

# Jason K. Keller

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- Interests** Anaerobic carbon cycling, biogeochemistry, ecosystem ecology, global change, plant-microbe interactions, microbial ecology, wetland ecology
- Education**
- Ph.D., Biological Sciences**  
2000-2006 University of Notre Dame Notre Dame, IN  
Dissertation: Controls of microbial carbon cycling in northern peatlands  
Advisors: Dr. Scott D. Bridgham and Dr. Charles F. Kulpa
- B.S., Biological Sciences (*cum laude*)**  
1994-1998 University of Notre Dame Notre Dame, IN
- Appointments**
- Assistant Professor**  
Fall 2008 Chapman University Orange, CA  
Accepted position in the Department of Biological Sciences. Primary responsibilities will include teaching and mentoring undergraduate research.
- Post-Doctoral Fellow**  
2006 - Present Smithsonian Environmental Research Center Edgewater, MD  
Research focused on plant-microbe interactions in tidal wetlands of the Chesapeake Bay region with an emphasis on anaerobic microbial carbon cycling.
- Adjunct Professor**  
Fall 2006 Anne Arundel Community College Annapolis, MD  
Taught section of course entitled "Ecosystems and the Environment" (12 students).  
Developed syllabus, classroom presentations and examinations for the class.
- Graduate Teaching Assistant**  
Fall 2000 and Fall 2002 University of Notre Dame Notre Dame, IN  
General Ecology Laboratory (~15 students). Designed and presented introductory laboratory lectures, graded student reports. Guest speaker for multiple course lectures.
- Research Technician**  
1998-2000 University of Notre Dame Duluth, MN  
Coordinated laboratory and field research on a project investigating carbon and energy flow and plant community response to climate change in peatlands.

## Publications

Bridgham, S.D., J.P. Megonigal, **J.K. Keller**, C. Trettin, and N.B. Bliss. Accepted for Publication. Wetlands in the State of the Carbon Cycle Report (SOCCR) Focused on North America, Synthesis and Assessment Product 2.2, Climate Change Science Program.

**Keller, J.K.** and S.D. Bridgham. 2007. Pathways of anaerobic carbon cycling across an ombrotrophic-minerotrophic peatland gradient. *Limnology and Oceanography* 52:96-107.

Bridgham, S.D., J.P. Megonigal, **J.K. Keller**, N.B. Bliss, and C. Trettin. 2006. The carbon balance of North American wetlands. *Wetlands* 26(4):889-916.

Weltzin, J.F., R.T. Belote, L.M. Williams, **J.K. Keller**, and E.C. Engel. 2006. Authorship in ecology: attribution, accountability, and responsibility. *Frontiers in Ecology and the Environment* 4:435-441. (see also Weltzin, J.F., R.T. Belote, L.M. Williams, **J.K. Keller**, and E.C. Engel. 2007. Ensuring that "authors" write - The authors reply. *Frontiers in Ecology and the Environment* 5:11)

**Keller, J.K.**, A.K. Bauers\*, S.D. Bridgham, L.E. Kellogg, and C.M. Iversen. 2006. Nutrient control of microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. *Journal of Geophysical Research* 111, G03006, doi:10.1029/2005JG000152 (\* = **undergraduate collaborator**)

**Keller, J.K.**, S.D. Bridgham, C.T. Chapin, and C.M. Iversen. 2005. Limited effects of long-term fertilization on carbon mineralization in a Minnesota fen. *Soil Biology and Biochemistry* 37:1197-1204.

Weltzin, J.F.\*, **J.K. Keller\***, S.D. Bridgham, J. Pastor, P.B. Allen, and J. Chen. 2005. Litter controls plant community composition in a northern fen. *Oikos* 110:537-546. (\* = **authors contributed equally**)

**Keller, J.K.**, J.R. White, S.D. Bridgham, and J. Pastor. 2004. Climate change effects on carbon and nitrogen mineralization in peatlands through changes in soil quality. *Global Change Biology* 10:1053-1064.

## Fellowships and Awards

Participant in Dissertation Initiative for the Advancement of Climate Change Research (DISCCRS) Symposium (2007)  
Smithsonian Post-doctoral Fellowship (2006-present)  
University of Notre Dame Award for Outstanding Graduate Research (2006)  
Arthur J. Schmitt Graduate Fellowship (2000-2005)  
National Science Foundation Graduate Research Fellowship (2001-2004)  
Society of Wetland Scientists Best Student Oral Presentation Award (2003)  
Kanab Center for Teaching and Learning Graduate Teaching Fellowship (2001-2002)

**Professional  
Activities**

Designed new laboratory activities for general ecology course in a collaborative, graduate student seminar at the University of Notre Dame. Culminated in a laboratory manual used in undergraduate teaching course.

Served as a committee member for the 24<sup>th</sup> Annual Midwest Ecology and Evolution Conference hosted by graduate students at the University of Notre Dame. Moderated Ecosystem Session during conference.

Membership in American Geophysical Union, American Society of Limnology and Oceanography, Ecological Society of America, Soil Science Society of America, and Society of Wetland Scientists.

Ad-hoc reviewer for: *American Midland Naturalist*, *Atmospheric Environment*, *Australian Journal of Soil Research*, *Biogeochemistry*, *Ecosystems*, *European Journal of Soil Science*, *Global Change Biology*, *Journal of Geophysical Research – Biogeosciences*, *New Phytologist*, *Soil Biology and Biochemistry*, *Wetlands*, *Wetlands Ecology and Management*.

Proposal reviewer for: *The National Science Foundation*, and *The Research Council of Norway*.

**Selected  
Presentations**

**Keller, J.K.**, A.A. Wolf, B.G. Drake, and J.P. Megonigal. 2007. Effects of elevated CO<sub>2</sub> on anaerobic heterotrophic metabolism in a Chesapeake Bay tidal wetland. Annual Society of Wetland Scientists Meeting, Sacramento, CA

**Keller, J.K.** 2007. Ecosystems in a changing world: The importance of plant-microbe interactions in wetlands. Invited Seminar. Chapman University, Orange, CA

**Keller, J.K.** 2006. Controls of microbial carbon cycling in northern peatlands. Invited Seminar. Smithsonian Environmental Research Center, Edgewater, MD

Bridgham, S.D., **J.K. Keller**, and M.A. Vile. 2005. Pathways of anaerobic carbon flow in peatlands. Ecological Society of America Meeting, Montreal, Canada

Nold, S., M. Zwolinski, and **J. Keller**. 2004. When does microbial diversity matter? International Society of Microbial Ecology, Cancun, Mexico

**Keller, J.K.**, A.K. Reist, and S.D. Bridgham. 2004. Effects of nitrogen and phosphorus fertilization on microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. INTECOL International Wetlands Conference, Utrecht, Netherlands

**Keller, J.K.**, J.R. White, S.D. Bridgham, and J. Pastor. 2003. Indirect effects of climate change on peatland carbon and nitrogen mineralization: results from a 6-year manipulative mesocosm experiment. Annual Society of Wetland Scientists Meeting, New Orleans, LA. **Winner of best student oral presentation award.**