

Trista J. Vick-Majors

Flathead Lake Biological Station

University of Montana

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Education

Ph.D., Ecology and Environmental Sciences, 2011-2015

Montana State University

Advisor: Dr. John Priscu

Dissertation: *Biogeochemical processes in Antarctic aquatic environments: linkages and limitations*

M.S., Land Resources and Environmental Sciences, 2008-2010

Montana State University

Advisor: Dr. John Priscu

Thesis: *Bacterioplankton dynamics in stratified lakes of the Taylor Valley, Antarctica, during the transition to Polar Night*

B.A., Biology, 1999-2003

Colorado College

Research and Professional Experience

Postdoctoral Research Associate (2017-present)

Microbial ecology and metabolism in oligotrophic environments

University of Montana, Flathead Lake Biological Station, USA

Supervisor: Dr. Matthew Church.

Postdoctoral Research Associate (2016-2017)

Linking carbon biogeochemistry and microorganisms in northern aquatic ecosystems

Université du Québec à Montréal, Canada

Supervisor: Dr. Paul del Giorgio.

Graduate Research Assistant (2010-2016)

Whillans Ice Stream Subglacial Access Research and Drilling (WISSARD) Project

Montana State University, USA.

Supervisor: Dr. John Priscu.

Summer Research Experience (2012)

Hawai'i Ocean Time Series

R/V Kilo Moana, University of Hawai'i Center for Microbial Oceanography

Graduate Research Assistant (2008-2010)

Microbial Ecology and Limnology of McMurdo Dry Valley Lakes, Antarctica

Montana State University, USA

Supervisor. Dr. John Priscu

Nevada STARS Research Fellow (2006-2008)

Microbiology of Great Basin hot springs

University of Nevada, Las Vegas, USA

Supervisor: Dr. Brian Hedlund

Peer-reviewed publications (published, accepted, and in press)

20. Michaud AB, Dore JE, Achberger AM, Christner BC, Priscu JC, Skidmore ML, **Vick-Majors TJ** (2017). Microbial oxidation as a methane sink and energy source beneath the West Antarctic Ice Sheet. *Nature Geoscience*. 10:582-586. doi:10.1038/ngeo2992 (Alphabetical after first two authors).
19. Stelmach KB, Neveu M, **Vick-Majors TJ**, Mickol R, et al. (2017) Secondary electrons as a novel energy source: Implications for life on worlds with tenuous atmospheres. *Astrobiology*. 18:73-85. doi: 10.1089/ast.2016.1510
18. Liu Y, **Vick-Majors TJ**, Priscu JC, Yao T, Kang S, Liu K, Cong Z, Xiong J, Li Y (2017). Biogeography of cryoconite bacterial communities on glaciers of the Tibetan Plateau. *FEMS Microbiology Ecology*. 93:fix072. doi:10.1093/femsec/fix072
17. **Vick-Majors TJ**, Mitchell AC, Achberger AM, Christner BC, Dore JE, Michaud AB, Mikucki JA, Purcell AM, Skidmore ML and Priscu JC (2016). Physiological ecology of microorganisms in Subglacial Lake Whillans. *Frontiers in Microbiology*. 7:1705. doi: 10.3389/fmicb.2016.01705
16. Bowman JS, **Vick-Majors TJ**, Morgan-Kiss R, Takacs-Vesbach C, Ducklow HW, Priscu JC (2016). Contrasting carbon and microbial community dynamics in two polar extremes: The lakes of the McMurdo Dry Valleys and the West Antarctic Peninsula marine ecosystem. *Bioscience*. 66:829-847. doi:10.1093/biosci/biw103
15. Achberger AM, Christner BC, Michaud AB, Priscu JC, Skidmore ML and **Vick-Majors TJ** (2016). Microbial Community Structure of Subglacial Lake Whillans, West Antarctica.

Frontiers in Microbiology. 7:1457. doi: 10.3389/fmicb.2016.01457 (Alphabetical after first author).

14. Michaud AB, Skidmore ML, Mitchell AC, **Vick-Majors TJ**, Barbante C, Turetta C, vanGelder W, Priscu JC. (2016). Solute sources and geochemical processes in Subglacial Lake Whillans, West Antarctica. *Geology*. 5:G37639.1. doi: 10.1130/G37639.1
13. Liu Y, Priscu J, Xiong J, Conrad R, **Vick-Majors T**, Chu H, Hou J. (2016). Salinity drives archaeal distribution patterns in high altitude lake sediments on the Tibetan Plateau. *FEMS Microbiology Ecology*. 92(3):fiw033. doi: 10.1093/femsec/fiw033
12. Liu Y, Yao T, Priscu JC, **Vick-Majors TJ**, Xu B, Jiao N, Santibáñez P, Huang S, Wang N, Greenwood M, Michaud AB, Kang S, Wang J, Gao Q, Yang Y. (2016). Bacterial responses to environmental change in the Tibetan Plateau over the past half-century. *Environmental Microbiology*. 18:1930-1941. doi: 10.1111/1462-2920.13115
11. Mikucki JA, Lee PA, Ghosh D, Purcell AM, Mitchell AC, Mankoff KD, Fischer AT, Tulaczyk S, Carter S, Siegfried M, Fricker HA, Hodson T, Coen J, Powell R, Scherer R, **Vick-Majors T**, Achberger AA, Christner BC, Tranter M, and the WISSARD Science Team (2016). Subglacial Lake Whillans biogeochemistry: A synthesis of current knowledge. *Philosophical Transactions of the Royal Society A*. 374:20140290
doi:10.1098/rsta.2014.0290.
10. **Vick-Majors TJ**, Achberger A, Santibáñez P, Dore JE, Hodson T, Michaud AB, Christner BC, Mikucki J, Skidmore ML, Powell R, Adkins WP, Barbante C, Mitchell A, Scherer R, Priscu JC (2016). Biogeochemistry and microbial diversity in the marine cavity beneath the McMurdo Ice Shelf, Antarctica. *Limnology and Oceanography*. 61:572-586.
doi:10.1002/lno.10234
9. Christner BC, Priscu JC, Achberger A, Barbante C, Carter SP, Christianson K, Mikucki JA, Michaud AB, Mitchell A, Skidmore ML, **Vick-Majors TJ**, and the WISSARD Science Team (2014). A microbial ecosystem beneath the West Antarctic Ice Sheet. *Nature*. 512:310-313. (Alphabetical after first two authors).
8. Xu Y, **Vick-Majors TJ**, Morgan-Kiss R, Priscu JC, Amaral-Zettler L (2014). Ciliate diversity, community structure, and novel taxa in lakes of the McMurdo Dry Valleys, Antarctica. *Biological Bulletins*. 227:175-190.
7. Liu Y, Priscu J, Yao T, **Vick-Majors T**, Michaud A, Jiao N, Hou J, Tian L, Hu A, Chen Z (2014). A comparison of pelagic, littoral, and riverine bacterial assemblages in Lake Bangongco, Tibetan Plateau. *FEMS Microbiology Ecology*. 89:211-221.

6. Purcell AM, Mikucki JA, Achberger A, Alekhina I, Barbante C, Christner BC, Ghosh D, Michaud AB, Mitchell AC, Priscu JC, Scherer R, Skidmore M, **Vick-Majors TJ**, and the WISSARD Science Team (2014). Microbial sulfur transformations in Subglacial Lake Whillans sediments. 19:594. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2014.00594 (Alphabetical after first two authors).
5. **Vick-Majors TJ**, Priscu JC, Amaral-Zettler L (2014). Modular structure suggests community plasticity during the transition to polar night in ice-covered Antarctic lakes. *The ISME Journal*. 8:778-789. doi:10.1038/ismej.2013.190.
4. Priscu JC, Achberger AM, Cahoon J, Christner B, Edwards RL, Jones W, Michaud AB, Siegfried MR, Skidmore M, Siegel RH, Switzer G, Tulaczyk S, **Vick-Majors TJ** (2013). A microbiologically clean strategy for access to the Whillans Ice Stream Subglacial Environment. *Antarctic Science*. 25:637-647. doi:10.1017/S0954102013000035 (Alphabetical after first author).
3. **Vick TJ** and Priscu JC (2012). Bacterioplankton responses to the polar night transition in lakes of the Taylor Valley, Antarctica. *Aquatic Microbial Ecology*. 68:77-90. doi:10.3354/ame01604
2. Thurman J, Parry J, Hill P, Priscu J, **Vick T**, Chiuchiolo A, Laybourn-Parry J (2012). Microbial dynamics and flagellate grazing during transition to winter in Lakes Hoare and Bonney, Antarctica. *FEMS Microbiology Ecology*. 82:449-458. doi:10.1111/j.1574-6941.2012.01423.x
1. **Vick TJ**, Dodsworth JA, Costa KC, Shock EL, Hedlund BP (2010). Microbiology and geochemistry of Little Hot Creek, a hot spring environment in the Long Valley Caldera. *Geobiology*, 8:140-154. doi:10.1111/j.1472-4669.2009.00228.x

Refereed publications (in preparation, submitted and in review)

5. Santibáñez P, Michaud AB, **Vick-Majors TJ**, D'Andrilli J, Chiuchiolo A, Priscu JC. Preferential incorporation of bacteria into lake ice covers during freezing. In preparation for *Journal of Geophysical Research-Biogeosciences*.
3. **Vick-Majors TJ** and Priscu JC. Partitioning of inorganic carbon fixation in Antarctic lakes. In preparation for *Microbial Ecology*.
4. Liu, Y, Priscu JC, Michaud AB, **Vick-Majors TJ**, et al. Culturable bacteria isolated from seven high altitude ice cores on the Tibetan Plateau. In review at *Journal of Glaciology*.

2. **Vick-Majors TJ**, Michaud AB, Skidmore, ML, Turetta C, Barbante C, Christner BC, Christianson K, Mitchell AC, Achberger AM, Mikucki JA, Priscu JC. Subglacial carbon and nutrients fertilize the marine cavity under the Ross Ice Shelf. In review at Nature Geoscience.
1. Hindshaw R, Mariash H, **Vick-Majors TJ**, Thornton AE, Pope A, Zaika Y, Lenz J, Nielsen H, Fugmann G. A decade of shaping the futures of polar early career researchers: A legacy of the International Polar Year. In review at Polar Record.

Book chapters and other publications

3. **Vick-Majors TJ**, Achberger AM, Michaud AB, Priscu JP. Metabolic and biological diversity in Antarctic subglacial environments. in *Life in Extreme Environments: Insights into Biological Capability*. British Ecological Society/Cambridge University Press. Forthcoming 2018.
2. Achberger AM, Michaud AB, **Vick-Majors TJ**, Christner B, et al. Microbiology of Subglacial Environments. in *Psychrophiles: from biodiversity to biotechnology*. Springer-Verlag. 2017.
1. **Vick-Majors TJ**, Engelbertz S, Fugmann G. (2016). Focus on the Future of Polar Research. *Eos*. 97, doi:10.1029/2016EO042993.

Teaching Experience

Teaching Assistant

Nutrient Cycling (ENSC 351). Undergraduate course with Dr. Rich Macur
Montana State University, (2012)

Microbial Ecology, Undergraduate course with Dr. Brian Hedlund
University of Nevada, Las Vegas, Summer (2007, 2008)

English as a Second Language. Adult education program
School District 11 Adult and Family Education, Colorado Springs, CO (2003-2005)

Lectures

Course: BIOS 280 Principles and Applications of Genetics
Title: Microbial Ecology in Antarctica: Taking molecular biology to the extreme
Undergraduate course, Salish Kootenai College. (2018)

Course: BIOM 415 Microbial Ecology, Diversity and Evolution
Title: Life under ice: Microbial ecology in Antarctic subglacial environments
Undergraduate course, University of Montana. (2018)

Course: Study Abroad in Antarctica Program.
Title: Microbial Processes and Biogeochemistry in Antarctica.
Undergraduate study abroad prep course, University of Georgia. (2013)

Course: ENSC 351 Nutrient Cycling.
Title: The Nitrogen Cycle.
Undergraduate course, Montana State University. (2012)

Course: Biology 580 Examining Life in Extreme Environments.
Title: Microbial Life in Antarctic Lakes.
Master of Science in Education Program, Montana State University. (2011)

Mentoring Experience

Kimberly Rousch, Montana State University, M.S. student. (2016-pres.)
Priyanka Kudalkar, Montana State University, M.S. student. (2014-2016)
Kimberly Rousch, Montana State University, Lab Technician. (2015-2016)
Tyler Subatch, High School Student, Montana Apprenticeship Program. (2014)
Courtney Thurner, Montana State University undergraduate in Biotechnology. (2011)
Hayden Wilson, Montana State University undergraduate, Microbiology. (2010-2012)
Sierra Fisher-Dykman, 7th grade student from Bozeman, MT. (2010-2011)
Andrew Baber. Montana State University undergraduate, Earth Sciences. (2008)
Austin McDonald, University of Nevada, Las Vegas, undergraduate student (2007)
Cameron Ball, University of Nevada, Las Vegas, REU student. (2007)

Grants and Fellowships

Institute on Ecosystems Graduate Research Fellowship (2015). *Stable isotopic investigation of subglacial carbon biogeochemistry.*

American Association of University Women Dissertation Fellowship (2014-2015).

Graduate Research Assistantship (2014-2015), Montana State University.

Census of Deep Life (2014). *Dark energy in the deep, cold ecosystem of Subglacial Lake Whillans, West Antarctica.* Funded as co-PI for sequencing of 3 microbial metagenomes.

Institute on Ecosystems Graduate Research Fellowship (2014). *Stable isotopic investigation of nitrogen cycling in subglacial aquatic environments.*

Graduate Research Assistantship (2013), Montana State University.

Center for Microbial Oceanography Summer Graduate Fellow (2012), University of Hawai'i.

Montana Space Grant Consortium Graduate Fellow (2009). *Microbial and carbon dynamics during the Polar Night transition in Antarctic lakes.*

Nevada STARS Fellowship (2007-2008). *Microbiology and geochemistry of Great Basin Hot Springs.*

Honors and Awards

Scientific Committee on Antarctic Research, Women of the Antarctic Wikibomb honoree. https://en.wikipedia.org/wiki/Trista_Vick-Majors. (2016)

American Society for Microbiology Travel Award. (2015)

US Scientific Committee on Antarctic Research Travel Award. (2014)

International Polar Year Early Career Travel Award. (2012)

American Geophysical Union Chapman Student Travel Award. (2010)

Scientific Committee on Antarctic Research Travel Award. (2009)

Graduate and Professional Student Association Travel Grant, University of Nevada, Las Vegas. (2007)

BIOS Symposium Award for Best Oral Presentation. University of Nevada, Las Vegas. (2007)

Conference Presentations (* talk)

Vick-Majors TJ*, Ruiz-Gonzalez C, Guillemette F, del Giorgio P. Functional perspectives on community assembly along a boreal aquatic continuum. SAME 2017, Zagreb, Croatia. (2017)

Vick-Majors TJ*, Guillemette, F, del Giorgio, P. Dissolved organic matter transformations along a boreal aquatic continuum. GRIL 2017, Jouvence, QC. (2017)

Vick-Majors TJ*, Michaud A, et al., Subglacial carbon and nutrient fluxes fertilize the Southern Ocean under the Ross Ice Shelf. ASLO 2016, Santa Fe, NM. (2016)

Vick-Majors TJ*, Achberger A, et al., Microbial physiology in subglacial aquatic environments: an unexplored part of the low-energy biosphere. International Society for Microbial Ecology 16, Montréal, QC. (2016)

Vick-Majors TJ, Michaud A, et al., Limitations on heterotrophic activity in Subglacial Lake Whillans, West Antarctica. Microenergy 2015, Sandbjerg, DK. (2015)

Vick-Majors TJ, Achberger A, et al., Sources and sinks of carbon and nitrogen in Antarctic subglacial aquatic environments. American Society for Microbiology Meeting, New Orleans, LA. (2015)

Vick-Majors TJ*, Priscu J, Achberger A, et al., Microbial nutrient cycling and physiology in Subglacial Lake Whillans, Antarctica. SCAR Open Science Conference, Auckland, NZ. (2014)

Vick-Majors TJ*, Michaud A, Priscu J, et al. Physiological Ecology of Bacteria in the water column of Subglacial Lake Whillans, Antarctica. Polar and Alpine Microbiology Conference, Big Sky, MT. (2013)

Vick-Majors TJ, Achberger A, Priscu J. et al., 2013. Biogeochemical characteristics of sub-Ross Ice Shelf waters near McMurdo Sound, Antarctica. Polar and Alpine Microbiology Conference, Big Sky, MT. (2013)

Vick T*, Amaral-Zettler L, Priscu J. 2012. Variations in Bacterial, Archaeal, and Eukaryal Communities during the Polar Night Transition in Lakes of the McMurdo Dry Valleys, Antarctica. SCAR Open Science Conference, Portland, OR. (2012)

Kelly S, Michaud A, **Vick T**, Priscu J. 2012. Science is cool: The Crow Education Partnership. SCAR Open Science Conference, Portland, OR. (2012)

Vick T*, Amaral-Zettler L, Priscu J 2012. Microbial Diversity during the Polar Night Transition in Lakes of the McMurdo Dry Valleys, Antarctica. International Polar Year Conference, Montréal, QC. (2012)

Vick TJ*, Priscu JC. 2011. Life in the Cold and Dark: Carbon-cycling in a Permanently Ice-covered Antarctic Lake. Montana Space Grant Consortium Symposium, Bozeman, MT. (2011)

Vick TJ, Amaral-Zettler L, Priscu JC. 2010. Microbial diversity during the polar night transition in lakes of the McMurdo Dry Valleys. McMurdo LTER Meeting, Fort Collins, CO. (2010)

Vick TJ, Priscu JC. 2010. Microbial responses during the transition to polar night in permanently ice-covered Antarctic lakes. AGU Chapman Conference on the Exploration of Antarctic Subglacial Environments, Baltimore, MD. (2010)

Vick TJ, Priscu JC. 2009. The response of microplankton in Antarctic lakes during the transition to polar night. LTER All Scientists Meeting, Estes Park, CO. (2009)

Vick TJ*, Priscu JC, Mikucki, JA. 2009. Microbial dynamics in lakes of the McMurdo Dry Valleys during the transition to polar night. SCAR Biology Symposium, Sapporo, Japan. (2009)

Vick TJ, Hedlund BP. 2008. Microbiology and Geochemistry at Little Hot Creek. Thermal Biology Institute Symposium, Bozeman, MT. (2008)

Vick TJ*, Costa KC, Shock EL, Hedlund BP. 2007. Geochemical and Microbiological Characterization of Little Hot Creek. Best presentation award. BIOS Symposium, Las Vegas, NV. (2007)

Vick TJ, Costa KC, Shock EL, Hedlund BP. Microbiology and Geochemistry of Little Hot Creek Hot Springs, Long Valley Caldera, California. General Meeting of the American Society for Microbiology, Toronto, ON. (2007)

Vick TJ*, Costa KC, Shock EL, Hedlund BP. 2007. Microbiology and Geochemistry of Little Hot Creek Hot Springs, Long Valley Caldera, California. Arizona/Nevada Regional Meeting for the American Society for Microbiology, Flagstaff, AZ. (2007)

Seminars and Public Lectures (* invited)

*University of Quebec at Montréal, Department of Biological Sciences, Ecology and Evolution Seminar Series. Title: Antarctica: Ecology on Ice. (2016)

*University of Quebec at Montréal, Department of Biological Sciences, Aquatic Seminar Series. Title: Microbial processes in Antarctic aquatic environments. (2016)

*National Radio Astronomy Observatory Lecture Series. Title: Reaching for the stars: What subglacial environments can teach us about life in the Universe. (2015)

*Department of Chemistry and Biochemistry Seminar Series, Montana Tech. Title: Living under the ice: Biogeochemistry in subglacial environments. (2015)

*Guest Lecture on Antarctic microbiology for the public at the Colorado Springs Science Festival. (2015)

*Guest Lecture at the Colorado Springs Science Festival. Title: Where Penguins don't roam: Discovering life in a lake beneath the West Antarctic Ice Sheet. (2013)

MIRADA: From Molecules to Metadata workshop, McMurdo LTER Updates, Woods Hole, MA. (2010)

*Guest Lecture for Clark County School District Summer Science Teachers Institute. Title: The Microbial World: More Than Meets the Eye. Las Vegas, NV. (2007)

Recent Collaborations

Dr. John Priscu and the SALSA project. Collaborator on Antarctic subglacial lake drilling and microbiology project (ongoing).

Dr. Yongqin Liu, Institute of Tibetan Plateau Research, Chinese Academy of Sciences: Microbial communities on the Tibetan Plateau, and Microbial carbon cycling in the Arctic, Antarctic, and at the Third Pole (ongoing)

Dr. Wayne Gardner, University of Texas Marine Sciences Center: Ammonium dynamics in Subglacial Lake Whillans and beneath the Ross Ice Shelf.

Dr. Eric Boyd, Montana State University: Ammonium oxidation and chemoautotrophic primary production in Subglacial Lake Whillans.

Pamela Santibañez, Montana State University/Chilean Antarctic Institute: Flow cytometric analysis of microbial populations in Subglacial Lake Whillans and beneath the McMurdo Ice Shelf.

Short Courses and Professional Development

Santander Astrobiology Summer School, "Habitable Environments in the Universe", Spanish National University, Santander, Spain. (2014)

Center for Microbial Oceanography Summer Course, Honolulu, HI (2012)

Bioinformatics Programming with Python, Montana State University (2011)

Teaching in Biology, Montana State University (2010)

Technical, Lab and Field Skills

physiological assays, radioisotopes, microscopy, wet chemistry nutrient analyses, network analysis, microbial community analysis, excitation-emission matrix spectroscopy of dissolved organic matter (EEMS), parallel factor analysis (EEMS), R, Python (beginner), Antarctic deep field camping, ice drilling, CTD, Niskin/Go-Flo bottles, Licor light sensors, gas headspace sampling, next-generation sequencing

Service

Session co-convener, *Linkages between microorganisms and carbon biogeochemistry along aquatic continuums*, ASLO summer meeting, Victoria, BC. (2018)

Council Ex-officio, Association of Polar Early Career Scientists. (2017-2018)

Executive Committee Ex-officio, Association of Polar Early Career Scientists. (2016-2017)

Executive Committee Member (Vice President), Association of Polar Early Career Scientists. (2015-2016)

Session co-convener, *Subglacial Aquatic Environments*. Scientific Committee on Antarctic Research Open Science Conference, Kuala Lumpur. (2016)

Secretary/Treasurer, Montana State University Graduate Employee Organization. (2014-2015)

Executive Committee Member (Vice President), Association of Polar Early Career Scientists. (2014-2015)

JASON Learning Mentor. Live Role Model Program. <http://goo.gl/sVv2uQ> (2014)

International Scientific Organizing Committee Member, Scientific Committee on Antarctic Research Open Science Conference. (2014)

Local Organizing Committee, Polar and Alpine Microbiology International Conference (PAM5). Bozeman, MT. (2013)

Scientific Advisor, Montana Space Public Outreach Team, presenting "Life in the Universe" at Montana public schools. (2013)

Council Member, Association of Polar Early Career Scientists. (2012-2016)

Vice President, Montana State University Graduate Employee Organization. (2012-2013)

Co-chair, Research Activities Council, Association of Polar Early Career Scientists. (2012)

Session Convener for *Polar Microbes, Genetics and Molecular Biology*. International Polar Year Conference, Montréal, Canada. (2012)

President, Women in Science and Engineering, Montana State University. (2011-2012)

Chair and founder of Land Resources and Environmental Sciences Graduate Student Organization, Montana State University. (2009-2011)

Secretary, BIOS Club, University of Nevada, Las Vegas. (2008)

Secretary and Co-founder, Las Vegas Student Chapter of the American Society for Microbiology, Las Vegas. (2007-2008)

Peer Review, Journal Articles: ISME Journal, Biogeochemistry, Nature Scientific Reports, Proceedings of the National Academy of Sciences, Environmental Research Letters, FEMS Microbiology Ecology, Microorganisms, Climate of the Past, Hydrobiologia, Soil Biology and Biochemistry, Environmental Microbiology, Antonie van Leeuwenhoek, Applied Soil Ecology, Science of the Total Environment

Peer Review, Research Grant Proposals: Panelist for NASA reviews in my area of expertise, Australian Antarctic Division, Chilean Antarctic Institute (INACH)

Public Education and Outreach

Wrote and performed the piece "Life in Antarctica" for the podcast, "Out There: A Podcast About the Outdoors". <https://goo.gl/Bz4gkS> (2015)

Polar Regions and Climate Workshop. Workshop for Montana science teachers. (2015)

Colorado Springs Science Festival. I made E&O presentations for >100 students, grades 5-12. Colorado Springs, CO. (2015)

JASON Learning, STEM Mentoring program. Video E&O sessions about Antarctica and Microbiology with elementary schools. (2014)

Colorado Springs Science Festival. Participated in public lecture series and school visits with grades K-12. Colorado Springs, CO. (2013)

Peaks and Potentials Summer Camp. School group mentor. Montana State University. (2013)

Exploring Antarctica. I designed a series of E&O presentations for grades 5-8 at Montana schools. (2012-2013)

Teaching the Environmental Literacy Framework (NOAA). Presenter at Climate Education Workshop for teachers. Montana State University. (2012)

Climate Change Student Summit (C2S2). Student mentor. Hardin, MT. (2012)

Clues to the Cryosphere: Lessons from the Ice. National Science Teachers Association Symposium, San Francisco, CA. Workshop for teachers. (2011)

Montana Regional Science Fair Mentor. Bozeman, MT. (2011)

Peaks and Potentials Summer Camp. School group mentor. Montana State University. (2010-2011)

Science Olympiad Judge. Montana State University. (2010)

Press (selected)

CS Monitor: <http://goo.gl/1c019d> | Nature: <http://goo.gl/uKLVmn> | Discover Magazine: <http://goo.gl/ATbUikl> | National Geographic: <http://goo.gl/ZcUiMU> | New York Times: <http://goo.gl/fWKSCH> | Colorado Springs Gazette: <http://goo.gl/076JYI> | Bozeman Daily Chronicle: <http://goo.gl/XPU3Vx>