**Darya Anderson**

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**Research Interests**

* Climate change
* Vulnerability and adaptation related to climate change
* Environmental justice
* Intersections of environmental and community health
* Microbial ecology

**Education**

McGill University-Montreal, Quebec

* **M.S. in Geography, *April 2018***

The University of Arizona-Tucson, Arizona

* **B.S. in Soil, Water, and Environmental Science, May 2016**
  + Minors in Spanish & Public Health
* GPA: 4.0
* With Honorable Mention to the Dean’s List in the College of Agriculture and Life Sciences

**Awards and Scholarships**

Eben Hopson Fellowship 2016-2017

Graduate funding by Dr. James Ford at McGill University 2016-2018

Howard Hughes and Dot Graduate School Scholarship 2016-2018

University of Arizona Environmental Sciences Outstanding Senior nominee 2016

Phi Beta Kappa Travel Grant 2016

Arizona Association of Environmental Professionals Scholarship 2015

Alumni Legacy Travel Grant from University of Arizona Honors College 2014

Conference Travel Grant from Undergraduate Biology Research Program 2014

Student Travel Grant from American Geophysical Union 2014

Donald Post Travel Scholarship 2014

Howard Hughes Medical Institute grant 2014

Biomedical Research Abroad: Vistas Open! Funding 2014

Undergraduate Biology Research Program Funding 2013-15

AZ Board of Regent High Honors Tuition Scholarship 2012-Present

Howard Hughes and Dot Scholarship 2012-Present

**Publications**

**Darya Anderson**, Suzanne Hodgkins, Carmody McCalley, Mohammad Torabi, Malak Tfaily, Patrick Cril, Patrick Cril, Jeff Chanton, and Virginia Rich. “Mapping microbial carbon substrate utilization across a permafrost thaw gradient.” *Honors thesis and in preparation for planned submission.*

Ignacio-Espinoza JC, Martinez M, **Anderson D,** Sederholm M, Woodcroft B, Hodgkins SH, Chanton JP, Saleska SR, Tyson GW, Rich VI. (in prep) “A novel sulfate reducer (Canditatus Cryoserica) regulates the onset of methane emission at the initial stages of permafrost thaw*.”*

**Presentations**

* **Darya Anderson,** James Ford. “Bakeapple Picking in a Changing Physical, Social, Political, and Economic Landscape.” (Oral Presentation) *Graduate Research Proposal Presentation,* Montreal, QC, April 2018.
* **Darya Anderson**, Suzanne Hodgkins, Carmody McCalley, Malak Tfaily, Jeff Chanton, and Virginia Rich. “Mapping microbial carbon substrate utilization across permafrost thaw.” (Poster) *American Geophysical Union Conference,* San Francisco, CA, December 2014.
* **Darya Anderson** andVirginia Rich. “Awakening microbes in the land of the midnight sun.” (Oral) *University of Arizona,* Tucson, AZ, September 2014
* **Darya Anderson**, Maya Sederholm, Robert Jones, Eun-Hae Kim, Suzanne Hodgkins, Jeff Chanton, and Virginia Rich. “Microbial responses to thawing permafrost: Will they accelerate climate change?” (Poster) *Arizona-Nevada Academy of Sciences Conference,* Flagstaff, AZ, April 2014.
* **Darya Anderson**, Maya Sederholm, Robert Jones, Eun-Hae Kim, Suzanne Hodgkins, Jeff Chanton, and Virginia Rich. “Microbial responses to thawing permafrost: Will they accelerate climate change?” (Poster) *Earth Week Conference,* University of Arizona,Tucson, AZ, April 2014.
* **Darya Anderson**, Maya Sederholm, Robert Jones, Eun-Hae Kim, Suzanne Hodgkins, Jeff Chanton, and Virginia Rich. “Drivers of climate change feedback: Changing microbial communities in thawed permafrost.” (Poster) *Biological, Engineering, & Chemical Undergraduate Research (BECUR) Conference*, Tucson, AZ, February 2014.
* **Darya Anderson**, Maya Sederholm, Robert Jones, Eun-Hae Kim, Suzanne Hodgkins, Jeff Chanton, and Virginia Rich. “Drivers of climate change feedback: Changing microbial communities in thawed permafrost.” (Poster) *Undergraduate Biology Research Program (UBRP) Conference,* Tucson, AZ,January 2014
* **Darya Anderson**. “The School Garden Tour.” (Poster) *First Year Honors Independent Research Project,* Tucson, AZ, January 2014.

**Research and Professional Experience**

**Vulnerability and Resilience to Climate Change in the Arctic (VaRCCA) Lab**

*Researcher* Fall 2016-present

* Review the permafrost thaw and community impacts literature
* Proposed a research project on permafrost thaw and bakeapple picking in indigenous Canadian Arctic communities
* Collaborate with other researchers in the field to build on previous and current research
* Collect vegetation data and interview data in a sub-arctic Labrador community

**Geography Graduate Society (GGS)- Montreal, Quebec**

*Sustainability Representative* Fall 2016-Winter2017

* Create and implement means to make GGS events more sustainable
* Communicate sustainability measure to students involved in GGS

**Applied Research (BARA) Internship- Tucson, Arizona**

*Intern* Fall2015-Spring 2016

* Mentored by Dr. Diane Austin at the University of Arizona
* Evaluated current environmental challenges on the US-Mexico border
* Communicated with a bi-national team to discuss environmental issues of water quality and potential solutions
* Organized community meetings and interacted with community members
* Presented experiences with BARA interns and data with community partners

**Long-Term Ecological Field Research Site- Abisko, Sweden**

*Field Technician* Summer 2015

* Coordinated and organized division of lab work amongst field technicians
* Collected peat samples from permafrost thaw gradient for microbial and biogeochemical analysis

**International Artic Research Center (IARC) Summer Class- Fairbanks, Alaska**

*Student* Summer 2015

* Expanded knowledge and understanding of permafrost systems via attendance of lectures given by renowned climate scientists
* Visited Toolik lake field station and engaged in hands-on field experience
* Presented group research project on the relationship between methane fluxes and various abiotic factors to professors and students of the IARC summer class

**Senior Honors Thesis- Tucson, Arizona**

*Researcher* Fall 2014-Spring 2016

* Advised by Dr. Virginia Rich at the University of Arizona
* Analyzed biogeochemical and microbial data via excel and QIIME (computer software)
* Collaborated with partnering microbial ecologists and geochemists
* Presented and discussed results at lab meetings and scientific conferences
* Completed undergraduate honors thesis, “Mapping microbial substrate utilization across permafrost thaw,” during junior year
* Currently preparing first-author manuscript for peer-reviewed scientific publication

**Biomedical Research Abroad: Vistas Open! (BRAVO)- Abisko, Sweden**

*Researcher*  Summer 2014

* Proposed an independent and international research project on changes in carbon substrate utilization with permafrost thaw
* Designed and revised an experimental protocol and data collection methods
* Learned about and participated in Swedish culture via emersion at a research station
* Collaborated with visiting international researchers from other countries such as Germany, France, United Kingdom, and Denmark
* Conducted field work such as soil core extraction and soil sample preparation
* Mastered use of gas chromatographer, infra-red gas analyzer, and an absorbance spectrophotometer to analyze samples

**Soil, Water, and Environmental Science (SWES) Lab- Tucson, Arizona**

*Undergraduate Biology Program Researcher (UBRP)* Summer 2013-Spring 2015

* Advised by Dr. Virginia Rich at the University of Arizona
* Funded in part by the UBRP program
* Analyzed microbial communities in permafrost using QIIME
* Trained incoming undergraduate researchers to use QIIME
* Extracted proteins from permafrost samples
* Optimized methods for protein extractions
* Prepared and presented academic posters for conferences

**University of Arizona First Year Honors Project- Tucson, Arizona**

*Researcher*  Spring 2013

* Organized a tour of elementary school gardens in central Tucson as a community service research project
* Developed means (i.e. preliminary school visits, fliers and free event transportation) to encourage community participation
* Created resources (i.e. information packets on gardening) for attendees
* Presented findings at University of Arizona First Year Honors Poster Session

**University of Arizona Chemical Thinking Class- Tucson, Arizona**

*Preceptor* Fall 2013-Spring 2014

* Mentored by Dr. John Pollard at the University of Arizona
* Selected to be a preceptor based on expertise demonstrated in general chemistry
* Prepared practice problems for weekly office hours (in which 3-10 students attended)
* Answered students’ questions during lectures

**Skills**

* **Programming & Software:**  Proficient in ENVI, QIIME, Excel, Word, Endnote or Zotero, PowerPoint and basic R programming
* **Lab Methods:** Experienced in use of gas chromatographer, infra-red gas analyzer, spectrophotometer, pressurized gas cylinders, DNA extraction protocols/kits, and other basic laboratory tasks
* **Field Experience:** Soil core extraction, sample preparation for microbial and biogeochemical analysis, administer interviews, focus groups, participant observation
* **Professional:** Leadership, organizational skills, teamwork, management, interpersonal skills, and communication skills (written and verbal)

**Outreach and Community Service**

**Tucson Village Farm**

*Volunteer farming assistant* Fall 2015-Spring 2016

* Learned about farm management practices related to irrigation, winter/summer crops, planting, thinning, and harvesting

**KXCI Radio Program**

*Thursday Thesis Guest* Spring 2015

* Interviewed about research conducted in Sweden through BRAVO program

**Pen Pal Outreach through UBRP**

*Correspondent with Middle School Student* Fall 2014-Spring 2015

* Mentored a middle school student via the exchange of journal entries
* Inspired and responded to scientific questions of student
* Shared about my research in microbial ecology and studies in environmental science

**Casa de los Niños- Tucson, Arizona**

*Volunteer in shelter* Spring 2014-Spring 2015

* Completed training to work in shelter
* Helped care takers attend to groups of three to six children
* Communicated with staff about issues in the shelter

**Food bank Snack Pack Program-Tucson, Arizona**

*Volunteer* 2013

* Assisted with nutritional after-school programs for children