

GRACE M. WILKINSON

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Education

2015 Ph.D., Environmental Sciences, University of Virginia
2010 B.A., Biology, St. Olaf College

Employment

Jan 2017 Assistant Professor, Iowa State University
2015-2016 Postdoctoral Research Associate, University of Virginia
2010-2015 Research Assistant, Univ. of Virginia Dept. of Environmental Sciences
2010-2015 Teaching Assistant, Univ. of Virginia Dept. of Environmental Sciences
2010 Research Technician, St. Catherine's University at the Angelo Coast Reserve

Publications

**Denotes undergraduate student coauthors*

Pace, ML, RD Batt, CD Buelo, SR Carpenter, JJ Cole, J Kurtzweil, GM Wilkinson. *In Press*.
Reversal of a Cyanobacterial Bloom In Response to Early Warnings. Proceedings of the
National Academy of Sciences USA.

Wilkinson, GM, C Buelo, JJ Cole, ML Pace. 2016. Exogenously produced CO₂ more than
doubles the flux of greenhouse gases from three north temperate lakes. *Geophysical
Research Letters*, doi: 10.1002/2016GL067732

Greiner, JT, KE Emery, GM Wilkinson, KJ McGlathery. 2016. Identifying carbon source
contributors to restored seagrass sediment. *Marine Ecology Progress Series*.

Carpenter, SR, JJ Cole, ML Pace, GM Wilkinson. 2016. Response of plankton to nutrients,
planktivory, and terrestrial organic matter: A model analysis of whole-lake experiments.
Ecology Letters 19: 230-239, doi: 10.1111/ele.12558

Wilkinson, GM, JJ Cole, ML Pace, RA Johnson, M Kleinhans*. 2015. The contribution of
biological and physical processes to the formation and persistence of oxygen maxima in
lakes. *Limnology and Oceanography* 60: 242-251.

Wilkinson, GM, JJ Cole, ML Pace. 2015. The sensitivity of deuterium based allochthony
estimates to the dietary water correction and lipid content. *Limnology and
Oceanography: Methods* 13(5): 213-223.

Emery, KA, GM Wilkinson, FG Ballard*, ML Pace. 2015. Use of allochthonous resources by
zooplankton in reservoirs. *Hydrobiologia* 758: 257-269.

- Emery, KA, GM Wilkinson, VF Camacho-Ibar, ML Pace, KJ McGlathery, JM Sandoval-Gil, J Hernández-López. 2015. Resource use of a cultured oyster (*Crassostrea gigas*) in the reverse estuary Bahía San Quintín, Baja California, Mexico. *Estuaries and Coasts*, doi: 10.1007/s12237-015-0021-9.
- Batt, RD, SR Carpenter, JJ Cole, ML Pace, RA Johnson, JK Kurtzweil, GM Wilkinson. 2015. Altered energy flow in the food web of an experimentally darkened lake. *Ecosphere* 6: Article 33.
- Wilkinson, GM, SR Carpenter, JJ Cole, ML Pace. 2014. Metalimnetic ¹³C addition reveals minor support of metalimnetic resources to pelagic consumers. *Limnology and Oceanography* 59: 986-996.
- Yang, C*, GM Wilkinson, JJ Cole, SA Macko, ML Pace. 2014. Determining the isotopic values of resource end members in freshwater food web studies. *Inland Waters* 4: 233-242.
- Wilkinson, GM, ML Pace, JJ Cole. 2013. Terrestrial dominance of organic matter in north temperate lakes. *Global Biogeochemical Cycles* 27: 43-51.
- Wilkinson, GM, SR Carpenter, JJ Cole, ML Pace, C Yang*. 2013. Terrestrial support of pelagic consumers among lakes: Patterns and variability revealed from a multi-lake study. *Freshwater Biology* 58: 2037-2049.

Book Chapters

- Wilkinson, GM. *In press*. Eutrophication of Freshwater and Coastal Ecosystems. In the Encyclopedia of Sustainable Technologies, Springer.
- Emery, KA, JA Gephart, GM Wilkinson, AF Besterman, ML Pace. 2016. Modeling drivers of trophic cascades and food-web alterations in a lake ecosystems. *Learner-Centered Teaching Activities for Environmental and Sustainability Studies*.

Examples of Broader Impact, Non-Peer Reviewed Publications

- Wilkinson, GM. 2015. "Transcript of the Address of the President at the 150th Annual ESA Meeting" ESA Centennial Writing Contest, Runner Up. *Frontiers in Ecology and the Environment* 13 (5): 283.
- Wilkinson, GM. 2015. "The benefits of student membership in ASLO." *Bulletin of the Association for the Sciences of Limnology and Oceanography* 24: 92-93, doi: 10.1002/lob.10057

Awards, Honors, and Grants

Maury Environmental Prize (2015) *Department of Environmental Science, University of Virginia*

Elected to the **Board of Directors** of the Association for the Sciences of Limnology and Oceanography [serving 2014-2017]

Science Outreach Grant (2015) *Dean's Office, University of Virginia*. "Increasing community participation at an annual environmental symposium." (\$1,500)

Moore Research Award (2013) *Department of Environmental Sciences, University of Virginia* "Allochthony in an increasingly autochthonous world: Investigating shifts in consumer resource use during a cyanobacteria bloom." (\$5,000)

Dr. and Mrs. Carl A. Bunde Graduate Research Grant (2013) *Department of Zoology, UW- Madison*. "Can ambient stable isotopes trace cyanobacteria through a lake food web?" (\$3,000)

Anna Grant Birge Award (2013) *Center for Limnology UW-Madison*. "Can ambient stable isotopes trace cyanobacteria through a lake food web?" (\$1,500)

Exploratory Research Award (2012) *Department of Environmental Sciences, University of Virginia*. "Are fish made of trees? Investigating terrestrial support of aquatic food webs across a gradient of lakes." (\$1,500)

National Science Foundation Graduate Research Fellowship (2011) Honorable Mention

Presentations and Seminars

Workshop Instruction

Introduction to Geographic Information Systems: students learn the basics of GIS and map making through hands on learning and tutorials

- Trout Lake Station Summer Workshop Series (2014, 2015, 2016)

How to Write A Scientific Paper: students learn how to structure scientific papers, effectively present the knowledge gap, and use data to tell a story.

- Central Caribbean Marine Institute REU Program (2016)
- University of Notre Dame Practicum in Environmental Field Biology (2016)

Seminars and Keynote Presentations

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. University of California Santa Barbara [April 3, 2017]

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. Duke University River Center [February 9th, 2017]

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. Civil and Environmental Engineering Water Resources Group, Iowa State University [January 31st, 2017]

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. Prairie Lakes Conference [Aug 11th, 2016]. ***Invited Speaker***

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. Iowa Lakeside Laboratory: Regents Resource Center [June 21st, 2016].

Wilkinson, GM. Ecosystem Alarms: Searching for Early Warnings of Large Changes in Lakes. University of Notre Dame Environmental Research Center Summer Seminar Series [June 16th, 2016].

- Wilkinson, GM. Terrestrial inputs and organic carbon dynamics in lake ecosystems. Longwood University [April 7th, 2016].
- Wilkinson, GM. Terrestrial inputs and organic carbon dynamics in lake ecosystems. University of Vermont Rubenstein School of Natural Resources [March 17th, 2016].
- Wilkinson, GM. Terrestrial inputs and organic carbon dynamics in lake ecosystems. Iowa State University [Feb 29th, 2016].
- Wilkinson, GM. Terrestrial inputs and organic carbon dynamics in lake ecosystems. Cary Institute of Ecosystem Studies. [April 17, 2015].
- Wilkinson, GM. Patterns of terrestrial resource use by zooplankton in lakes. Université du Québec à Montréal. [Sept 26, 2014]
- Wilkinson, GM. Quantifying patterns of terrestrial resource use by zooplankton in lakes. University of Virginia Dept of Environmental Science. [Sept 18, 2014]

Conference Presentations

- Wilkinson, GM**, SR Carpenter, JJ Cole, ML Pace, RD Batt, CD Buelo, JD Kurtzweil. 2017. Statistical early warning indicators predict algal blooms in lakes. ASLO Aquatic Sciences Meeting, Honolulu, HI.
- Besterman, A, **Wilkinson, GM**, CD Buelo, J Gephart, ML Pace. 2017. Comparing modern carbon burial in aquatic ecosystems. ASLO Aquatic Sciences Meeting, Honolulu, HI.
- Pace, ML, **GM Wilkinson**, SR Carpenter. 2017. Long term ecological research and reproducibility: Lessons from whole-lake experiments. ASLO Aquatic Sciences Meeting, Honolulu, HI.
- Wilkinson, GM**, CD Buelo, JJ Cole, ML Pace. 2016. Exogenously produced CO₂ more than doubles the flux of greenhouse gases from three north temperate lakes. ASLO Summer Meeting, Santa Fe, NM.
- Pace, ML, SR Carpenter, JJ Cole, RD Batt, **GM Wilkinson**, CD Buelo, J Kurtzweil. 2016. A whole-lake test of early warnings: Reversal of a cyanobacteria bloom. ASLO Summer Meeting, Santa Fe, NM.
- Wilkinson, GM**, KE Emery, V Camacho-Ibar, M Pace, K McGlathery, J Sandoval Gil, J Hernandez Lopez. 2016. Resource use of an aquacultured shellfish in the reverse estuary Bahía San Quintín, Baja California, México. Ocean Sciences Meeting, New Orleans, LA
- Buelo, C, ML Pace, **GM Wilkinson**. 2015. Storm events and algal blooms in a local drinking water supply. Water Resources Conference of the Virginias.
- Carey, CC, JP Doubek, AB Gerling, KD Hamre, ZW Munger, **GM Wilkinson**, PA Gantzer, JC Little, ML Pace, ME Schreiber. 2015. Whole-ecosystem oxygenation demonstrates that episodic anoxic events promote internal loading of metals and carbon burial in a eutrophic reservoir. ESA 100th Annual Meeting.
- Wilkinson, GM**, JJ Cole, ML Pace, RA Johnson, M Kleinhans. 2015. The contribution of biological and physical processes to the formation of metalimnetic oxygen maxima in lakes. ASLO Aquatic Sciences Meeting, Granada, Spain.
- Pace, ML, RD Batt, C Buelo, SR Carpenter, JJ Cole, JJ Kurtzweil, **GM Wilkinson**. 2015. Early warnings of phytoplankton blooms? A whole lake experiment. Association for the ASLO Aquatic Sciences Meeting, Granada, Spain.
- Wilkinson, GM**, SR Carpenter, JJ Cole, ML Pace. 2014. Use of deep algal resources by zooplankton: Results of a metalimnetic addition of ¹³C to a small lake. Joint meeting of the British Ecological Society and the French Ecological Society. *[Invited]*

- Pace, ML, **GW Wilkinson**, JJ Cole, SR Carpenter. 2014. Watershed inputs, aquatic foodwebs, and ecosystem stability. Joint meeting of the British Ecological Society and the French Ecological Society. *[Invited]*
- Wilkinson, GM**, SR Carpenter, JJ Cole, ML Pace. 2014. Use of deep algal resources by zooplankton: Results of a metalimnetic addition of ^{13}C to a small lake. Joint Aquatic Sciences Meeting. Portland, OR.
- Wilkinson, GM**, SR Carpenter, JJ Cole, ML Pace, C Yang. 2013. Terrestrial support of pelagic consumers among lakes: Patterns and variability revealed from a multi-lake study. ESA 98th Annual Meeting. Minneapolis, MN.
- Batt, RD, SR Carpenter, JJ Cole, M.L. Pace, RA Johnson, JK Kurtzweil, **GM Wilkinson**. 2013. Altered energy flow in the food web of an experimentally darkened lake. ESA 98th Annual Meeting. Minneapolis, MN,
- Wilkinson, GM**, JJ Cole, ML Pace. 2013. Terrestrial dominance of organic matter in north temperate lakes. ASLO Aquatic Sciences Meeting, New Orleans, LA.
- Pace, ML, JJ Cole, SR Carpenter, **GM Wilkinson**. 2013. Are inputs of terrestrial organic carbon to lakes large or small relative to primary production. ASLO Aquatic Sciences Meeting, New Orleans, LA.
- Wilkinson, GM**, JJ Cole, ML Pace. 2012. Terrestrial dominance of organic matter in north temperate lakes. AGU Fall Conference, San Francisco, CA. *[Invited]*.
- Welter, JR, PC Furey, JA Cormier, AJ Rosendahl, BL Weigel, **GM Wilkinson**. 2011. Abiotic and biotic constraints on nitrogen fixation and producer species assemblages in an N-limited river ecosystem. Ecological Society of America 96th Annual Meeting. Austin, TX.
- Wilkinson, GM**, S Dunn, AP Hinrich, M Marty, SN Schmidt, J Schade. 2010. Nitrogen dynamics along a moisture gradient in a restored wetland. ASLO-NABS Joint Meeting. Santa Fe, NM.
- Carpenter, LM, DWP Manning, EC Seybold, **GM Wilkinson**, JD Schade. 2009. Winter snowpack effects on biogeochemical processes in a restored tallgrass prairie. Ecological Society of America 94th Annual Meeting. Albuquerque, NM.

Teaching and Mentoring

2010-Present **Teaching Assistant**, Department of Environmental Sciences, Univ. of Virginia

- Guest Lecturer, Project Co-Instructor, Limnology, *Fall 2016, Fall 2015, Fall 2014*
- Lab Instructor, Fundamentals of Ecology, *Spring 2013, Spring 2011, Fall 2010*
- Lab Instructor, Terrestrial Ecology, *Fall 2012, Fall 2011*
- Lab Instructor, GIS Methods, *Spring 2012*

2011-Present **Research Mentor**, Department of Environmental Sciences, Univ. of Virginia

- Carol Yang*, (2011-2012), Univ. of Virginia, Envi Sci Distinguished Major
- Maxwell Kleinhans, (2012-2014), Univ. of Wisconsin, Madison
- Joshua Whelan (2012-2013), Univ. of Virginia
- Jonathan Torres^{§†} (2013- 2014), Univ. of Virginia
- Flannery Ballard[§] (2013- 2014), Univ. of Virginia
- Charles Hanley[§] (2014-2015), Univ. of Virginia
- Meredith Kadjeski (2016), Wells College
- Elizabeth McKay (2016), Calvin College
- Audrey Thellman (2016), University of Notre Dame

*Recipient of Sigma Xi Grant in Aid of Research

§ Recipient of Small College Research Grant, Univ. of Virginia

†Recipient of a College Council Research Grant, Univ. of Virginia

Professional Activities and Affiliations

Reviewer for: *Aquatic Sciences* (x2), *Biology Letters*, *Biogeochemistry* (x4), *Chinese Journal of Oceanology and Limnology*, *Ecology*, *Ecosystems* (x2), *Geophysical Research Letters*, *Global Change Biology*, *Hydrobiologia* (x2), *Journal of Animal Ecology*, *Journal of Geophysical Research- Biogeosciences*, *Journal of Hydrology*, *Limnology & Oceanography* (x2), *Limnology and Oceanography Letters*, *Limnology & Oceanography: Methods*, *Oecologia*, *Oikos*, *Science of the Total Environment*

Ad Hoc Associate Editor: *Ecological Applications*

Member of:

- Association for the Sciences of Limnology and Oceanography (ASLO)
- Ecological Society of America (ESA)

Recent Professional Service Activities

- ASLO Multicultural Program Mentor
- ASLO Summer Meeting 2016 Organizing Committee
- ASLO Student Activities Committee Co-Chair
- ASLO Meeting Mentor for graduate and undergraduate students (2015, 2016, 2017)
- AERC Congressional Briefing Day