

Dr. Melissa K. Ward Jones

Research Assistant Professor, Water and Environmental Research Center
Institute of Northern Engineering, University of Alaska Fairbanks
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Research Interests

- Understanding drivers of change and system responses of permafrost systems
- Landscape (geomorphic) change generated by degrading ice-rich permafrost
- Approaching landscapes as complex systems
- Understanding how changing permafrost systems impacts sustainability issues such as food and economic security, including agriculture
- Integrating fieldwork, remote sensing and GIS to analyze landscape changes at different spatial and temporal scales

Education

Graduate Course

2021

- Topics in Computer Science and Computer Systems Engineering: Image Analysis using Google Earth Engine
- Computer Science and Computer Engineering, University of Alaska Anchorage, Anchorage, Alaska, USA

Doctor of Philosophy, Permafrost Geomorphology

2015 - 2020

- Department of Geography, Faculty of Science, McGill University, Montreal, QC, Canada
- Thesis title: Permafrost-active layer dynamics and feedbacks with climate forcing in ice-rich sediments, Fosheim Peninsula, Ellesmere Island, Nunavut (supervised by Dr. Wayne Pollard)

Research Exchange, Department of Geosciences

2018

- University of Alaska Fairbanks, Fairbanks, Alaska, USA
- Recipient of a McGill University Graduate Mobility Award (\$5,300) for travel and living expenses

Intensive Graduate Course

2016

- Permafrost and Periglacial Environments, PhD Course AG 830
- Department of Arctic Geology, University Center in Svalbard (UNIS), Longyearbyen, Norway

Master of Science, Permafrost Geomorphology and Planetary Sciences

2012 - 2016

- Department of Geography, Faculty of Science, McGill University, Montreal, QC, Canada
- Thesis title: Geomorphology of two hyper-saline springs in the Canadian High Arctic (supervised by Dr. Wayne Pollard)

Bachelor of Science, Physical Geography (major) and Geology (minor)

2007 - 2012

- Faculty of Science, McGill University, Montreal, QC, Canada

Current Position

Assistant Research Professor, University of Alaska Fairbanks 2022-Present
Water and Environmental Research Center, Institute of Northern Engineering, Fairbanks, AK, USA

Professional Experience

Postdoctoral Fellow, University of Alaska Fairbanks 2020-Present
Institute of Northern Engineering, Fairbanks, AK, USA
-Supervisor: Dr. Yuri Shur

Part-time Postdoctoral Researcher, Woodwell Climate Research Center 2020 - 2021
Falmouth, MA, USA
-Project Title: Quantifying Arctic Mass Wasting using ArcticDEM
-Supervisor: Dr. Anna Liljedahl

Temporary Research Technician, University of Alaska Fairbanks 2020
Fairbanks, AK, USA
-Project Title: Model for Arctic Coastal Erosion
-Supervisor: Dr. Yuri Shur

Co-organizer, the McGill Sustainability Research Symposium 2013 – 2018
McGill University, Montreal, QC, Canada
-Key member in a four-person team in developing a \$50,000- and five-year partnership with the Faculty of Science to fund future events

Report Manager for Dr. Wayne Pollard 2013 – 2015
Department of Geography, McGill University, Montreal, QC, Canada
-Managed annual reporting of ArcticNet project 2.4 and 4.4 for Dr. Wayne Pollard and five students
-Liaison between project collaborators from Memorial University and Université Laval

Research Assistant for Dr. Wayne Pollard 2014 – 2015
Department of Geography, McGill University, Montreal, QC, Canada
-Helped carry out fieldwork on Ellesmere Island and Axel Heiberg Island, Nunavut
-Surveyed headwalls of retrogressive thaw slumps using a differential Global Positioning System (dGPS) around the Eureka Weather Station and prepared a map using ArcGIS software

Research Assistant for Martine Larouche and Dr. Jeanine Rhemtulla 2012
Department of Geography, McGill University, Montreal, QC, Canada
-Project Title: “Effects of past land use and landscape configuration on plant diversity in an agro forested landscape in Southern Quebec, Canada”
-Duties: digitizing old maps of Southern Quebec from 1960’s using ArcGIS software

Research Assistant for Itzel Hernandez and Dr. Jeanine Rhemtulla 2010 – 2011
Department of Geography, McGill University, Montreal, QC, Canada
-Project title: “Ecosystem Resilience and Structural Legacies in the Colorado River Delta, Mexico”
-Duties: prepare and digitize maps of the Colorado Delta in Mexico from 1968 and 1984 using ArcGIS software, literature review, completed a supervised independent study project entitled “Bobcat Habitat increased between 1968 and 1984 in the Colorado River Delta, Mexico”

Teaching Experience, Department of Geography, McGill University, Montreal, QC, Canada

- Course Instructor**, GEOG 495: Local Field School **2016 and 2017**
-Taught and led five field-based exercises of different aspects of geography (micro-meteorology, surveying and mapping, fluvial geomorphology, biogeography and soil; and disturbance ecology)
-Developed a GIS (Geographic Information Science) component to two exercises to demonstrate how technology and field work can be coupled
-Supervised all stages of independent research projects for 18 students (initial research planning and methodology development, field work, analysis, write up and oral presentations)
-In charge of all the logistics for the course, including transportation and lodging at Mont St Hilaire for 10 days
- Course Co-Instructor**, GEOG 272: Earth's Changing Surface **2016**
-Taught 2/3 of lectures for a first year undergraduate introductory to geomorphology course
-Prepared all exercise materials, course exams (midterm and final) and managed all course administration including two teaching assistants
- Course Co-Instructor**, GEOG 290: Local Geography Excursion **2016**
-Led stream gauging and surveying exercises for weekend field excursion to Eastern Townships
- Teaching Assistant**, GEOG 272: Earth's Changing Surface **2012, 2013 and 2015**
-Created a new field-based assignment on Mont Royal, Montreal in 2015
-Taught two lectures on glaciers processes and glacial landforms in November 2015
-Presented a guest lecture in November 2014
-Graded assignments and provide weekly office hours
- Teaching Assistant**, GEOG 290: Local Geographic Excursion **2012, 2013 and 2014**
-Taught and led stream gauging exercise
- Teaching Assistant**, GEOG 372: Running Water Environments **2014**
-Led tutorials, graded assignments and exams
-Assisted in leading one day field excursion in the Eastern Townships Area, Quebec
- Teaching Assistant**, GEOG 205: Global Change: Past, Present and Future **2013, 2014 and 2016**
-Graded assignments and exams

Proposals in review

**All amounts in US dollars unless otherwise indicated*

National Science Foundation Arctic Natural Science. Title: Collaborative Research: Thaw Below Zero – how warming saline permafrost controls key arctic landscape processes, 2024 – 2027 (\$1,039,772), Co-Investigator.

Alaska North Slope Borough. Title: Factors influencing lesser snow goose nesting distribution, 2024 – 2026 (\$88,087), Co-Investigator.

Funded Proposals (PI Total: \$3,469,099 USD)

**All amounts in US dollars unless otherwise indicated*

Alaska NASA EPSCoR RID. Mapping Agricultural Fields in Alaska: creating a baseline dataset to understand and monitor the environmental and socio-economic effects of a growing sector, 2023 – 2024 (\$52,700), Principal Investigator.

International Permafrost Association Action Group. Title: The permafrost-agroecosystems working group: developing and setting up a global map product, knowledge exchange and network building, 2022 – 2023 (5,000€), Action Group Lead and Contact

National Science Foundation Navigating the New Arctic. Title: NNA Research: Permafrost Grown: Cultivating convergence between farmers and researchers to foster sustainability for intensifying permafrost-agroecosystems, 2022 – 2027 (\$3,000,000); Principal Investigator

NASA New (Early Career) Investigator Program in Earth Science. Title: Degrading ice-wedges: using field, airborne and satellite measurements to link fine-scale micro-topographic changes to large-scale impacts in terrestrial permafrost systems, 2021 – 2024 (\$416,399); Principal Investigator

NASA Research Opportunities in Space and Earth Science (ROSES-2019). Title: Quantifying Arctic Mass Wasting using ArcticDEM, 2020 – 2023 (\$134,988 USD); Postdoctoral Researcher

M.Sc. and Ph.D. Awards, and Fellowships (PI Total: \$145,191 CAD)

**All amounts in Canadian dollars unless otherwise indicated*

European Geophysical Union (EGU) Early Career Scientist's Travel Support (285€); General assembly, Vienna, Austria, May 3 – 8, 2020. Conference switched to online format due to COVID-19.

McGill University Graduate Mobility Award (\$5,300); Funding for travel and living expenses to partake in a research visit at the University of Alaska Fairbanks with Dr. Daniel Mann in the Department of Geosciences, 2018

2016 Troy L. Péwé Award- Outstanding presentation of a young scientist in permafrost science (400€); International Permafrost Association; 11th International Conference on Permafrost, Potsdam, Germany, June 2016

Fonds de recherche du Quebec – Nature et technologies doctoral scholarship in geomorphology studies (\$46,666); Fonds de recherche du Quebec- Nature et technologies, 2016 - 2018

Student Travel Award (250€); to attend the 11th International Conference on Permafrost, Potsdam, Germany, June 20 - 24, 2016

David Erb Fellowship in Remote Sensing and GIS for the Study of Geomorphology (\$1,000); Graduate Affairs Committee, McGill University, 2015

The Canadian National Committee for the International Permafrost Association (CNC-IPA) Travel Bursary (\$200); to attend GeoQuebec 2015 - the 68th Canadian Geotechnical Conference and the 7th Canadian Permafrost Conference, Quebec City, Qc, September 20 – 23, 2015.

Eben Hopson Fellowship in Arctic Studies (\$24,000); Graduate Affairs Committee, McGill University, 2015 - 2018

Research Support Opportunity in Arctic Environmental Studies (in kind support worth \$100,000);
Association of Canadian Universities for Northern Studies (ACUNS), 2015 - 2017

Grad Excellence Award- PhD (\$7,000); Department of Geography, McGill University, 2015

Natural Sciences and Engineering Research Council Collaborative Research and Training Experience (NSERC CREATE) MSc Student position (\$34,600); Canadian Astrobiology Training Program (CATP), 2013 - 2015

National Geographic Young Explorer Award (\$5,000USD); National Geographic Society, 2013

Northern Scientific Training Program (\$18,125); Aboriginal Affairs and Northern Development Canada, Government of Canada, 2013 – 2018

Grad Excellence Award- M.Sc (\$3,000); Department of Geography, McGill University, 2012

Arctic Field Experience

-Anaktuvuk Pass, Alaska, 2023 - present

-Bethel, Alaska, 2022 - present

-Greater Fairbanks Area, Alaska; 2021 - present

-Teshekpuk Lake and Utqiagvik (formerly Barrow), Alaska, USA; 2018 - present

-Fosheim Peninsula, Ellesmere Island (primarily based out of the Eureka Weather Station, summer and winter fieldwork), Nunavut, Canada; 2013 – 2018

-Axel Heiberg Island (primarily based out of McGill Arctic Research Station with remote summer and winter camping), Nunavut, Canada; 2013 - 2018

- Spitsbergen Island, Svalbard Archipelago, Norway (primarily based out of Longyearbyen, winter fieldwork); 2016

Academic Journal Publications

Nitze, I., Van der Sluijs, J., Barth, S., Bernhard, P., Huang, L., Lara, M., Kizyakov, A., Nesterova, N., Runge, A., Veremeeva, A., **Ward Jones, M.**, Witharana, C., Xia, Z., and Liljedahl, A. (*Submitted*). A labeling intercomparison of retrogressive thaw slumps by a diverse group of domain experts. *Permafrost and Periglacial Processes*.

Jones, B.M., Kanevskiy, M.Z., Shur, Y., Gaglioti, B.V., Jorgenson, M.T., **Ward Jones, M.K.**, Veremeeva, A., Miller, E.A., and Jandt, R. (*In Revision*). Post-fire stabilization of thaw-affected permafrost terrain in northern Alaska. *Scientific Reports*.

Ward Jones, M., Habeck, O.H., Ulrich, M., Crate, S., Gannon, G., Schwoerer, T., Jones, B., Kanevskiy, M., Baral, P., Maharjan, A., Steiner, J., Spring, A., Price, M.J., Bysouth, D., Forbes, B.C., Verdonen, M., Kumpula, T., Strauss, J., Windirsch, T., Poeplau, C., Shur, Y., Gaglioti, B., Parlato, N., Tao, F., Turetsky, M., Grand, S., Unc, A., and Borchard, N. (*In Review*). Socio-ecological dynamics of diverse global permafrost-agroecosystems under environmental change. *Arctic, Antarctic, and Alpine Research*.

Parlato, N., and **Ward Jones, M. K.** (*In Revision*). The Law of Thaw: Understanding Subnational Land Use Policies for Permafrost-Agroecosystems. *Polar Record*.

Dai, D., Howat, I., van der Sluijs, J., Liljedahl, A. K., Higman, B., Freymueller, J. T., **Ward Jones, M. K.**, Kokelj, S. V., Boike, J., Walker, B., and Marsh, P. (*Accepted*). Applications of ArcticDEM for measuring volcanic dynamics, landslides, retrogressive thaw slumps, snowdrifts, and vegetation heights. *Science of Remote Sensing*.

Jones, B.M. Kanevskiy, M., Parsekian, A., Bergstedt, H., **Ward Jones, M.K.**, Rangel, R., Hinkel, K.M., and Shur, Y. (2023). Rapid saline permafrost thaw below a shallow thermokarst lake in Arctic Alaska. *Geophysical Research Letters*, 50(22): e2023CL105552. <https://doi.org/10.1029/2023GL105552>

Jones, B.M., Tessier, S.S., Tessier, T., Brubaker, M., Brook, M., Schaeffer, J., **Ward Jones, M.K.**, Grosse, G., Nitze, I., Rettelbach, T., Savoico, S., Clark, J.A., and Tape, K.D. (2023). Integrating local environmental observations and remote sensing to better understand the life cycle of a thermokarst lake in Arctic Alaska. *Arctic, Antarctic, and Alpine Research*, 55 (1), 2195518. <https://doi.org/10.1080/15230430.2023.2195518>

Witharana, C., Udawalpola, M. R., Liljedahl, A. K., **Ward Jones, M. K.**, Jones, B. M., Hasan, A., Joshi, D., and Manos, E. (2022). Automated recognition of retrogressive thaw slumps in the Arctic permafrost tundra using high spatial resolution commercial satellite imagery. *Remote Sensing*, 14(17), 4132. <https://doi.org/10.3390/rs14174132>

Ward Jones, M. K., Schwoerer, T., Gannon, G., Jones, B. M., Kanevskiy, M. Z., Sutton, I., St. Pierre, B., St. Pierre, C., Russell, J., and Russell, D. (2022). Climate-driven expansion of northern agriculture must consider permafrost. *Nature Climate Change*, 12, 699-703. <https://doi.org/10.1038/s41558-022-01436-z>.

Ward Jones, M., and Bendixen, M. (2022). It's time to make science in remote places family friendly. *Nature*. <https://doi.org/10.1038/d41586-022-02048-5>.

Dai, C., Howat, I. M., Freymueller, J. T., Lu, Z., Vijay, S., Liljedahl, A. K., **Ward Jones, M.K.**, Bergstedt, H., and Lev, E. (2022). Quantifying surface height changes at Mt. Cleveland, Alaska between 2001 and 2020 using satellite photogrammetry. *Journal of Volcanology and Geothermal Research*. <https://doi.org/10.1016/j.jvolgeores.2022.107614>.

Shur, Y., Fortier, D., Jorgenson, M. T., Kanevskiy, M., Schirrmeister, L., Strauss, J., Vasiliev, A., and **Ward Jones, M.** (2022). Yedoma Permafrost Genesis: More than 150 Years of Mystery and Controversy. *Frontiers Earth Science*, 9, 1251. <https://doi.org/10.3389/feart.2021.757891>

Jones, B. M., Tape, K. D., Clark, J. A., Bondurant, A. C., **Ward Jones, M. K.**, Gaglioti, B. V., Elder, C. D., Witharana, C., and Miller, C. E. (2021). Multi-dimensional remote sensing analysis documents beaver-induced permafrost degradation, Seward Peninsula, Alaska. *Remote Sensing*, 13(23), p.4863. <https://doi.org/10.3390/rs13234863>.

Ward Jones, M. K. and Pollard, W. (2021). Daily field observations of retrogressive thaw slump dynamics in the Canadian high Arctic. *ARCTIC*, 74(3), 339-354. <https://doi.org/10.14430/arctic73377>.

Shur, Y., Jones, B. M., Kaveskiy, M., Jorgenson, T., **Ward Jones, M. K.**, Fortier, D., Stephani, E., and Vasiliev, A. (2021) Fluvio-thermal erosion and thermal denudation in the yedoma region of northern Alaska, revisiting the Ikillik River Exposure. *Permafrost and Periglacial Processes*, 32(2), 277 – 298. <https://doi.org/10.1002/ppp.2105>

Witharana, C., Bhuiyan, M.A.E., Liljedahl, A.K., Kanevskiy, M., Jorgenson, T., Jones, B.M., Daanen, R., Epstein, H.E., Griffin, C.G., Kent, K. and **Ward Jones, M.K.** (2021). An Object-Based Approach for Mapping Tundra Ice-Wedge Polygon Troughs from Very High Spatial Resolution Optical Satellite Imagery. *Remote Sensing*, 13(4), 558. <https://doi.org/10.3390/rs13040558>

Chunli, D., Higman, B., Lynett, P. J., Jacquemart, M., Howat, I., Liljedahl, A. K., Dufresne, A., Freymueller, J. T., Geertsema, M., **Ward Jones, M.**, Haeussler, P. J. (2020) Large slow moving landslide and potential future tsunami following rapid glacier retreat, Barry Arm Fjord, Alaska. *Geophysical Research Letters*. <https://doi.org/10.1029/2020GL089800>

Witharana, C., Bhuiyan, E. M., Liljedahl, A. K., Kanevskiy, M., Epstein, H. E., Jones, B. M., Daanen, R., Griffin, C. G., Kent, K., and **Ward Jones, M. K.** (2020) Understanding the synergies of deep learning and data fusion of multispectral and panchromatic high resolution commercial satellite imagery for automated ice-wedge polygon detection. *ISPRS Journal of Photogrammetry and Remote Sensing*. <https://doi.org/10.1016/j.isprsjprs.2020.10.010>

Ward Jones, M. K., Pollard, W. H., and Amyot, F. (2020) Impacts of degrading ice wedges on ground temperatures in a high Arctic polar desert system. *Journal of Geophysical Research Earth Surface*, 125(3): e2019JF005173. <https://doi.org/10.1029/2019JF005173>

Ward Jones, M. K., Pollard, W. H., and Jones, B. M. (2019) Rapid initialization of retrogressive thaw slumps in the Canadian high Arctic and their response to climate and terrain factors. *Environmental Research Letters*, 14(5): 055006. <https://doi.org/10.1088/1748-9326/ab12fd>

Ward, M. K., and Pollard, W. H. (2018) A hydrohalite spring deposit in the Canadian high Arctic: A potential Mars analogue. *Earth and Planetary Science Letters*, 504, 126-138. <https://doi.org/10.1016/j.epsl.2018.10.001>

Ouellet Dallaire, C., Trinci, K., **Ward, M. K.**, Harris, L. I., Jarvis, L., Dryden, R. L., and MacDonald, G. K. (2018) Creating space for sustainability literacy: the case of student-centered symposia. *International Journal of Sustainability in Higher Education*, 19(4), 839-855. <https://doi.org/10.1108/IJSHE-08-2017-0126>

Conference Proceedings

Ward Jones, M. K., and Pollard, W. H. (2018) Daily Monitoring of a Retrogressive Thaw Slump on the Fosheim Peninsula, Ellesmere Island, Nunavut. In European Conference on Permafrost (EUCOP) Conferences Proceedings.

Ward, M. K., Pollard, W. H. (2015) Hyper-saline spring dynamics and salt deposits on Axel Heiberg Island, Nunavut. In GeoQuebec 2015 – the 68th Canadian Geotechnical Conference and the 7th Canadian Permafrost Conference Proceedings.

Pollard, W., **Ward, M.**, Becker, M. (2015) The Eureka Sound lowlands: an ice-rich permafrost landscape in transition. In GeoQuebec 2015 – the 68th Canadian Geotechnical Conference and the 7th Canadian Permafrost Conference Proceedings.

Bishop, J. L., **Ward, M. K.**, Roush, T. L., Davila, A., Brown, A. J., McKay, C. P., Quinn, R., and Pollard, W. (2014) Spectral Properties of Na, Ca-, Mg-and Fe-Chlorides and Analyses of Hydrohalite-Bearing Samples from Axel Heiberg Island. In Lunar and Planetary Institute Science Conference Abstracts (Vol. 45, p. 2145).

Report

Bull, D.L., E.M. Bristol, E. Brown, R.C. Choens, C.T. Connolly, C. Flanary, J.M. Frederick, B.M. Jones, C.A. Jones, M. Ward Jones, J.L. Kasper, J.W. McClelland, A. Mota, I. Tezaur (2020). Arctic Coastal Erosion: Modeling and Experimentation, Report SAND2020-10223, Sandia National Laboratories, NM.

Theses

Ward, M. K. (2020) Permafrost-active layer dynamics and feedbacks with climate forcing in ice-rich sediments, Fosheim Peninsula, Ellesmere Island, Nunavut. Ph.D. thesis, McGill University, Department of Geography. 193 p.

Ward, M. K. (2016) The geomorphology of two hypersaline springs in the Canadian high Arctic. M. Sc. Thesis, McGill University, Department of Geography. 146 p.

Encyclopedia Articles

Ward, M. (2016) Fosheim Peninsula. The Canadian Encyclopedia, Historica Canada. <http://www.thecanadianencyclopedia.ca/en/article/fosheim-peninsula/>

Ward, M. (2016) Axel Heiberg Island. The Canadian Encyclopedia, Historica Canada. <http://www.thecanadianencyclopedia.ca/en/article/axel-heiberg-island/>

Science-outreach Articles

Ward Jones, M. (2024). US Permafrost Association Launches Family Care Program. *Witness Community Highlights*. Arctic Consortium of the United States (ARCUS). Access: <https://www.arcus.org/witness-the-arctic/2024/3/highlight/1>

Ward Jones, M. (2024). Shapes on the Tundra: Art Created by Permafrost. Alaska Magazine, February 2024

Ward Jones, M. (2023). Permafrost grown: Investigating permafrost-agriculture interactions in Alaska. Open Access Government. Access: <https://www.openaccessgovernment.org/article/permafrost-grown-investigating-permafrost-agriculture-interactions-in-alaska/171507/>

Ward Jones, M. (2023). Assessing Ice Wedge Micro-Topography Interactions with Environmental Parameters in Alaska through Family Friendly Science. *Witness Community Highlights*. Arctic Consortium of the United States (ARCUS). Access: <https://www.arcus.org/witness-the-arctic/2023/8/highlight/1>

Ward Jones, M. (2023). Grad school frustrations become career strengths. *Becoming a polar Scientist Blog Series*. US Association of Early Polar Career Scientists.

Ward Jones, M., K., Garron, J., Jones, B. M., Bergstedt, H., Reynolds, M., Zwieback, S., and Frost, G. (2022). Rethinking Scientific Meetings in a COVID World, an Example of the 16th International Circumpolar Remote Sensing Symposium. *Witness Community Highlights*. Arctic Consortium of the United States (ARCUS). Access: <https://www.arcus.org/witness-the-arctic/2022/6/highlight/1>

Ward Jones M. K., Jones, B. M., Gannon, G., Schwoerer, T., Kanevskiy, M., Russell, J., Russell, D., and Sutton, I. (2021). Northern Farmers and UAF Researchers Team up to Sustainably Manage Permafrost-Agroecosystems. *Witness the Arctic*. Arctic Consortium of the United States (ARCUS). Access: <https://www.arcus.org/witness-the-arctic/2021/2>

Ward Jones, M. (2019). Widespread permafrost degradation in the Canadian High Arctic at 80°N. *Witness Community Highlights*. Arctic Consortium of the United States (ARCUS). Access: <https://www.arcus.org/witness-the-arctic/2019/10/highlight/1>

Skills and Certifications

- Fluent in English and French
- Computer Skills: Microsoft Office, ArcGIS, SigmaPlot, Google Earth Engine (Javascript editor)
- Advanced Sirius Wilderness (40hr course) First Aid/CPR
- Canadian Firearm Safety Course
- Alaska Driver's License Class D (exp: 2026)
- Remote fieldwork
- differential GPS, setting up and maintaining sensor networks (Campbell Scientific and Onset)

Professional Service and Involvement

USPA Family Care Program **2023 – Present**

- Program Chair and co-developer
- Fundraising and launching caregiver grants in 2024

USPA Board of Direction **2023 – Present**

- Board member at large position

USPA-PYRN Educational Fund (UPEF) Committee **2019 - Present**

- Committee member
- Reviewing student applications for travel funding awards and general fund raising

Ester Community Association **2019 – 2023**

- Ester, AK, USA
- Board member
- Fund raising and event organization

Symposium Organizer for ICRSS **2019 – 2022**

- Fairbanks, AK, USA
- 16th International Circumpolar Remote Sensing Symposium scheduled for May 2022 in Fairbanks, AK, USA

Interior Alaska Science Fair **2019, 2023**

- Science fair judge and provided feedback for students

International Permafrost Conference 2016 Young Researchers Workshop **2015 - 2016**

- Association of Polar Early Career Scientists (APECS) Canada Representative on the Permafrost Young Researchers Network (PYRN), United States Permafrost Association (USPA), and Arctic Development and Adaptation to Permafrost Transition (ADAPT) organization committee for the 2016 workshop being held June 18-19 in Potsdam, Germany

Association of Polar Early Career Scientists (APECS) Canada **2015 - 2016**

- Board member

Geographic Student Society (GGS) **2015 - 2016**

- Department of Geography, McGill University, Montreal, QC, Canada

-Elected as co-president for the 2015/2016 academic year

The McGill Geography Graduate-Undergraduate Mentoring Program **2013 - 2017**

-Department of Geography, McGill University, Montreal, QC, Canada
-Meet with undergraduate students to discuss life experiences and life after graduating an undergraduate degree

Annual Science Fair Judge and Volunteer Recruiter **2013 - 2016**

-Kahnawake Survivor School. Kahnawake, QC, Canada
-Science fair at the middle school and secondary school level

Graduate Affairs Committee **2014 - 2014**

-Department of Geography, McGill University, Montreal, QC, Canada
-Involvement: Master's student representative at meetings and reviewing graduate student applications, also revised and updated the current Graduate Student Handbook for the Department of Geography

Geographic Student Society (GGS) **2013 - 2014**

-Department of Geography, McGill University, Montreal, QC, Canada
- Held the position of secretary on the student council

Conference Presentations

Ward Jones, M. (2023) Mapping Agricultural Fields in Alaska. Poster Presentation. American Geophysical Union Fall Meeting. San Francisco, CA. December 11 – 15.

Jones, B. M., **Ward Jones, M.**, Kanevskiy, M., Gannon, G., Ping, C-L., Stitch, D., Gaglioti, B., Schwoerer, T., Agnew, A., and Shur, Y. (2023). Farm field abandonment due to thermokarst and other thaw-related phenomena in Fairbanks, Alaska. Poster Presentation. American Geophysical Union Fall Meeting. San Francisco, CA. December 11 – 15.

Ward Jones, M., Jones, B. M., Kanevskiy, M. Z., and Breen, A. L. (2023). Interactions between ice wedge micro-topography and ground temperatures in high-centered polygon systems in Alaska. Poster Presentation. American Geophysical Union Fall Meeting. San Francisco, CA. December 11 – 15

Gannon, G., and **Ward Jones, M.** (2023). Permafrost Grown: The Great Mulch Study. Oral Presentation. Alaska Food & Farm Festival. Anchorage, AK. November 10 – 12.

Ward Jones, M. (2023). Permafrost Grown: Year 2 Project Update and Preliminary Results. Oral Presentation. Alaska Food and Farm Festival. Anchorage, AK. November 10 – 12.

Ward Jones, M., Jones, B., Nitze, I., Gessner, M., and Grosse, G. (2023). Observing ice-rich permafrost coastal bluff erosion at Drew Point, Beaufort Sea Coast, Alaska using UAV surveys and airborne multispectral imagery. Oral Presentation. 6th European Conference on Permafrost (EUCOP6), Puigcerda, Spain. June 18 – 22.

Ward Jones, M., Baral, P., Borchard, N., Crate, S., Forbes, B., Gaglioti, B., Gannon, G., Grand, S., Habeck, J. O., Jones, B., Kanevskiy, M., Kumpula, T., Maharjan, A., Parlato, N., Poeplau, C., Price, M., Shur, Y., Schwoerer, T., Spring, A., Steiner, J., Strauss, J., Tao, F., Turetsky, M., Ulrich, M., Unc, A., Verdonen, M., and Wirdirsch, T. (2023). The Permafrost-Agroecosystem Action Group: first results and future goals. Poster Presentation. 6th European Conference on Permafrost (EUCOP6), Puigcerda, Spain. June 18 – 22.

Jones, B., Parsekian, A., Kanevskiy, M., **Ward Jones, M.**, Rangel, R., Ohara, N., Veremmeva, A., Breen, A., Hinkel, K., Shur, Y., and Harcharek, Q. (2023). Chain reaction drainage of four permafrost region lakes in

northern Alaska. Poster Presentation. 6th European Conference on Permafrost (EUCOP6), Puigcerda, Spain. June 18 – 22.

Nitze, I., van der Sluijs, J., Barth, S., Bernhard, P., Huang, L., Lara, M., Nesterova, N., Runge, A., **Ward Jones, M.**, Witharana, C., Xia, Z., Kizyakov, A., Veremeeva, A., Liljedahl, and Dai, C. (2023). An experiment to compare digitized labels of retrogressive thaw slumps by domain experts. Oral Presentation. 6th European Conference on Permafrost (EUCOP6), Puigcerda, Spain. June 18 – 22.

Ward Jones, M., Jones, B. M., Kanevskiy, M. Z., and Youcha, E. (2023). NDVI and microtopography interactions in ice wedge systems in Utqiagvik, Alaska. Poster Presentation. NASA ABoVE Science Team Meeting 9. San Diego, CA. January 23-26.

Ward Jones, M., Jones, B. M., Kanevskiy, M. Z., Veremeeva, A., Breen, A. L., Witharana, C., Udawalpola, M., Hasan, A., Liljedahl, A and Youcha, E. (2022). Remote Sensing of ice wedge systems through varying spatial scales with a focus on NDVI. Oral Presentation. American Geophysical Union Fall Meeting. Chicago, IL, and online. December 12 – 16.

Jones, B. M., **Ward Jones, M. K.**, Kanevskiy, M., Shur, Y., Gannon, G., Gaglioti, B., Schwoerer, T. and Ping, C-L. (2022). Remotely sensing 71 years of Permafrost Soil Cultivation in Fairbanks, Alaska, USA. Poster Presentation. American Geophysical Union Fall Meeting. Chicago, IL, and online. December 12 – 16.

Manos, E., Witharana, C., Jones, B. M., **Ward Jones, M. K.**, and Liljedahl, A. K. (2022). Understanding Permafrost Landscape Evolution: Ice-Wedge Trough Network Change Detection from Historical Aerial Imagery using Convolutional Neural Networks and Graph Analysis. Poster Presentation. American Geophysical Union Fall Meeting. Chicago, IL, and online. December 12 – 16.

Jones, B. M., Harcharek, Q., Parsekian, A., Kanevskiy, M. Z., **Ward Jones, M. K.**, Rangel, R. C., Ohara, N., Veremeeva, A., Breen, A. L., Hinkel, K. M., and Shur, Y. (2022). Landscape Reorganization Caused by Cascading Arctic Lake Drainage. Poster Presentation. American Geophysical Union Fall Meeting. Chicago, IL, and online. December 12 – 16.

Frederick, J. M., Bull, D. L., Mota, A., Tezaur, I., Jones, B. M., Bristol, E. M., Choens, R., Flanary, C., Jones, C. A., **Ward Jones, M. K.** (2022). Calibration of the Arctic Coastal Erosion Model at Drew Point, AK, Over a Permafrost Bluff Block Collapse Event in Summer 2018. Poster Presentation. American Geophysical Union Fall Meeting. Chicago, IL, and online. December 12 – 16.

Ward Jones, M. K., Jones, B. M., Nitze, I., Gessner, M., and Grosse, G. (2022). Observing permafrost coastal bluff erosion using a high spatial and temporal resolution remote sensing time series at Drew Point, Beaufort Sea Coast, Alaska. Oral Presentation. 16th International Circumpolar Remote Sensing Symposium. Fairbanks, AK, and online. May 16 – 20.

Ward Jones, M., Jones, B. M., Walker, D. A., Kanevskiy, M. Z., Shur, Y., Peirce, J., Zwieback, S., Breen, A., Youcha, E., Iwahana, G., and Miller, C. E. (2022). Quantifying micro-topographic impacts in ice wedge systems: a preliminary assessment. Poster Presentation. ABoVE Science Team Meeting. Fairbanks, AK, and online. May 9-13.

Ward Jones, M., Jones, B. M., Walker, D. A., Kanevskiy, M. Z., Shur, Y., Peirce, J., Zwieback, S., Breen, A., Youcha, E., Iwahana, G., and Miller, C. E. (2022). Quantifying micro-topographic impacts in ice wedge systems: a preliminary assessment. Oral Presentation. ABoVE Science Team Meeting. Fairbanks, AK, and online. May 9-13.

Gannon, G., **Ward Jones, M.**, and St. Pierre, B. (2022). Permafrost Grown Permafrost Grown: Cultivating knowledge of permafrost-agroecosystems through partnerships with Alaskan farmers. Oral Presentation. Alaska Food Policy Council Virtual Conference. March 17 – 19.

Ward Jones, M., Gannon, G., and Sutton, I. (2022) Permafrost Grown: Cultivating knowledge of permafrost-agroecosystems with farmer knowledge co-production. Oral Presentation. Interagency Arctic Research Policy Committee February Permafrost Collaboration Team Meeting.

Ward Jones, M. (2022). Supporting Sustainable Permafrost-agroecosystems by Co-producing Knowledge with Alaskan and Siberian Farmers with the Permafrost Grown Project. Invited talk. McGill University, Department of Geography Geospectives Seminar Series.

Ward Jones, M., Jones, B., Gannon, G., Schowoyer, T., Kanevskiy, M., Shur, Y., Gaglioti, B., Parlato, N., Fedorov, A., Desyatkin, R., Ping, C., Chapin, C., Sutton, I., Russell, J., Russell, D., St. Pierre, B., and St. Pierre, C. (2021). Understanding permafrost and agriculture interactions for ensuring sustainable, adaptable and resilient permafrost-agroecosystems. Poster Presentation. American Geophysical Union Fall Meeting. New Orleans, LA, and online. December 13 – 17.

Ward Jones, M., Jones, B. M., Walker, D. A., Kanevskiy, M. Z., Shur, Y., Peirce, J., Zwieback, S., Breen, A. L., Liljedahl, A., Natali, S., Miller, C. E., Larsen, C., and Iwahana, G. (2021). Preliminary assessment of the micro-topographic impacts of ice-wedge systems using remote sensing and field observations. Poster Presentation. American Geophysical Union Fall Meeting. New Orleans, LA, and online. December 13 – 17.

Jones, B. M., Kanevskiy, M. Z., Shur, Y., Jorgenson, M. T., Iwahana, G., Gaglioti, B., **Ward Jones, M.**, Larsen, C., Miller, E. A., Miller, C. E., and Jandt, R. (2021). Degradation, stabilization, and initial aggradation of permafrost following an arctic tundra fire. Poster Presentation. American Geophysical Union Fall Meeting. New Orleans, LA, and online. December 13 – 17.

Dai, C., Howat, I., **Ward Jones, M.**, van der Sluijs, J., Nesterova, N., Liljedahl, A., and Freymueller, J. T. (2021). Mapping Retrogressive Thaw Slumps Using ArcticDEM and Machine Learning. Oral Presentation. American Geophysical Union Fall Meeting. New Orleans, LA, and online. December 13 – 17.

Ward Jones, M., Dai, C., Pollard, W., Liljedahl, A., van der Sluijs, J., Brinkerhoff, C., Howat, I., Freymueller, J., (2021). Using ArcticDEM and shallow boreholes to quantify mass wasting sediment loss of retrogressive thaw slumps in the Eureka Sound Lowlands, Canadian high Arctic. Poster Presentation. 2021 Regional Conference on Permafrost and 19th International Conference on Cold Regions Engineering. Online. October 24 – 29.

Jones, B., Urban, F., Soliman, A., Kanevskiy, M., **Ward Jones, M.**, Farquharson, L., Heise, M., Bergstedt, H., Breen, A. L., Shurm Y., and Hinkel, K., (2021). High spatial and temporal resolution remote sensing of a collapsing pingo in northern Alaska. Poster Presentation. 2021 Regional Conference on Permafrost and 19th International Conference on Cold Regions Engineering. Online. October 24 – 29.

Frederick, J., Eymold, W., Mota, A., Tezaur, I., Jones, B., Flanary, C., Jones, C., Thomas, M., Bristol, E., Choens, R., **Ward Jones, M.**, Kasper, J., Brown, E., McClelland, J, and Bull, D. (2021). Demonstration of the ACE (Arctic Coastal Erosion) model at Drew Point, AK during a permafrost bluff block collapse event in summer 2018. Poster Presentation. 2021 Regional Conference on Permafrost and 19th International Conference on Cold Regions Engineering. Online. October 24 – 29.

Ward Jones, M., Jones, B., Gannon, G., Schowoyer, T., Kanevskiy, M., Shur, Y., Gaglioti, B., Parlato, N., Ping, C., Fedorov, A., Klimstra, R., Schlumbohm, R., Sutton, I., St. Pierre, C., St. Pierre, B., Russell, J., and Russell, D. (2021). Permafrost Grown: Co-producing Knowledge with Alaskan and Siberian Farmers to Understand Permafrost-cultivation Interactions. Oral Presentation. Arctic Research Consortium of the United States (ARCUS) Community and Citizen Science in the Far North. Online, October 5 – 7.

Bull, D. L., Frederick, J., Mota, A., Jones, B. M., Tezaur, I., Flanary, C., Choens, R., **Ward Jones, M. K.**, Eymold, W. K., Jones, C. A., Kasper, J., Bristol, E. M., McClelland J. W., and Brown, E. P. (2020). Initial Validation Results for the Arctic Coastal Erosion (ACE) Model. Oral Presentation. American Geophysical Union. Online, December 1 – 17.

Ward Jones, M. K., Jones, B. M., Dai, C., Pollard, W. H., Amyot, F., Liljedahl, A. K., Howat, I., Freymueller, J. T., and Higman, B. M. (2020). A mixed-methods approach to assessing sub-seasonal retreat rates of retrogressive thaw slumps in the Eureka Area, Ellesmere Island, Nunavut, Canada. Poster Presentation. American Geophysical Union. Online, December 1 – 17.

Witharana, C., Bhuiyan, M. A. E., Liljedahl, A. K., Kanevskiy, M. Z., Jorgenson, T., Jones, B., Daanen, R. P., Epstein, H. E., Griffin, C. G., Kent, K., and **Ward Jones, M. K.** (2020). Automated Mapping of Ice-wedge Polygon Troughs in the Continuous Permafrost Zone using Commercial Satellite Imagery. Poster Presentation. American Geophysical Union. Online, December 1 – 17.

Dai, C., Howat, I., Freymueller, J. T., Liljedahl, A. K., **Ward Jones, M. K.**, and Higman, B. M. (2020). Establishing a database for volcanic eruptions and landslides using ArcticDEM. Oral Presentation. American Geophysical Union. Online, December 1 – 17.

Higman, B. M., Briggs, C., Coe, J. A., Dai, C., Dufresne, A., Freymueller, J. T., Geertsema, M., Haeussler, P. J., Jacquemart, M. F., Koppes, M. N., Liljedahl, A. K., Lynett, P. J., Nicolsky, D., Schaefer, L. N., **Ward Jones, M. K.**, Weiss, R., West, R., and Wolken, G. J. (2020). How Alaska's Barry Arm Can Help Us Prepare for Climate Change Hazards. Poster Presentation. American Geophysical Union. Online, December 1 – 17.

Ward Jones, M. K., and Pollard, W. H. (2019) Environmental interactions and feedbacks of degrading ice wedges and impacts on shallow ground temperatures in a high Arctic polar desert system. Poster Presentation. American Geophysical Union. San Francisco, USA, December 9 – 13.

Shur, Y., Fortier, D., Jorgenson, T., Kanevskiy, M. Z., Jones, B. M., and **Ward Jones, M. K.** (2019) Self-organization of ice-wedge systems during their formation and degradation. Poster Presentation. American Geophysical Union. San Francisco, USA, December 9 – 13.

Ward Jones, M. K., Pollard, W. H., and Jones, B. M*. (2018). Rapid initialization and retreat rates of retrogressive thaw slumps in the Fosheim Peninsula, Ellesmere Island, Nunavut. Poster Presentation. 15th International Circumpolar Remote Sensing Symposium. Potsdam, Germany, September 2018. *Presenting author

Ward Jones, M. K., and Pollard, W. H. (2018) Daily Monitoring of a Retrogressive Thaw Slump on the Fosheim Peninsula, Ellesmere Island, Nunavut. Oral Presentation. European Conference on Permafrost (EUCOP) Chamonix-Mont-Blanc, 23 June – 1 July.

Ward, M. K., and Pollard, W. H. (2017) Seasonal Ice Wedge Dynamics in Fosheim Peninsula, Ellesmere Island, Nunavut. Poster Presentation. American Geophysical Union. New Orleans, USA, December 11 – 15.

Ward, M. K., Moersch, J. E., and Pollard, W.H. (2016) Monitoring thermokarst activity and landscape change in the Eureka Sound Lowlands, Ellesmere Island, Nunavut. Poster and Oral Presentation. American Geophysical Union. San Francisco, USA, December 12 – 16.

Ward, M., Moersch, J. E., and Pollard, W. (2016) Combining remote sensing, GIS and fieldwork to monitor the evolution of a retrogressive thaw slump in Eureka, NU. Poster Presentation. GIS Day, McGill University, Montreal, Canada, November 16.

Ward, M., and Pollard, W. (2016) Monitoring thermokarst activity and landscape change in the Eureka Sound Lowlands, Ellesmere Island, Nunavut. Oral presentation, 14th International Circumpolar Remote Sensing Symposium, Homer, Alaska, September 12-16.

Ward, M., and Pollard, W. (2016) Using a mix-methods approach to monitor thermokarst activity in the Eureka Sound Lowlands, Ellesmere Island, Nunavut. Oral presentation, winner of the Troy L. Péwé award for outstanding student presentation, 11th International Conference on Permafrost, Potsdam, Germany, June 20-24.

Pollard, W., and **Ward, M.** (2016) The seasonal dynamics of a hydrohalite tufa associated with a perennial hyper-saline spring in the Canadian high Arctic. Poster presentation, 11th International Conference on Permafrost, Potsdam, Germany, June 20-24.

Gros, M., Koutsavakis, J., Levoy, S., Normand, S., **Ward, M.**, and Chmura, G. (2016) Dyke construction and failure near Caraquet on Chaleur Bay. Poster presentation based on GEOG 550 class research project. Atlantic Canada Coastal and Estuarine Science Society, University of Prince Edward Island, Charlottetown, PEI, May 11-14.

Ward, M., and Pollard, W. (2016). Landscape change around Eureka, Nunavut between 1947 and 2015 and implications for sustainable development. Oral Presentation. McGill Sustainability Research Symposium, McGill University, Montreal, Canada, March 9.

O. Dallaire, C., Harris, L., **Ward, M.**, Trinsci, K., Jarvis, L., MacDonald, G., and Dryden, R. (2016) Creating spaces for sustainability literacy outside the classroom: the McGill Sustainability Research Symposium. Poster Presentation. Science for a Sustainable Society Symposium, McGill University, Montreal, Canada, January 26-27.

Ward, M., and Pollard, W. (2015) Arctic change: landscape changes around Eureka, Nunavut and other stories from the field. Geography in Action! Brown Bag Series Invited Presentation, Department of Geography, McGill University, Montreal, Canada, November 12.

Ward, M. K., Pollard, W. H. (2015) Hyper-saline spring dynamics and salt deposits on Axel Heiberg Island, Nunavut. Oral Presentation. GeoQuebec 2015 – the 68th Canadian Geotechnical Conference and the 7th Canadian Permafrost Conference, Quebec City, Qc, September 20 – 23.

Ward, M., and Pollard, W. (2015) Geomorphology of two hyper-saline springs in the Canadian High Arctic. Oral Presentation. European Geophysical Union, Vienna, Austria, April 13 – 17.

Ward, M., and Pollard, W. (2014) Recent retrogressive thaw slump activity in the Eureka Area, Ellesmere Island, Nunavut. Poster Presentation. Arctic Change, Ottawa, Canada, December 8 – 12.

Ward, M., Pollard, W, and Omelon, C. (2014) Hyper-saline spring activity on Axel Heiberg Island, Nunavut. Poster Presentation. Arctic Change, Ottawa, Canada, December 8 – 12.

Ward, M., and Pollard, W. (2014) Recent retrogressive thaw slump activity in the Eureka Area, Ellesmere Island, Nunavut. Poster Presentation. GIS Day, McGill University, Montreal, Canada, November 10.

Ward, M., and Pollard, W. (2014) High Arctic camping with a grain of salt: the geomorphology of two hyper-saline springs on Axel Heiberg Island, Nunavut. Geography in Action! Brown Bag Series Invited Presentation, Department of Geography, McGill University, Montreal, Canada, September 19.

Ward, M., and Pollard, W. (2014) Hyper-saline spring geomorphology at Stolz Diapir, Axel Heiberg Island, Nunavut. Oral Presentation. Canadian Astrobiology Scientific Training Program Annual Meeting. Montreal, Canada, June 2 – 4.

Ward, M., and Pollard, W. (2013) The geomorphology of two hyper-saline springs in the Canadian High Arctic. Oral Presentation. Canadian Astrobiology Scientific Training Program Annual Meeting. Montreal, Canada, September 16 – 17.

Ward, M.K., and Pollard, W.H. (2013) The geomorphology of two hyper-saline springs in the Canadian High Arctic: preliminary observations and results. Poster Presentation. American Geophysical Union. San Francisco, USA, December 9 – 13.

Ward, M.K., Pollard, W.H. and Omelon, C.R. (2013) The geomorphology of two hyper-saline springs in the Canadian High Arctic: preliminary observations and results. Poster Presentation. Arctic Change, Halifax, Canada, December 9 – 13.

Hernandez-Morlan, X. Itzel, G. Peterson, J. Rhemtulla, **M. Ward**, S. Gupta. (2011). Legacies of the Colorado River Delta, Mexico: Over 30 Years of Landscape Changes. Poster Presentation. Resilience 2011: Resilience, Innovation and Sustainability. Second International Science and Policy Conference. Tempe, AZ, USA. March 11-16.

Published Datasets

Jones, B.M., Ward Jones, M. (2024). University of Alaska, Fairbanks, T Field; Classified LiDAR Point Cloud, Digital Surface Model, Digital Terrain Model, Orthophoto Mosaic, and Multispectral Orthomosaic Imagery; Fairbanks, Alaska; 18 August 2023. Arctic Data Center. <https://doi.org/10.18739/A2125QB64>.

Ward Jones, M., Gannon, G., and Jones, B. (2024). Temperature and soil moisture monitoring of celery trials and compost piles at a farm in Fairbanks, Alaska from May 2022 to March 2023. Arctic Data Center. <https://doi.org/10.18739/A2319S45K>.

Ward Jones, M., Gannon, G., and Jones, B. (2024). Temperature monitoring of various crop with and without seasonal extension techniques during the 2022 growing season in Fairbanks, Alaska. Arctic Data Center. <https://doi.org/10.18739/A26T0GZ0N>.

Jones, B., Kanevskiy, M., Shur, Y., Ward Jones, M., Gaglioti, B., Jorgenson, T., Veremeeva, A., Miller, E., and Jandt, R. (2024). Multi-temporal elevation data, ground temperature time-series, and permafrost borehole logs document the recovery of permafrost at the Anaktuvuk River tundra fire, 2009 to 2023. Arctic Data Center. <https://doi.org/10.18739/A2251FM9P>.

Jones, B.M., and Ward Jones, M. (2023). Midnight Sun Golf Course Classified LiDAR Point Cloud, Digital Surface Model, Digital Terrain Model, Digital Photos, and Orthophoto Mosaic, Fairbanks, AK. Arctic Data Center. <https://doi.org/10.18739/A2W37KX40>.

Jones, B.M., Kanevskiy, M., Parsekian, A., Bergstedt, H., Ward Jones, M., Rangel, R., Hinkel, K., and Shur, Y. (2023). Saline permafrost degradation below a shallow thermokarst lake in northern Alaska, 2008-2023. Arctic Data Center. <https://doi.org/10.18739/A20P0WS3K>.

Jones, B.M., and Ward Jones, M. (2023). Orthomosaic Image and Digital Surface Model for the Bugeye Lakes Complex, Arctic Coastal Plain of northern Alaska. Arctic Data Center. <https://doi.org/10.18739/A2X34MT5Q>.

Ward, M. K., Amyot, F., and Pollard, W. (2020). Shallow (12 cm) ground temperatures for 7 ice-wedge troughs and 2 polygon centres in a high-centred polygon system in Fosheim Peninsula, Ellesmere Island, Nunavut, Canada. Polar Data Catalogue. <https://doi.org/10.21963/13135>.

Ward, M. K., Amyot, F., and Pollard, W. (2020). Ice-wedge transect thaw depths during 2017 and 2018 thaw seasons, Fosheim Peninsula, Ellesmere Island, Nunavut, Canada. Polar Data Catalogue. <https://doi.org/10.21963/13134>.

Media Coverage

Farming on Permafrost, Futurum Careers Webpage, July 2023

Farming on Permafrost, Futurum Magazine, January 2023

Future of Farming: Scientists Turn Towards Alaska, Alaska Magazine, September 2022

Policy changes can help Alaska's new farmers work in permafrost conditions, UAF experts say, Alaska Beacon, 6 September, 2022

The Surreal Abundance of Alaska's Permafrost Farms, The New Yorker, 30 August, 2022

Breaking the Ice, How to Feed the World Impact Report 2022, August 2022

UAF at AGU 2021, Science Shorts Q & A: Melissa Ward Jones.

<https://www.youtube.com/watch?v=dRdVYDV8Z5w>

Project to study interactions between permafrost, agriculture, University of Alaska Fairbanks Cornerstone Newsletter, 22 September 2021. <https://uaf.edu/news/project-to-study-interactions-between-permafrost-agriculture.php>

Twig Science Reporter Weekly News Update, 6 June, 2019, Twig Education, Imperial College London, UK

Live Radio Interview, CBC Homerun, 29 May, 2019

Interview, CBC Montreal 6pm evening news, 24 May, 2019: <https://www.cbc.ca/player/play/1527549507640>

Even in the High Arctic, researchers find permafrost thaws are changing the landscape. CBC News Montreal, 24 May, 2019: <https://www.cbc.ca/news/canada/montreal/in-the-high-arctic-researchers-find-permafrost-thaws-are-changing-the-landscape-1.5149442>

Permafrost degradation spreads in Canadian High Arctic. Eye on the Arctic, 24 May, 2019:

<http://www.rcinet.ca/eye-on-the-arctic/2019/05/24/permafrost-study-canada-nunavut-arctic-climate/>

Permafrost degradation spreads in High Arctic. Radio Canada International 24 May, 2019:

<http://www.rcinet.ca/en/2019/05/24/permafrost-degradation-spreads-in-high-arctic/>