

DINA M. LEECH

Institute of Marine Sciences
The University of North Carolina at Chapel Hill
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Morehead City, North Carolina 28557
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EDUCATION

Ph.D., Environmental Sciences, 2001

Dept. of Earth and Environmental Sciences, Lehigh University, Bethlehem, PA
"Tolerance and Behavioral Responses of Freshwater Zooplankton to UV Radiation"
Advisor: Dr. Craig Williamson

B.Sc., Biology, 1994 (Ecology Concentration) Magna cum laude

James Madison University, Harrisonburg, VA
"Timing of Chromatin Diminution in Freshwater Cyclopidae"
Advisor: Dr. Grace Wyngaard

POST-DOCTORAL PROFESSIONAL EXPERIENCE

Institute of Marine Sciences, University of North Carolina, Morehead City, NC

Research Scientist, Summer 2007-Present, Dr. Michael Piehler, adviser

Project: Limnology of the coastal lakes of North Carolina

University of North Carolina, Environmental Sciences and Engineering Dept., Chapel Hill, NC

SPIRE Postdoctoral Fellow, Spring 2003-Spring 2007, Dr. Robert Wetzel, advisor

Project: Indirect effects of elevated atmospheric CO₂ and UV radiation on carbon cycling and species diversity in the microbial loop

Duke University, Biology Department, Durham, NC

Postdoctoral Researcher, Fall 2001-Spring 2003, Dr. Sönke Johnsen, advisor

Project: UV vision and the feeding behavior of bluegill sunfish, *Lepomis macrochirus*

AWARDS AND HONORS

Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) V
Selected Symposium Participant, 2003, American Society of Limnology and
Oceanography

National Institutes of Health Seeding Postdoctoral Innovators in Research and Education
(SPIRE) Postdoctoral Fellowship, 2003, University of North Carolina at Chapel Hill, NC,

Kravis Fellowship, 2001, Department of Earth and Environmental Sciences, Lehigh University,
Bethlehem, PA

Dissertation Improvement Funds, 1998, 1999, Department of Earth and Environmental Sciences,
Lehigh University Bethlehem, PA

Philanthropic Educational Organization (PEO) Fellowship Nominee, 1997

PEER-REVIEWED PUBLICATIONS

- Chow, A.T., **D.M. Leech***, T. Boyer and P. Singer. 2008. In press. Impact of simulated solar irradiation on disinfection byproduct precursors. *Environmental Science and Technology*
*Corresponding Author
- Cooke, S. L., C. E. Williamson, **D. M. Leech**, W. J. Boeing and L. Torres. 2008. In press. Effects of temperature and ultraviolet radiation on diel vertical migration of freshwater crustacean zooplankton. *Canadian Journal of Fisheries and Aquatic Ecology*.
- Riggsbee, J.A., C.H. Orr, **D.M. Leech**, M.W. Doyle, and R.G. Wetzel. 2008. In press. Suspended Sediments in River Ecosystems: Photochemical Sources of Dissolved Organic Carbon and Adsorptive Removal of Dissolved Iron. *Journal of Geophysical Research*.
- Williamson, C.E., DeLange H., and **D.M. Leech**. 2007. Do zooplankton contribute to an ultraviolet clear-water phase in lakes? *Limnology and Oceanography* 52: 662-667.
- Lango, A., **D.M. Leech*** and R.G. Wetzel. 2007. Indirect effects of elevated atmospheric CO₂ and UV radiation on culturable bacteria. *Fundamental and Applied Limnology* 168: 327-333. *Corresponding Author
- Leech, D.M.** and S. Johnsen. 2006. UV vision and the feeding ecology of bluegill sunfish, *Lepomis macrochirus*. *Canadian Journal of Fisheries and Aquatic Sciences* 63: 2183-2190.
- Leech, D.M.**, A. Padeletti, and C.E. Williamson. 2005. Behavioral responses to UV radiation vary within and among lakes. *Journal of Plankton Research* 27: 461-471.
- Leech, D.M.**, C.E. Williamson, R.E. Moeller, and B. Hargraeves. 2005. UV radiation and zooplankton vertical distribution and abundance: Testing for UV behavioral avoidance. *Archiv für Hydrobiologie* 162: 445-464.
- Boeing, W.J., **D.M. Leech**, C.E. Williamson, S.A. Cooke, and L.E. Torres. 2004. Damaging UV radiation and invertebrate predation: conflicting selective pressures for zooplankton vertical distribution in the water column of low DOC lakes. *Oecologia* 138 (4): 603-612.
- Leech, D.M.** and S. Johnsen. 2003. Behavioral responses: UV avoidance and vision. *In UV Effects in Aquatic Organisms and Ecosystems*. Editors, W. Helbling and H. Zagarese. Pp. 455-481. (Invited chapter)
- Leech, D.M.** and C.E. Williamson. 2001. *In situ* exposure to UV radiation alters the depth distribution of *Daphnia*. *Limnology and Oceanography* 46: 416-420.
- Leech, D.M.** and C.E. Williamson. 2000. Is tolerance to ultraviolet radiation in zooplankton related to body size, taxon, or lake transparency? *Ecological Applications* 10:1530-1540.

Leech, D.M. and G.A. Wyngaard. 1996. Timing of chromatin diminution in free-living, freshwater Cyclopidae (Crustacea: Copepoda). *Journal of Crustacean Biology* 16: 496-500.

INVITED BOOK CHAPTERS IN PREPARATION

Leech, D.M. and S. Johnsen. (Accepted, to be published in 2008.) Light, photoreceptors, and UV vision. *In* Encyclopedia of Inland Waters. Editor, G. Likens.

SELECTED MANUSCRIPTS IN SUBMISSION/PREPARATION

Leech, D.M., W.J. Boeing, C.E. Williamson, S.A. Cooke, and L. Torres. (submitted *Ecology Letters*) UV radiation facilitates fish predation in UV-transparent lakes.

Leech, D.M., A. Teske, T. Long, and B. Veronesi. (submitted *FEMS-Microbiology Letters*) Effects of synthetic iron nanoparticles on freshwater bacterial communities.

Leech, D.M., M.T. Snyder, and R.G. Wetzel. (in revision) Climate change and DOM photomineralization: Implications for CO₂ evasion from fresh waters.

Leech, D.M. and R.G. Wetzel. (in revision) Natural organic matter and sunlight accelerate the degradation of 17 β -estradiol.

Leech, D.M. and R.G. Wetzel. (To be submitted to *Aquatic Microbial Ecology*) Indirect effects of elevated CO₂ and UV on energy transfer in the microbial loop.

RESEARCH GRANT

Leech, D.M., S. Ensign, H. Byrum, and M. Piehler. 2008. Zooplankton Assessment Project (ZAP): Reassessing prey availability for river herring in the Chowan River and Albemarle Sound. North Carolina Sea Grant, \$30,071.

TEACHING EXPERIENCE

UNC Institute of Marine Sciences, Morehead City, NC

Visiting Faculty, Fall Semester 2007, Human Impacts on Estuarine Processes

University of North Carolina at Chapel Hill, NC

Visiting Faculty, Fall Semester 2005, Limnology/Freshwater Ecology (graduate course)

University of North Carolina at Pembroke, NC

Visiting Faculty, Spring Semester 2005, General Biology

Lehigh University, Department of Earth and Environmental Sciences, Bethlehem, PA

Graduate Assistant, 1998-2001, Supervised undergraduates conducting independent research as part of the Salamander Response to Climate Change Project

Adjunct Professor, Fall 1999, Plant Ecology (designed and taught both lecture and lab)

Teaching Assistant, 1997-2001, Sole laboratory instructor for Ecological Field Methods, Introduction to Biology, Lake Ecosystems, and Plants and Plant Communities

Graduate Advisor, 1995-1997, Research Experience for Undergraduates Program sponsored by NSF at the Lacawac Sanctuary in the Pocono Mts., PA

SELECTED UNDERGRADUATE STUDENTS

Whitney Kihlstrom, Institute of Marine Sciences, Fall 2007- Present

Project: Contribution of man-made canals to the organic loading of dystrophic Pungo Lake, NC

Cecilia Royer, North Carolina Central University, 2005-2006

Project: Effects of climate change on freshwater bacterial species diversity (Currently applying to medical schools)

Rebecca Williams, Fayetteville Tech Community College, Summer 2004

Project: Effects of climate change on organic matter decomposition and bacterial metabolism (Currently an undergraduate at UNC Chapel Hill)

Lisette Torres, Lehigh University, Summer 2001

Project: UV radiation facilitates fish predation in high UV lakes (Currently a graduate student at Miami University of Ohio)

Angela Padeletti, Lehigh University, Summer 2000

Project: Behavioral responses of freshwater zooplankton to UV radiation (Former research technician at the University of Maryland's Horn Point Marine Laboratory)

CONFERENCE PRESENTATIONS

Leech, D.M. and R. G. Wetzel. 2007. Societe International Limnologie Meeting, Montreal, Quebec, Canada.

Leech, D.M. and A.T. Chow. 2006. Aquatic Sciences Meeting, American Society of Limnology and Oceanography, Victoria, British Columbia, Canada.

Leech, D.M. and R.G. Wetzel. 2005. INTECOL/Ecological Society of America Annual Meeting, Montreal, Quebec, Canada.

Leech, D.M. and R.G. Wetzel. 2005. Aquatic Sciences Meeting, American Society of Limnology and Oceanography, Salt Lake City, Utah.

Leech, D.M. and R.G. Wetzel. 2004. American Society of Limnology and Oceanography Annual Meeting, Savannah, Georgia.

Leech, D.M. 2003. DIALOG V Symposium, American Society of Limnology and Oceanography, Bermuda Biological Field Station.

Leech, D.M., W. Boeing, C.E. Williamson. 2002. American Society of Limnology and Oceanography Annual Meeting, Victoria, British Columbia.

Leech, D.M., A.T. Padeletti, and C.E. Williamson. 2001. American Society of Limnology and Oceanography Annual Meeting, Albuquerque, NM.

Padeletti, A.T., D.M. Leech, and C.E. Williamson. 2001. American Society of Limnology and Oceanography Annual Meeting, Albuquerque, NM.

Leech, D.M. and C.E. Williamson. 2000. Ecological Society of America Annual Meeting, Snowbird, UT.

Leech, D.M. and C.E. Williamson. 2000. American Society of Limnology and Oceanography Annual Meeting, Copenhagen, Denmark.

Leech, D.M. and C.E. Williamson. 1999. American Society of Limnology and Oceanography Annual Meeting, Santa Fe, NM.

INVITED PRESENTATIONS

Environmental Studies Program, Washington and Lee University, February 2008

Institute of Marine Sciences, UNC Chapel Hill, February 2008

Biology Department, University of Southern Mississippi, April 2006

Biology Department, Augusta State University, October 2005

Biosymposium Guest Speaker, Biology Department, James Madison University, April 2005

Department of Fisheries and Wildlife Sciences, New Mexico State University, March 2005

Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, September 2004

Department of Biological Sciences, Dartmouth College, May 2001

Department of Ecology and Evolutionary Biology, Cornell University, February 2001

PROFESSIONAL SERVICE AND ACTIVITIES

Reviewer for: *Archiv für Hydrobiologie*, *Biologia*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Ecology*, *Environmental Science and Technology*, *Hydrobiologia*, *Journal of Ethnology*, *Journal of the North American Benthological Society*, *Journal of Plankton Research*, *Limnology and Oceanography*, *Marine and Freshwater Research*, *Marine Ecology Progress Series*, *Marine Environmental Research*, *Oecologia*, *Oikos*, *Photochemistry and Photobiology*

Proposal Reviewer, 1999-Present, National Science Foundation

Participant, Nov. 2003, Felder/Brent Effective Teaching Workshop

Participant, Sept. 2002, Conference on the Scholarship of Teaching and Learning at a Research University, Duke University

Selected Course Participant, Jan. 1999, *Fundamentals of Ecosystem Studies*, Institute of Ecosystem Studies, Millbrook, NY

PROFESSIONAL SOCIETIES

American Society of Limnology and Oceanography
Ecological Society of America
Societe International Limnologie
Sigma Xi