

# Samuel B Fey

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## EDUCATION

**Dartmouth College, Ph.D.** 2014  
Ecology and Evolutionary Biology, Advisor: Kathryn L. Cottingham

**Hamilton College, B.A.** 2006  
Major in Biology. Minor in Environmental Studies. Study abroad in Christchurch, New Zealand

## CURRENT APPOINTMENTS

**Assistant Professor** Reed College. Department of Biology 2017-Present

## PRIOR APPOINTMENTS

**Postdoctoral Fellow** Yale University. Department of Ecology and Evolutionary Biology 2014-2017  
Advisor: David A. Vasseur

**Honorary Fellow** University of Wisconsin, Madison. Department of Zoology. 2016-2017

**Visiting Postdoctoral Scholar.** Dartmouth College. Department of Biological Sciences 2014-2016

**Lecturer.** Dartmouth College. Department of Biological Sciences 2013

**Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Fellow** 2012-2014

**NSF Integrative Graduate Education and Research Traineeship (IGERT) Fellow** 2010-2012

**Graduate Teaching Assistant.** Dartmouth College 2008-2010

**Postbaccalaureate Fellow.** National Institutes of Health 2006-2008

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## GRANTS, FELLOWSHIPS, AWARDS

James S. McDonnell Foundation Postdoctoral Fellowship in Complex Systems (\$200,000) 2014-2017

EPA Science to Achieve Results (STAR) Fellowship (\$126,000) 2012-2014

Dartmouth Graduate Student Filene Teaching Award 2013

Neukom Institute 3<sup>rd</sup> place prize for outstanding graduate research in computational science 2013

GLEON (Global Lake Ecological Observatory Network) Meeting Travel Fellowships 2011-2013

National Science Foundation (NSF) Doctoral Dissertation Improvement Grant (\$11,926) 2011

Dartmouth Gilman Fellowship (\$1,500) 2011

David Cushing Prize for best paper by an early career stage scientist where the first author is aged 35 or younger in *Journal of Plankton Research* 2010

NSF IGERT Fellowship: Polar Environmental Change 2010-2012

Porter Foundation Grant for Research in Sustainability Science (\$5,000) 2009

Dartmouth Graduate Student Travel Fellowship (\$500) 2009

Woodstock Union Endowment Foundation (\$1,000) 2009

GLEON 9 Meeting Student Travel Fellowship 2009

NIH Postbaccalaureate Intramural Research Training Award (\$56,000) 2006-2008

Dixon-Comstock Fellowship at Hamilton College 2002-2006

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## PUBLICATIONS

=indicates (co)equal authorship

# indicates undergraduate coauthor

### Published & In Press

1. **Fey SB**, D Wiczynski. 2017. The temporal structure of the environment may influence range expansions during climate warming. *Global Change Biology*. 23, 636-645
2. KL Cottingham, **SB Fey**<sup>=</sup>, KJ Fritschie<sup>=</sup>, JV Trout-Haney<sup>=</sup>. 2017. Advancing ecosystem science by promoting greater use of theory and multiple research approaches in graduate education. *Ecosystems*. 20, 267-273.
3. **Fey SB**, Vasseur DA. 2016. Thermal variability alters the impact of climate warming on consumer-resource systems. *Ecology*. 97, 1690-1699.
4. Dillon, ME, Woods A, Wang G, **Fey SB**, Vasseur DA, Telemeco RS, Marshall KE, Pincebourde S. 2016. Life in the frequency domain: the biological impacts of changes in climate variability at multiple time scales. *Integrative and Comparative Biology*. 56, 14-30.
5. **Fey SB**<sup>=</sup>, Siepielski AM<sup>=</sup>, Nusslé S, Cervantes-Yoshida K, Hwan JL, Huber ER, Fey MJ<sup>#</sup>, A Catenazzi, Carlson SM. 2015. Recent shifts in the occurrence, causes, and magnitude of animal mass mortality events. *Proceedings of the National Academy of Sciences, USA*. 112, 1083-1088.
6. Sanders RW, Cooke SL, Fischer JM, **Fey SB**, Heinze AW, Jeffrey WH, Macaluso AL, Moeller RE, Morris DP, Neale P, Olson M, Pakulsk JD, Porter JA, Schoener DM, Williamson CE. 2015. Shifts in plankton community structure and productivity after additions of naturally occurring dissolved organic matter: results from large-scale lacustrine mesocosms. *Limnology and Oceanography*. 60, 2130-2144.
7. **Fey SB**<sup>=</sup>, Mertens AN<sup>=#</sup>, Cottingham KL. 2015. Autumn leaf subsidies influence spring dynamics of freshwater plankton communities. *Oecologia*. 178, 875-885.
8. **Fey SB**, Mertens AN<sup>#</sup>, Beversdorf LJ, McMahon KD, Cottingham KL. 2015. Recognizing cross-ecosystem responses to changing temperatures: soil warming impacts pelagic food webs. *Oikos*. 124, 1473-1481.
9. **Fey SB**, Herren CM<sup>#</sup>. 2014. Temperature-mediated biotic interactions influence enemy release of non-native species in warming environments. *Ecology*. 95, 2246-2256.
10. Bertilsson S, Burgin A, Carey CC, **Fey SB**, Grossart H, Grubisic L, Jones I, Kirillin G, Lennon JT, Shade A, Robyn S. 2013. The below-ice microbiome of seasonally frozen lakes. *Limnology and Oceanography*. 58, 1998-2012.
11. O'Donnell D<sup>#</sup>, **Fey SB**, Cottingham KL. 2013. Nutrient availability influences kairomone-induced defenses in *Scenedesmus acutus* (Chlorophyceae). *Journal of Plankton Research*. 35, 191-200.
12. **Fey SB**, Cottingham KL. 2012. Thermal sensitivity predicts the establishment success of non-native species in a mesocosm warming experiment. *Ecology*. 93, 2313-2320.

13. **Fey SB**, Cottingham KL. 2011. Linking biotic interactions and climate change to the success of exotic *Daphnia lumholtzi*. *Freshwater Biology*. 56, 2196-2209.
14. **Fey SB**, Mayer ZA<sup>#</sup>, Davis SD<sup>#</sup>, Cottingham KL. 2010. Zooplankton grazing of *Gloeotrichia echinulata* and associated life history consequences. *Journal of Plankton Research*. 32, 1337-1347.  
\*\*2010 David Cushing Prize winner for best paper in *JPR* by an early career stage scientist\*\*
- While at National Institutes of Health (2006-2008)*
15. Schmeisser H, **Fey SB**, Horowitz J, Fischer ER, Miyake K, Balinsky CA, Miyake K, Bekisz J, Snow AL, Zoon KC. 2013. Type I interferons induce autophagy in certain human cancer cell lines. *Autophagy*, 9, 1-14.
16. Baron S, Finbloom F, Horowitz J, Bekisz J, Morrow A, Zhao T, **Fey S**, Schmeisser H, Balinsky C, Miyake K, Clark C, Zoon K. 2011. Near eradication of clinically relevant concentrations of human tumor cells by interferon-activated monocytes in vitro. *Journal of Interferon and Cytokine Research*, 33, 276-282.

## PRESENTATIONS (first author)

### *Presentations at National Meetings*

**Fey SB**. 2017. Species interactions in variable environments: How temporal patterns of temperature may influence competitive interactions. Oral Presentation. SICB annual meeting. New Orleans, LA.

**Fey SB**, Vasseur DA. 2015. Theoretical predictions for consumer-resource dynamics in variable thermal environments. Oral Presentation. ESA annual meeting. Baltimore, MD.

**Fey SB**, Herren CM. 2014. Consequences of asymmetric responses to changes in temperature. Poster Presentation. Gordon Research Seminar: Unifying Ecology Across Scales. Biddeford, ME.

**Fey SB**, Mertens AN<sup>#</sup>, Cottingham KL. 2014. Inter-annual response of freshwater plankton communities to leaf additions: do autumn subsidies impact spring dynamics? Oral Presentation. Joint Aquatic Sciences Meeting. Portland, OR.

**Fey SB**, Mertens AN<sup>#</sup>, Beversdorf LJ, McMahon KD, Cottingham KL. 2013. Climate change consequences cross ecosystem boundaries: increase in soil temperature impact lake plankton communities through modifying terrestrial vegetation subsidies. Oral Presentation. ESA annual meeting. Minneapolis, MN.

**Fey SB**, Herren CM<sup>#</sup>. 2012. Predicting the impact of climate change on the establishment success of non-native species. Oral Presentation. ESA annual meeting. Portland, OR.

**Fey SB**, Cottingham KL. 2010. Climate change and the establishment of *Daphnia lumholtzi*. Oral Presentation. Association for the Sciences of Limnology and Oceanography (ASLO) summer meeting. Santa Fe, NM.

### *Invited Seminars*

**Fey SB**, 2016. University of Vermont. The Rubenstein School. Burlington, VT.

**Fey SB**, 2016. Reed College. Department of Biology. Portland, OR.

**Fey SB**, 2016. College of William and Mary. Department of Biology. Williamsburg, VA.

**Fey SB**. 2015. Hamilton College. Department of Biology. Clinton, NY.

**Fey SB**, Chaves-Ulloa R, Trout-Haney JV, Culler LE, Cottingham KL. 2014. The future of aquatic science: an education session for undergraduates. Joint Aquatic Sciences Meeting. Portland, OR.

**Fey SB**. 2011. Franklin and Marshall College: Department of Biology. Lancaster, PA.

**Fey SB**. 2011. Colby Sawyer College: Department of Natural Sciences. New London, NH.

*Presentations at International Meetings*

**Fey SB**, Herren CM<sup>#</sup>. 2012. Implications of temperature-sensitive enemy release for lake food webs. GLEON 14 meeting: Mulranny, Ireland.

**Fey SB**. 2011. Can thermal reaction norms predict the establishment success of non-native species in a warming world? GLEON 13 meeting: Sunapee, NH.

**Fey SB**. 2011. Changing temperatures and the movement of species. Polar Environmental Change Symposium. Public oral presentation. Nuuk, Greenland.

**Fey SB**, Cottingham KL. 2010. Temperature and cyanobacterial blooms mediate the future establishment of *Daphnia lumholtzi*. Poster presentation. GLEON 11 meeting: Nanjing, China.

**Fey SB**, Mayer ZA<sup>#</sup>, Davis SC<sup>#</sup>, Cottingham KL. 2009. Zooplankton grazing of *Gloeotrichia echinulata* and associated life history consequences. Poster presentation. GLEON 9 meeting; Boulder Junction, WI.

**Fey SB**, Schmeisser H, Mejido J, Nie H, Tsuno T, Zoon KC. 2007. Influence of IFN- $\alpha$ 2c on growth arrest, apoptosis, and autophagy in Daudi cells. Poster presentation. ISICR Annual Meeting; Oxford, UK.

*Presentations at Public Science Events*

**Fey SB**. 2017. Forecasting ecology amidst global change. Oral Presentation. 4 Lakes SCUBA Club. Madison, WI.

*Presentations at Regional Meetings*

**Fey SB**. 2017. Using quantitative ecology to resolve the response of organisms to rapid environmental change. Pacific Northwest Quantitative Biology Meeting. Portland, OR.

**Fey SB**. 2011. Does hotter mean more invasive species? Poster presentation. Understanding Rapid Environmental and Social Change in the Arctic meeting. Juneau, AK.

**Fey SB**, Schmeisser H, Fischer B, Mejido J, Zoon KC. 2008. PCD induction induced by IFN- $\alpha$ . Poster presentation. Keystone Symposia: Cell Death in the Immune System; Breckenridge, CO.

**Fey SB**. 2008. The effect of human interferon- $\alpha$  2c on apoptosis and autophagy induction in Daudi Burkitt's Lymphoma cells. Oral presentation. Postbaccalaureate Seminar Series; Bethesda, MD.

**Fey, SB**, Schmeisser H, Mejido J, Zoon KC. 2007. Influence of IFN- $\alpha$ 2c on growth arrest, apoptosis, and autophagy in Daudi cells. Poster presentation. 20<sup>th</sup> Anniversary NIH Research Festival; Bethesda, MD.

**Fey, SB**, Pfitsch W. 2006. Ecological interactions limiting molybdenum uptake in *Lupinus perennis* and symbiotic bradyrhizobia. Poster presentation. Annual Adirondack Natural History Conference; Albany, NY.

#### *Departmental Seminars*

**Fey SB**. 2014. The occurrence, cause, and magnitude of animal mass mortality events. Oral presentation. Dartmouth Ecology and Evolutionary Biology Lunch Series.

**Fey SB**. 2013. Temperature effects on food web interactions: From lakes to landscapes. Oral presentation for public thesis defense. Dartmouth College.

**Fey SB**. 2012. Predicting the effects of temperature on community assembly. Oral presentation. Dartmouth Ecology and Evolutionary Biology Lunch Series.

**Fey SB**. 2010. Cross system consequences of climate change for freshwater plankton communities. Oral presentation. Dartmouth Ecology and Evolutionary Biology Lunch Series.

**Fey SB**. 2010. The effect of climate change on aquatic food web interactions. Oral presentation for public thesis proposal defense. Dartmouth College.

**Fey SB**. 2009. The influence of temperature on aquatic biotic interactions and community structure. Oral presentation. Dartmouth Ecology and Evolutionary Biology Lunch Series.

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### TEACHING EXPERIENCE

#### *Course Director*

Methods in Ecology, Dartmouth College, Department of Biological Sciences 2013

#### *Guest Lecturer*

2009-Present  
Research Methods (University of Vermont 2016), Aquatic Ecology (College of William and Mary 2016), Ecology (Hamilton College, 2015), Ecology (Dartmouth 2015), Physiological Ecology (Dartmouth 2013), Animal Behavior (Dartmouth 2012), Ecology (Dartmouth 2012 Spring & Fall), Ecological Research in the Tropics (Dartmouth 2012), Introduction to Polar Systems (Dartmouth 2011), Invasive Species, Society and the Environment (Dartmouth 2011), Methods in Ecology (Dartmouth 2009, 2010, 2016).

#### *Teaching Assistantships, Dartmouth College Department of Biological Sciences*

Biology Foreign Studies Program: Ecological Research in the Tropics 2012  
Physiological Ecology 2011  
Methods in Ecology 2009  
Evolution and Genomic Diversity 2009  
Animal Behavior 2008

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### PROFESSIONAL ACTIVITIES AND AFFILIATIONS

Reviewer for: *The American Naturalist*, *Animal Conservation*, Austrian Academy of Sciences, *Current Opinion in Insect Science*, *Ecology*, *Environmental Pollution*, *Freshwater Science (Journal of the North American Benthological Society)*, *Functional Ecology*, *Genomics*, *Global Change Biology*, *Journal of Plankton Research*, *Journal of Animal Ecology*, *Hydrobiologia*, *Knowledge & Management of Aquatic Ecosystems*, Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Project Grants, National Science Foundation (external proposal reviewer), *Oikos*, *PeerJ*, *PLoS ONE*, *Polar Biology*, *Proceedings of the Royal Society B*, *Science* (co-review with KLC), *Sustainability*, *Water Research*, Yale Institute for Biospheric Studies (YIBS) Small Grant Program.

Ecological Society of America (ESA) Aquatic Ecology Section Secretary. 2017-Present

NCEAS (National Center for Ecological Analysis and Synthesis) Working Group 2017-Present  
Title: Synthesizing population and community synchrony to understand drivers of ecological stability across LTER sites

NCEAS (National Center for Ecological Analysis and Synthesis) Working Group 2014-2017  
Title: A toolbox for analysis of long-term ecological dynamics

GLEON Limnology Theory Working Group Participant. 2010-2014  
Title: Examining patterns of controls on phytoplankton community assembly.

Women in Science Project (WISP) research internship sponsor. 2009-2011

Global Change Ecology Hands-on Research for High School Students. Woodstock, VT 2009-2011

Four winds Nature Program volunteer. Mount Lebanon Elementary School. Lebanon, NH. 2009

Society Memberships: Association for the Science of Limnology & Oceanography, Ecological Society of America, Global Lake Ecological Observatory Network