

## **Sara F. Paver**

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### **EDUCATION**

**Ph.D., Program in Ecology, Evolution, and Conservation Biology** December 2013  
University of Illinois at Urbana-Champaign, Urbana, IL

**M.S., Natural Resources and Environmental Sciences** December 2009  
University of Illinois at Urbana-Champaign, Urbana, IL

**B.S., Biology**, Chemistry minor, *Summa Cum Laude* May 2007  
University of Illinois at Springfield, Springfield, IL

### **PROFESSIONAL EXPERIENCE**

**Postdoctoral Scholar** (2015-present), Advisor: Dr. Maureen L. Coleman, University of Chicago

**Sea Grant Knauss Fellow** (2014-2015), Division of Ocean Sciences, National Science Foundation  
Responsibilities: facilitate peer review and award decisions for proposals submitted to the Biological Oceanography Program and the Coastal Science, Engineering and Education for Sustainability (Coastal SEES) Solicitation; lead the planning and coordination of a workshop for Coastal SEES Principal Investigators

**Graduate Research** (2007-2013), Advisor: Dr. Angela D. Kent  
University of Illinois at Urbana-Champaign

Ph.D. Thesis: Investigating the effect of phytoplankton on bacterial community composition across different environmental contexts

M.S. Thesis: Investigating exudate- and habitat- mediated effects of phytoplankton on lake bacterial community dynamics

**Laboratory Technician** (October 2005-May 2006, June-August 2007), Advisor: Dr. Michael J. Lemke  
University of Illinois at Springfield

Responsibilities: Performed water chemistry analyses; trained student researchers

**Undergraduate Research** (2004-2007), Advisor: Dr. Michael J. Lemke  
University of Illinois at Springfield

Projects: Characterizing the bacterial community at the air-water interface and subsurface water of a lake with special attention to organophosphate nutrient cycling, bacterial community recovery from cryogenic treatments, archaeal diversity on decomposing silver maple leaves

### **SKILLS**

Molecular analysis of microbial communities (e.g., tag-sequencing, community fingerprinting techniques, qPCR), bacterial and algal culturing, experimental design, high-throughput sequence processing and analysis (e.g., using UNIX command line, QIIME, mothur), multivariate statistical analysis (e.g., using R, PRIMER, Canoco)

## PROFESSIONAL DEVELOPMENT ACTIVITIES

Ecological Dissertations in the Aquatic Sciences (Eco-DAS) Workshop, Center for Microbial Oceanography: Research and Education, Honolulu, HI, October 19-25, 2014  
Explorations in Data Analyses for Metagenomic Advances in Microbial Ecology (EDAMAME) Course at Kellogg Biological Station, Hickory Corners, MI, August 13-20, 2014  
National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center Trainings: Project Development and Evaluation, Planning and Facilitating Collaborative Meetings, July 15-18, 2014  
Integration & Application Network Science Communications Course, University of Maryland Center for Environmental Science, Horn Point, MD, June 21, 2014  
OCB Scoping Workshop: Improving predictive biogeochemical models through single cell-based analyses of marine plankton physiological plasticity, genetic diversity and evolutionary processes, Bigelow Laboratory for Ocean Sciences, Boothbay, ME, May 28-30, 2014  
National Science Foundation Program Management Seminar and Merit Review Basics, 2014

## HONORS, AWARDS, AND FELLOWSHIPS

2014	Sea Grant Knauss Fellowship
2012	John G. & Evelyn Hartman Heiligenstein Outstanding Teaching Assistant Award
2012	Best Overall Talk, 14th Annual Graduate Student in Ecology and Evolutionary Biology Symposium, University of Illinois at Urbana-Champaign
2011 SP, FA*	List of Teachers Ranked as Excellent by Their Students (*outstanding)
2011	NSF Doctoral Dissertation Improvement Grant (\$14,890)
2011	Program in Ecology, Evolution, and Conservation Summer Research Grant (\$1,000)
2010	International Society for Microbial Ecology Travel Grant
2010, 2011, 2012	Program in Ecology, Evolution, and Conservation Travel Grants
2010	University Fellowship (\$1,000)
2010	Graduate College Conference Travel Grant
2007-2009	O'Dell Fellowship in Soil Science, University of Illinois at Urbana-Champaign
2008, 2009	Natural Resources and Environmental Sciences Educational Opportunity Travel Grant
2009	NSF Graduate Research Fellowship Honorable Mention
2008	American Society for Limnology and Oceanography Student Travel Award
2006	<i>Sigma Xi</i> Grant-in-Aid of Research, "Extension of Phosphate Cycling in Freshwater: Identification of Bacteria that Cycle Organophosphates" (\$400)
2006	American Society for Microbiology Undergraduate Research Fellowship (\$5,000)
2006	Academic Achievement Award, Capital Scholars Honors Program, University of Illinois at Springfield
2005	First Place Student Poster Award, 5th Annual University of Illinois at Springfield Science Research Symposium

## TEACHING EXPERIENCE

Teaching Assistant, University of Illinois at Urbana-Champaign  
Fundamentals of Environmental Science (NRES 100, Fall 2013), Supervisor: Dr. Angela Kent  
Environmental Biology Online Course (IB 105, Fall 2012), Supervisor: Beth Morgan  
Ecology (IB 203, Fall 2011), Supervisor: Dr. Carol Augspurger  
Quantitative Methods in NRES (NRES 421, Spring 2011), Supervisor: Dr. Anthony Yannarell  
Writing Across the Curriculum Seminar Participant, University of Illinois at Urbana-Champaign, 2012  
Peer Tutor, Capital Scholars Honors Program, University of Illinois at Springfield, 2005-2007  
Online Tutor, Biology of Water Pollution, University of Illinois at Springfield, Spring 2007

## MENTORING EXPERIENCE

Undergraduate Research Mentor, Kent Lab, University of Illinois at Urbana-Champaign

Kevin Hayek (2009-2012), American Society for Microbiology Undergraduate Research Fellow (2010), graduated with Highest Distinction for undergraduate research (2012)

Elizabeth Baird (2010-2012)

Scott Rysz (2012-2013), graduated with Distinction for undergraduate research (2013)

## SERVICE

Reviewer for *Biogeosciences*, *Environmental Microbiology*, *Aquatic Microbial Ecology*

Ad-hoc reviewer for NSF Ocean Sciences, Illinois-Indiana Sea Grant

Ecolunch Seminar Coordinator, University of Illinois at Urbana-Champaign, 2011-2012

Educational outreach activities

Volunteer Pen Pal, Letters to a Pre-Scientist, 2013-present

Volunteered at the NOAA Exhibit, USA Science and Engineering Festival, 2014

Completed the Illinois Researchers in Partnership with K-12 Science Educators Course, 2011

Designed and presented lessons with hands-on science activities, Urbana-Champaign, IL, 2009-2012

Organizations: Orpheum Children's Science Museum Girls Do Science Camp, Campus Middle

School for Girls, Don Moyer Boys and Girls Club, Benjamin Banneker Science Program

Aquatics Station Presenter, Illinois State Envirothon Competition. 2009-2012

Peer Mentor, Capital Scholars Honors Program, University of Illinois at Springfield, 2005-2007

Search Committee Student Member, Cell Biologist Position, University of Illinois at Springfield, 2006

## PROFESSIONAL AFFILIATIONS

American Society for Microbiology

Association for the Sciences of Limnology and Oceanography

Ecological Society of America

International Society for Microbial Ecology

*Sigma Xi* Scientific Research Society

## PUBLICATIONS

**Paver, S. F.**, N. D. Youngblut, R. J. Whitaker and A. D. Kent. 2014. Phytoplankton succession affects the composition of *Polynucleobacter* subtypes in humic lakes. *Environmental Microbiology*. doi: 10.1111/1462-2920.12529.

**Paver, S. F.**, \*K. R. Hayek, K. A. Gano, J. R. Fagen, C. T. Brown, A. G. Davis-Richardson, D. B. Crabb, R. Rosario-Passaperia, A. Giongo, E. W. Triplett, and A. D. Kent. 2013. Interactions between specific phytoplankton and bacteria affect lake bacterial community succession. *Environmental Microbiology* **15** (9): 2489-2504.

**Paver, S. F.**, C. E. Nelson, and A. D. Kent. 2013. Temporal succession of glycolate-utilizing bacterioplankton tracks changes in dissolved organic matter in a high-elevation lake. *FEMS Microbiology Ecology* **83** (3): 527-805.

**Paver, S. F.** and A. D. Kent. 2010. Temporal patterns in glycolate-utilizing bacterial community composition correlate with phytoplankton population dynamics in humic lakes. *Microbial Ecology* **60** (2): 406-18.

\*Undergraduate co-author

## PRESENTATIONS

### *Invited Talk*

**Paver, S. F.** 2013. Temporal patterns in lake bacterial community composition: what do phytoplankton have to do with it? University of Illinois at Springfield. Springfield, IL.

### *Contributed Talks*

**Paver, S. F.** and A. D. Kent. 2014. Temporal patterns in lake bacterial community composition: what do phytoplankton have to do with it? 15th International Symposium on Microbial Ecology. Seoul, South Korea.

**Paver, S. F.** 2014. Temporal patterns in lake bacterial community composition: what do phytoplankton have to do with it? Knauss Fellows Brown Bag Seminar. National Oceanic and Atmospheric Administration (NOAA) Headquarters, Silver Spring, MD.

**Paver, S. F.** 2013. Temporal patterns in lake bacterial community composition: what do phytoplankton have to do with it? Program in Ecology, Evolution, and Conservation Biology Exit Seminar. Urbana, IL.

**Paver, S. F.** and A. D. Kent. 2013. Interactions with phytoplankton affect bacterial community response to changes in temperature and light availability. Association for the Sciences of Limnology and Oceanography 2013 Aquatic Sciences Meeting. New Orleans, LA.

**Paver, S. F.** and A. D. Kent. 2012. Context matters: Effects of phytoplankton on bacterial community composition change across varying temperature and light conditions. 97th Ecological Society of America Annual Meeting. Portland, OR.

**Paver, S. F.** 2012. Bacterial response to phytoplankton under different environmental contexts. University of Illinois Ecolunch Seminar. Urbana, IL.

**Paver, S. F.** 2012. Phytoplankton affect bacterial community temporal patterns in lakes. 14th Annual Graduate Student Symposium. Urbana, IL.

**Paver, S. F.**, \*K. R. Hayek, E. W. Triplett, and A. D. Kent. 2011. Phytoplankton succession and lake bacterial community dynamics. 96th Ecological Society of America Annual Meeting. Austin, TX.

**Paver, S. F.** 2010. Dynamics of glycolate-utilizing bacteria correlate with phytoplankton population dynamics in lakes. 12th Annual Graduate Student Symposium. Urbana, IL.

**Paver, S. F.** 2009. Exploring resource mediated control of aquatic bacterial communities. University of Illinois Ecolunch Seminar. Urbana, IL.

### *Posters*

**Paver, S. F.** and A. D. Kent. 2014. Lessons from lakes: Interacting effects of temperature, light availability, and phytoplankton on bacterial community composition. Gordon Research Conference on Ocean Global Change Biology: Interactive Effects of Multiple Global Change Variables. Waterville Valley, NH.

**Paver, S. F.**, N. D. Youngblut, R. J. Whitaker and A. D. Kent. 2013. Phytoplankton shape the composition of *Polynucleobacter*. Association for the Sciences of Limnology and Oceanography 2013 Aquatic Sciences Meeting. New Orleans, LA.

\*K. R. Hayek, **S. F. Paver**, and A. D. Kent. 2011. Influence of Light And Carbon Source on Bacterial Community Structure. 111th American Society for Microbiology General Meeting. New Orleans, LA.

**Paver, S. F.**, \*K. R. Hayek, and A. D. Kent. 2010. Algal populations influence lake bacterial community structure. 13th International Symposium on Microbial Ecology. Seattle, WA.

- Paver, S. F.** and A. D. Kent. 2010. Particle attachment as a habitat filter for lake bacterial assemblages. 13th International Symposium on Microbial Ecology. Seattle, WA.
- Paver, S. F.** and A. D. Kent. 2009. Contribution of Particle-Associated Bacteria to Aquatic Microbial Community Dynamics. 109th American Society for Microbiology General Meeting. Philadelphia, PA.
- Paver, S. F.**, Y. Chang, and A. D. Kent. 2008. Molecular characterization of aquatic food webs. American Society for Limnology and Oceanography Summer Meeting. St. John's, NL, Canada. 12th International Symposium on Microbial Ecology. Cairns, Australia. University of Illinois Environmental Horizons Conference. Urbana, IL.
- Lemke, M. J. and **S. F. Paver**. 2008. Bacterial use of membrane lipids: A sustainable source of phosphate for the aquatic microbial community? 93rd Ecological Society of America Annual Meeting. Milwaukee, WI.
- Paver, S. F.** and M. J. Lemke. 2007. The bacterial assemblage at the air-water interface of a freshwater lake with implications for organophosphate nutrient cycling. 107th American Society for Microbiology General Meeting. Toronto, ON, Canada.
- Paver, S. F.**, M. Randle, and M. J. Lemke. 2007. Between- and within-lake comparison of bacterial Assemblages in the Illinois River Floodplain. American Museum of Natural History's Center for Biodiversity and Conservation Annual Symposium. New York, NY.
- Paver, S.F.** and M. J. Lemke. 2007. The bacterial assemblage at the air-water interface with implications for organophosphate nutrient cycling. 7th Annual Science Symposium. University of Illinois at Springfield. Springfield, IL.
- Paver, S.F.**, M. Rossetto, J. Bonacum, A. Corthals, R. DeSalle, and M. J. Lemke. 2006. Preliminary studies in the development of best practice methods for archiving bacterial communities at the American Museum of Natural History, NY. 106th American Society for Microbiology General Meeting. Orlando, FL.
- Paver, S. F.**, J. Bonacum, A. Corthals, R. DeSalle, and M. J. Lemke. 2006. Comparison of bacterial community recovery from different cryogenic treatments for creation of archiving techniques at the American Museum of Natural History, NY. 6th Annual Science Symposium. University of Illinois at Springfield. Springfield, IL.
- Paver, S. F.**, D. M. Kellerhals, and M. J. Lemke. 2005. *Archaea* diversity on decomposing silver maple (*Acer saccharinum*) leaves on the Illinois River floodplain. 5th Annual Science Symposium. University of Illinois at Springfield. Springfield, IL.

\*Undergraduate co-author