COURTNEY R. WIGDAHL

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Other names: C.R. Salm

EDUCATIONAL BACKGROUND

2007-present Ph.D. candidate, Ecology and Environmental Science. University of Maine. Advisor: Jasmine E. Saros. Defense date: June 2012
Project title: Ecological interactions affecting diatom climate reconstructions in prairie saline lakes of the northern Great Plains (USA)

2007 M.S. Biology – Aquatic Science Concentration. University of Wisconsin – La Crosse. Advisor: Jasmine E. Saros.
Thesis title: Primary production by phytoplankton in prairie saline lakes.

2005 B.S. Biology – Environmental Science Concentration, Chemistry and Statistics minors. University of Wisconsin – La Crosse.

POSITIONS HELD

Spring 2012 Teaching Assistant for Organismal Biology (BIO 200), University of Maine
Fall 2011 Instructor, Limnology (BIO 468), University of Maine
Spring 2010 Teaching Assistant for Paleoecology (BIO 476/572) and Organismal Biology (BIO 200), University of Maine
Fall 2009 Teaching Assistant for Introductory Biology (BIO 100), University of Maine
Spring 2009 Teaching Assistant for Organismal Biology (BIO 200), University of Maine
Fall 2008 Teaching Assistant for Introductory Biology (BIO 100), University of Maine

HONORS AND AWARDS

2012: Outstanding Teaching Assistant Award, School of Biology and Ecology, University of Maine.
2010-2011: Chase Distinguished Research Fellowship, University of Maine.
2009: Best Student Presentation Award, 2nd Place, Harold W. Borns Symposium (Climate Change Institute, University of Maine)
2007-2008: University of Maine Provost Fellowship
2005: W.D. Williams Award for Best Student Poster, International Conference for Salt Lake Research
2005: Environmental Science Senior of the Year, University of Wisconsin-La Crosse Biology Department
2003: Dean's Distinguished Undergraduate Research Fellowship. University of Wisconsin – La Crosse, College of Science and Allied Health

PUBLICATIONS

Wigdahl, C.R., J.E. Saros, S.C. Fritz, J.R. Stone, and D. Engstrom. The role of basin morphometry in lake response to drought: utilizing modern ecology to understand disparities across diatom-based salinity reconstructions in prairie lakes of the Great Plains (*in prep*)

Osburn, C.L., **C.R. Wigdahl**, S.C. Fritz, and J.E. Saros. 2011. Dissolved organic matter composition and photoreactivity in prairie lakes of the U.S. Great Plains. *Limnology and Oceanography* 56:2371–2390

Lake, B.A., **C.R. Wigdahl**, K.E. Strock, J.E. Saros, and A. Amirbahman. 2011. Multiproxy paleolimnological assessment of biogeochemical versus food web controls on the trophic states of two shallow, mesotrophic lakes. *Journal of Paleolimnology* 46:45-57

Williamson, C.E., **C.R. Salm**, S.L. Cooke, and J.E. Saros. 2010. How do UV radiation, temperature, and zooplankton influence the dynamics of alpine phytoplankton communities? *Hydrobiologia* 648: 73-81.

Salm, C.R., J.E. Saros, S.C. Fritz, C.L. Osburn, D. Reineke. 2009a. Phytoplankton productivity across prairie saline lakes of the Great Plains (USA): A step toward deciphering patterns through lake classification models. *Canadian Journal of Fisheries and Aquatic Science* 6:1435-1448

Salm, C.R., J.E. Saros, C.S. Martin, and J.M. Erickson. 2009b. Patterns of seasonal phytoplankton distribution in prairie saline lakes of the northern Great Plains (U.S.A.) *Saline Systems* 5:1

Scott, C., J.E. Saros, C.E. Williamson, **C.R. Salm**, S.C. Peters, D. Mitchell. 2009. Effects of nutrients and dissolved organic matter on the response of phytoplankton to ultraviolet radiation: experimental comparison in spring versus summer. *Hydrobiologia* 619:155–166

GRANTS RECEIVED

2011: Zooplankton grazing effects on sedimentary diatom assemblages: ecological insights into drought reconstructions in the Great Plains (USA). ($425) University of Maine Graduate Student Government Grant (Travel to present)

2011: Graduate Student Travel Award. University of Maine – School of Biology and Ecology

2010: Indirect effects of climate on the use of diatoms as indicators of paleosalinity in prairie regions (Great Plains, USA). University of Maine Graduate Student Government Grant (Travel to present)

2009: Effects of ecological interactions on paleoclimate reconstructions: determination of edible algae species for zooplankton. University of Maine Graduate Student Government Grant (Degree related)

2008-2009: Exploratory paleolimnological analysis of lakes in Tierra del Fuego, Chile. Churchill Exploration Fund Grant (Awarded but declined)

2008: Publication charges for Saline Systems article, Salm et al. 2009b. Awarded by the International Society for Salt Lake Research

2008: Alpine lakes as sentinels of climate change: investigating the effects of ultraviolet radiation and temperature on plankton dynamics, presented at AGU Chapman Conference. University of Maine Graduate Student Government (Travel to present)

2005: Modeling primary production by algae in salt lakes of the Great Plains. University of Wisconsin – La Crosse Graduate Student Research, Service, and Educational Leadership Grant

PRESENTATIONS:

2012: **Wigdahl, C.R.**, J.E. Saros, S.C. Fritz. Disparities in diatom-inferred drought records across the Great Plains (USA): the potential role of climate-induced changes in lake habitat. 20th Annual Harold W. Borns Symposium, Climate Change Institute and University of Maine.

2011: **Wigdahl, C.R.** and J.E. Saros. Effects of ecological interactions on drought reconstructions from prairie lakes. Ecological Society of America (ESA) Annual Meeting

2011: **Wigdahl, C.R.**, J.E. Saros, and J.R. Stone. The role of site-specific lake characteristics in altering diatom-inferred salinity records from prairie lakes in the Great Plains (USA). 19th Annual Harold W. Borns Symposium, Climate Change Institute and University of Maine

2010: **Wigdahl, C.R.** and J.E. Saros. Indirect effects of climate on the use of diatoms as indicators of paleosalinity in prairie regions (Great Plains, USA). American Society of Limnology and Oceanography (ASLO) Annual Meeting

2010: **Wigdahl, C.R.** and J.E. Saros. Improving drought reconstructions in prairie saline lakes in the Great Plains (USA): An ecological perspective. 18th Annual Harold W. Borns Symposium, Climate Change Institute and University of Maine

2009: **Salm, C.R.** and J.E. Saros. Ecological interactions affecting diatom climate reconstructions in prairie saline lakes of the northern Great Plains (USA). 17th Annual Harold W. Borns Symposium, Climate Change Institute and University of Maine

2008: **Salm, C.R.**, J.E. Saros, C.E. Williamson, S.L. Cooke, and D.L. Mitchell. Alpine lakes as sentinels of climate change: investigating the effects of ultraviolet radiation and temperature on plankton dynamics. American Geophysical Union Chapman Conference: Lakes and Reservoirs as Sentinels, Integrators, and Regulators of Climate Change

2008: **Salm, C.R.**, J.E. Saros, and C.S. Martin. Patterns of seasonal phytoplankton succession and distribution in prairie saline lakes of the northern Great Plains (U.S.A.). International Society for Salt Lake Research.

2008: **Salm, C.R.** and J.E. Saros. "Ecological interactions affecting diatom-based inferences of drought frequency in prairie saline lakes of the northern Great Plains (USA)" 16th Annual Harold W. Borns Symposium, Climate Change Institute and University of Maine

2007: **Salm, C.R.** and J.E. Saros. Seasonal patterns of nutrient limitation in prairie saline lakes: a test of classification and regression models. ASLO Annual Meeting.

2007: **Salm, C.R.** and J.E. Saros. Classification schemes for algal primary productivity in prairie salt lakes (Great Plains). UW–La Crosse Celebration of Undergraduate and Graduate Research

2005: **Salm. C.R.**, J.E. Saros, C.L. Osburn, S.C. Fritz. Modeling primary production patterns in prairie saline lakes of the Great Plains. International Conference for Salt Lake Research

2005: Saros, J.E., J.M. Erickson, **C.R. Wigdahl**, S.C. Fritz, C.L. Osburn. Calcium as a key regulator of phosphorus availability in prairie saline lakes of North America. International Conference for Salt Lake Research

2005: **Wigdahl, C.R.**, J.E. Saros, C.L. Osburn, S.C. Fritz. Patterns of primary production in saline lakes of the Great Plains. ASLO Annual Meeting

2005: Saros, J.E., J.M. Erickson, **C.R. Wigdahl**, S.C. Fritz, C.L. Osburn. DOM-mediated phosphorus limitation of phytoplankton production in prairie saline lakes. ASLO Annual Meeting.

2005: D.M. Bazett-Jones, and **C.R. Wigdahl**. UW-L students knowledge of undergraduate research opportunities. UW–La Crosse Celebration of Undergraduate and Graduate Research

2004: **Wigdahl, C.R.,** and J.E. Saros. The effect of ultraviolet radiation on plankton in alpine lakes. National Conference for Undergraduate Research

2004: Doyle, S.A., **C.R. Wigdahl**, J.E. Saros, and C.E. Williamson. Interactive effects of ultraviolet radiation, temperature, nutrients and zooplankton grazing on alpine phytoplankton communities. Ecological Society of America Annual Meeting

2004: **Wigdahl, C.R.**, J.E. Saros, S.A. Doyle. The effect of ultraviolet radiation on plankton in alpine lakes. Seven Rivers Undergraduate Research Symposium – Viterbo University

TEACHING EXPERIENCE:

COURSE INSTRUCTOR:

BIO 468 – Limnology (University of Maine)
Lecture based, with field trip component.

TEACHING ASSISTANT:

BIO 476/572: Paleoecology. (University of Maine)
Laboratory and lecture assistance.

INT 500: Climate, Culture, and the Biosphere (University of Maine)
Seminar course, graduate coordinator for Biology session.

BIO 200: Organismal Biology. (University of Maine)
3 semesters; laboratory-based.
Inquiry-based and traditional formats.

BIO 100: Introduction to Biology. (University of Maine)
2 semesters; laboratory-based.
Inquiry-based and traditional formats.

BIO 341: Limnology (UW-La Crosse)
Laboratory and lecture assistance.

STUDENT RESEARCH MENTORING:

Assisted in mentoring Carl Tugend and Will Gray, two undergraduate students, during their research projects and lab work at the University of Maine; responsibilities included supervising and assisting with laboratory work. (2007- present)

Mentored Lillie Mayfield, a high school student, for a summer research project through the University of Maine's "Orono High School Research Experience" program; responsibilities included development of project questions with the student, supervising fieldwork, and training in microscopy and sediment processing techniques as well as data analysis. (2011)

Mentored Jessica Czubakowski, Carmen Daggett, and Erin Wilcox, as undergraduate research students working on projects related to Master's thesis work at UW-La Crosse; responsibilities included coordinating field expeditions, assisting with sample collection, and supervising laboratory work. (2005-2007)

PROFESSIONAL DEVELOPMENT

"Funding Challenges and Opportunities for Ecological Research at Undergraduate Institutions" workshop at Ecological Society of America Annual Meeting (2011)

National Science Foundation communication workshop at the University of Maine: "Science: Becoming the Messenger" (2011)

Advanced statistical methods development:

- "Multivariate Auto-Regressive Modelling" workshop at Ecological Society of America Annual Meeting (2007)
- "Analysis of Environmental Data" two-week intensive course with Dr. Steve Juggins at Iowa Lakeside Laboratory (2005)

Multiple workshops on teaching at the University of Maine, hosted by Center for Excellence in Teaching and Assessment and the Maine Center for Research in STEM Education (RiSE Center) (2007-present)

PROFESSIONAL SOCIETIES

Ecological Society of America (student member)
American Society of Limnology and Oceanography (student member)
International Society of Salt Lake Research (student member)

SERVICE AND OUTREACH ACTIVITIES

SERVICE:

Co-organizer of North American Diatom Symposium in 2013
Co-Reviewer for *Limnology and Oceanography*
Reviewer for *Hydrobiologia*
Senator, University of Maine Graduate Student Government
President, UW-La Crosse Graduate Student Organization
Founding Member and Public Relations Director of UW-La Crosse Society for Undergraduate Research, Creative, and Scholarly Activities (undergraduate)
Vice President of UW-La Crosse Environmental Science Club (undergraduate)

OUTREACH:

Coordinator of Paleoecology section of the Climate Change Institute's Annual Science Day at the University of Maine (4 years)
CCI tour guide for numerous events, including groups from the University of Maine Classified Employees Advisory Council and the College of the Atlantic
Climate panelist for Student and Parent Book Discussion – "Fact vs. Fiction: Where's the Science in Science Fiction?" at James F. Doughty Middle School, Bangor, Maine
Guest speaker on Acid Rain, for Biology classes at North High School, Sheboygan, Wisconsin