Amy R. Kireta
PhD Candidate

Climate Change Institute
University of Maine
Sawyer Environmental Center
Orono, ME 04469

Cell: 218.235.3205
email: amykireta@yahoo.com

Education

M.S. Biology, Bowling Green State University, 2001
B.A. Psychology, University of Akron, 1996

Experience

2004-2013, **Graduat Assistant, PhD Candidate**, Climate Change Institute, University of Maine. Currently attending the University of Maine through a National Science Foundation Integrative Graduate Research Education and Traineeship (IGERT) assistantship to investigate adaptation to abrupt climate change in the Great Lakes.

2004-2013, **Research Fellow**, Natural Resources Research Institute-Center for Water and the Environment-Ely Field Station.
Duties included: Coordinated efforts to enhance outreach and education through the Ely Field Station, performed diatom taxonomy and analysis for paleolimnological analysis of local lakes as part of the Kawishiwi Water Protection Project, and supervised a graduate student on a paleolimnological assessment of Lake Supeior. Experience sampling aboard the research vessels the R/V Lake Guardian collecting phytoplankton and assisting in chlorophyll analysis as part of the Great Lakes National Program Office (GLNPO) Great Lakes Monitoring Program and the R/V Blue Heron collecting sediment cores for a Minnesota Sea Grant project to determine anthropogenic effects on historical Lake Superior water quality. Co-leading the paleolimnological research project on Lake Superior by coordinating landscape characterizations, laboratory and diatom analyses, and analyzing results. Developed diatom bioindicators of environmental condition in large U.S. rivers as part of the Environmental Monitoring and Assessment Program-Great Rivers Ecosystem (EMAP-GRE) project. EMAP-GRE duties included enumerating and archiving planktonic diatom images, maintaining taxonomic consistency among algal subcomponents, testing and development of phytoplankton and periphyton bioindicators of integrated human disturbance, and manuscript preparation. Acted as a co-principal investigator on the Great Lakes Environmental indicator project (GLEI), including quality assurance of diatom taxa names, analyzing species and environmental variables using multivariate analyses, developing diatom-based inference models, and preparing manuscripts. Currently working on a GLEI taxa book to describe various diatom species found in the near-shore Great Lakes. Led community outreach efforts including developing a local Science, Technology, Engineering, and Mathematics (STEM) Education Coalition workshop for fifth through seventh grade girls, introducing elementary classrooms to the microscopic world and food chains, and hosting laboratory open houses for community members to bring in water samples to identify and image organisms. Presented at numerous professional conferences.

9/01-2004, **Junior Scientist**, Natural Resources Research Institute-Center for Water and the Environment-Ely Field Station
Worked on diatom/water quality subproject of the Great Lakes Environmental Indicator (GLEI) project on the upper Great Lakes.

Duties Include: Led field work effort from Ely, coordinating all travel and sampling; acted as a liaison between researchers in Ely and Duluth and diatomists at John Carroll University in Cleveland; trained interns in field and laboratory techniques, assisted in determining which sites would be included in project; used Arcview software to print maps for both diatom field groups; analyzed diatom collections with light microscopy and digital imaging; communicated with EPA officials about this and other projects; communicated with the public about the project; operated two four stroke outboard motors as well as canoe; worked with various field and laboratory equipment measuring water quality and processing diatoms.

6/99-8/01 **Graduate Assistant**, Bowling Green State University
Emphasis in Aquatic Ecology. Goal of thesis was to determine the effects of the invasive molluscivorous fish species *Neogobius melanostomus* (round goby) in the western basin of Lake Erie on dreissenid mussels (zebra [Dreissena polymorpha], and quagga [Dreissena bugensis]) and subsequently on the periphyton community.

Duties include: Intense summer fieldwork setting up and maintaining large mesocosms; routine collection and processing of samples, analysis of algal samples through use of microscopy and imaging; interpretation of results using statistical software and literature searches; measuring and recording data from various field instruments; operating an outboard motor

8/99-6/01 **Graduate Teaching Assistant**, Bowling Green State University
Independently taught laboratory sections of Introduction to Ecology.

Duties include: Helped pilot and refine a new lab manual for non-majors in ecology; created new consumption project to introduce non-biology majors to sustainability and science methodology by documenting individual impact on the environment and indentifying alternate or modified habits; helped students develop and perform their own research projects.

Honors

2007 “Star Performer” outstanding researcher award; awarded to acknowledge exemplary work in research at the University of Minnesota.
Graduated Magna Cum Laude from the University of Akron
Dean's list each semester as an undergraduate
Golden Key National Honor Society
Phi Sigma Alpha honors fraternity

Grants

Kireta, A.R., Reavie, E.D., Brown, T.N. A Whole-Lake Assessment of Long-Term Human Impacts in Lake Superior. Minnesota Sea Grant 2010-2012. ~$100,000

Publications

Chraïbi, V.L.S., Kireta, A.R., Reavie, E.D., Cai, M., Brown, T.N. (*in review*). A paleololimnological assessment of human impacts on Lake Superior. Journal of Great Lakes Research

Kireta, A.R., Reavie, E.D., Sgro, G.V., Angradi, T.R., Bolgrien, D.W., Hill, B. H., Jicha, T.M. (2012). Assessing the condition of the Missouri, Ohio, and Upper Mississippi rivers (USA) using diatom-based indicators. *Hydrobiologia* 691(1): 171-188. http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10750-012-1067-3

Kireta, A.R., Reavie, E.D., Sgro, G.V., Angradi, T.R., Bolgrien, D.W., Hill, B. H., Jicha, T.M. (2011). Planktonic and periphytic diatoms as indicators of human stress on great rivers of the United States: Testing water quality and disturbance models. *Ecological Indicators* 13(1): 222-231.

Angradi, T.R., Bolgrien, D.W., Jicha, T.M., Pearson, M.S., Taylor, D.L., Moffett, M.F., Blockson, K.A., Walters, D.M., Elonen, C.M., Anderson, L.E., Lazorchak, J.M., Reavie, E.D., Kireta, A.R., Hill, B.H. (2011). An assessment of stressor extent and biological condition in the North American mid-continent Great Rivers (USA). *Rivers Systems* 19:143-163.

Sgro, G.V., Reavie, E.D., Kireta, A.R., Angradi, T.R., Jicha, T.M., Bolgrien, D.W., Hill, B.H. (2010) Comparison of Diatom-Based Indices of Water Quality of Mid-Continent (USA) Great Rivers. *Environmental Indicators* 5(1): 48-67.

Reavie, E.D., Sgro, G.V. Danz, N.P. Axler, R.P., Kireta, A.R., Kingston, J.C., Hollenhorst. T.P. (2008). Comparison of Simple and Multimetric Diatom-Based Indices for Great Lakes Coastline Disturbance. *Journal of Phycology* 44: 787-802.

Kireta, A.R., Reavie, E.D., Danz, N.P., Axler, R.P., Sgro, G.V., Brown, T.N., and Hollenhorst, T.P. (2007). Coastal Geomorphic and Lake Variability in the Laurentian Great Lakes: Implications for a Diatom-Based Monitoring Tool. *Journal of Great Lakes Research.* 33(Special Issue 3):136-153.

Sgro, G.V., Reavie, E.D., Kingston, J.C., Kireta, A.R., Ferguson, M.J., Danz, N.P., and Johansen, J.R. (2007). A Diatom Quality Index from a Diatom -Based Total Phosphorus Inference Model. *Environmental Bioindicators*. 2(1):15-34.

Reavie, E.D., Axler, R.P., Sgro, G.V., Danz, N.P., Kingston, J.C., Kireta, A.R., Brown, T.N., and Hollenhorst, T.P. (2006). Diatom-Based Weighted-Averaging Models for Great Lakes Coastal Water Quality: Relationships to Watershed Characteristics. *Journal of Great Lakes Research* 32(2):321-47.

Kireta, A.R., (2001). Benthic Algal Shifts in Response to the Round Goby. M. S. thesis, Bowling Green State University, Bowling Green. 36 pp.