

GLRC Student Travel Awards

GLRC offers travel support to students
from member campuses to travel to, and
present at local and national scientific
conferences. 2016 recipients include:

Matthew Futia, SUNY Brockport
Dominique Derminio, SUNY ESF

GLRC Student Research Projects

In 2013, the GLRC initiated a very small
grants program to facilitate student research
at its member institutions. Grants are made
in the amount of up to \$1,000 and are
intended to help defray research expenses
that the student may otherwise need to pay
for out of personal funds. The 2015
recipients are:

Dominique Derminio, SUNY ESF:
*Identification of harmful algal blooms across
New York State*

Matthew Futia, SUNY Brockport:
*Causes and Impacts of Thiamine Deficiency
in Lake Ontario Salmonid Fish*

Kinsey Irvin, SUNY Brockport:
*Use of fatty acid signatures to explore the
river continuum concept*



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