Darya Anderson

380 Avenue Clarke Westmount, QC H3Z 2E6 Canada
438-502-4281
darya.anderson@mail.mcgill.ca
http://openwetware.org/wiki/User:Darya_Anderson

Research Interests

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

Education

McGill University-Montreal, Quebec

- **MSc in Geography, June 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

GREAT Travel award	2018
Eben Hopson Fellowship	2016-2017
GREAT Travel award	2017
Graduate funding by Dr. James Ford at McGill University	2016-2018
Worth and Dot Howard Foundation 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	2012-2016
Worth and Dot Howard Foundation Scholarship	2012-2016

Publications

Anderson D, Ford JD, Way RG. 2018. The Impacts of Climate and Social Changes on Cloudberry (Bakeapple) Picking: a Case Study from Southeastern Labrador. *Human Ecology*. DOI: 10.1007/s10745-018-0038-3

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. "The Vulnerability of Bakeapple Picking in a Changing Physical and Social Landscape." (Oral Presentation) *Arctic Change 2017.* Quebec City, QC, December 2017
- **Darya Anderson,** James Ford. "The Vulnerability of Bakeapple Picking in a Changing Physical and Social Landscape." (Poster) *Arctic Change 2017.* Quebec City, QC, December 2017
- **Darya Anderson,** James Ford. "Bakeapple Picking in a Changing Physical, Social, Political, and Economic Landscape." (Oral Presentation) *McGill MedLife Talk,* Montreal, QC, November 2017
- **Darya Anderson,** James Ford. "Bakeapple Picking in a Changing Physical, Social, Political, and Economic Landscape." (Oral Presentation) *Graduate Research Proposal Presentation,* Montreal, QC, April 2017.
- **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** and Virginia 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

Pima County Health Department- Tucson, Arizona Winter 2018
Intern

- Managed a vector borne disease dataset and created a map of vector occurrence using ArcGIS
- Shadowed environmental health specialists in the field

Intercultural Indigenous Workshop- Montreal, Quebec
Participant Fall 2017

- Participated in activities with other workshop participants to learn about the history of Indigenous peoples in Canada and to heighten my understanding of how to appropriately do research in and with Indigenous communities in Canada.

Vulnerability and Resilience to Climate Change in the Arctic Lab- Montreal, Quebec
Researcher Fall 2016-present

- Reviewed the community impacts of permafrost thaw and the traditional land based livelihoods literature
- Proposed a research project on the impacts of permafrost thaw on bakeapple berry picking in an Indigenous Canadian Arctic community
- Collected vegetation survey data, focus group data, interview data and analyzed satellite imagery and historical weather data
- Prepared a manuscript MSc thesis

Geography Graduate Society (GGS)- Montreal, Quebec
Sustainability Representative Fall 2016-Winter2017

- Implemented means to make GGS events more sustainable
- Communicated sustainability measure to students participating in GGS events

Applied Research (BARA) Internship- Tucson, Arizona
Intern Fall 2015-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 results and shared experiences with community partners
- Monitored composting toilet initiatives in Tucson, Arizona in partnership with the Watershed Management Group

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 climate scientists

- Visited Toolik lake field station and engaged in hands-on field experience
- Presented the results of a 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

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 R programming, ArcGIS, ENVI, Excel, Word, PowerPoint, Endnote or Zotero, QIIME,
- **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, water sampling, vegetation surveys, administer interviews, focus groups, participant observation
- **Professional:** Leadership, organizational skills, teamwork, management, interpersonal skills, and communication skills (written and verbal)

Outreach and Community Service

Santropol Roulant Summer 2017

Farm Volunteer

- Collaborated with a team of volunteers to maintain the edible gardens on the McGill University campus
- Contributed to the planning of a fundraising event

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