

University of Maine  
School of Earth and Climate  
Sciences

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**University of Maine, Orono, School of Earth and Climate Sciences & Climate Change Institute**

Pursuing Master of Science and Certificate in Interdisciplinary Climate Studies, graduating May 2019

National Science Foundation Graduate Research Fellowship

GPA: 4.00/4.00 (after two semesters)

Thesis title: Mass Accumulation Controls on Glacier Surges

Advisors: Dr. Karl Kreutz and Dr. Ellyn Enderlin

**Dickinson College, Carlisle, Pennsylvania, Class of 2016**

Bachelor of Science in Earth Sciences, *with Honors*

Cumulative GPA 3.95/4.00

Graduated Summa Cum Laude and Dean's List

Honors thesis title: *Short-term Climate Cycles, Recent Climate Changes, and Volcano-Ice Hazards: Nevado Coropuna, Arequipa, Peru*

Thesis advisor: Dr. Benjamin Edwards

Skills and interests

**Cartography/GIS** – using geospatial information to observe and understand Earth processes at all scales

**Satellite remote sensing** – space observations of land and ocean processes on various scales

**GPS** – differential GPS to measure location and feature change at fine spatial scales and resolution

**Time series analysis** – Using geophysical data, mainly from remote sensing, for repeat observations

**GPR** – Ground Penetrating Radar to understand sub-surface processes

Experience with optical, radar, and field geospatial datasets including: Landsat 1 to 8, differential GPS, Sentinel 1 and 2, Planet Labs, WorldView, GeoEye, QuickBird, ASTER, Radarsat-1 and 2, ERS-1 and 2, and LiDAR

Research and Field Experience

- 2017 Understanding glacier dynamics and geologic mapping at Hoodoo Ice cap and surrounding glaciers, British Columbia, Canada
- 2017 GPR, GPS, and ice cores at Eclipse Icefield, St. Elias Range, Yukon, Canada
- 2017 University Center of Svalbard visiting student in Remote Sensing of the Cryosphere and Glaciology
- 2016 Geologic and GPS mapping in Iceland at Vatnsskarð and Undirhliðar quarries of subglacial lavas
- 2015 Geologic and GPS mapping, lake sediment core, organized and executed expedition to understand volcanic geology and glacial evolution Coropuna, Peru [Co-leader]
- 2014 Geologic and GPS mapping, field investigations of sub-glacial lava formation at Edziza and Kima'Kho volcanoes, Northern British Columbia, Canada
- 2014 Regional Geology and Glaciers, Exploratory trip, Amasalik, Greenland and Reykjavik, Iceland
- 2014 Interviews and field research on the 2013-2015 Review of the 2°C global warming limit at the 20<sup>th</sup> Conference of the Parties to the UNFCCC, Lima, Peru
- 2013 Geologic and GPS mapping, spit progradation and sediment transport at Cape Henlopen, DE
- 2013 Interviews, GIS mapping, and Archaeological fieldwork, examining climate change in archaeological record and human adaptation, Taraco Archaeology Project, Lake Titicaca, Bolivia

## Awards and Honors (awarded \$159, 877.61 in grants)

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2017	GeoHackWeek Travel Grant from University of Washington (\$1,062.70)
2017	RemoteEx Science Activities Travel Grant (\$2,000, \$950, and \$737.56)
2017	International Arctic Science Committee Young Scientists Travel Grant (\$240)
2017	Maine Space Grant Consortium Director's Fund grant (\$400)
2016	UMaine Graduate Student Government travel to present grant (\$425)
2016	National Science Foundation Graduate Research Fellowship (\$138,000.00)
2016	Dickinson Research and Development: Volcano-Ice Interactions in Iceland. B. Edwards (PI), <b>W. Kochtitzky</b> (Co-PI). \$7,490.15
2016	Dickinson Baird Sustainability Fellow for high achievement in sustainability
2015	Dickinson Research and Development: Sediments as a climate record in a hydrologically closed basin, Coropuna, Peru. B. Edwards (PI), <b>W. Kochtitzky</b> (Co-PI). \$8,067.20
2015	Phi Beta Kappa Honor Society
2015	Dan and Betty Churchill Student Research Prize
2015	The Robert Allan Jansen Memorial Student-Faculty Research Prize
2015	Patton Prize, for research and highest GPA at Dickinson College
2015	Henry Hanson Research Prize for Excellence in Geology (\$500)
2014	EPA-Greater Research Opportunities Fellowship (alternate awardee)
2012	Alpha Lambda Delta Honor Society
2012 - 2016	Benjamin Rush Merit Scholarship from Dickinson College (\$60,000)
2012 - 2016	Dickinson College Dean's list (every semester except fall 2015)
2013	Dickinson College Sustainability Award, for significant sustainability achievement
2012	Honors in Science from University School of Nashville (High School)
2011	Eagle Scout Award, Boy Scouts of America, Nashville, TN

## Select Leadership and Involvement

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2017	Expert Reviewer for IPCC Special Report on Global Warming of 1.5°C
2017	UMaine Glaciology Group Lead Organizer
2017	International Arctic Science Committee Network on Arctic Glaciology Winter 2017 Local Organizing Committee member
2016	Volunteer with Old Town High School Earth Science Program
2013 to 2017	Sustainable Investment Task Force/Group: Student and Alumnus member
2013 to 2016	Presidential Commission for Environmental Sustainability: Student member
2013 to 2016	Geology Club of Dickinson: President, Treasurer, and Secretary
2013 to 2016	Dickinson College Outing Club: President, Treasurer, and Secretary

## Peer Reviewed Publications

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- Kochtitzky, W.**, Edwards, B., Enderlin, E., Marino, J., Marinque, N. 2017. Improved Estimates of Glacier Change Rates at the Nevado Coropuna Ice Cap, Peru. *Journal of Glaciology*. (In Review)
- Enderlin, E., Carrigan, C., **Kochtitzky, W.**, Cuadros, A., Moon, T., Hamilton, G. 2017. Greenland Iceberg Melt Variability from High-Resolution Satellite Observations. *The Cryosphere*. (In Review)

## Select Publications

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- Kochtitzky, W.** 2017. Snow Accumulation Controls on Surge-type Glacier Dynamics: Donjek Glacier, Yukon Territories. Finse, Norway.
- Kochtitzky, W.** 2017. Mass Accumulation Controls on Glacier Surges: Understanding the surge dynamics of Donjek Glacier, Yukon Territories, Canada. RemoteEx Workshop, Iceland.
- Kochtitzky, W.** and Enderlin, E. Submarine Iceberg Melting Measurements Using High-Spatial Resolution Remote Sensing Observations in Greenland Fjords. 2017. International Arctic Science Committee Network on Arctic Glaciology Annual Meeting. Bethel, Maine, USA.
- Mariño J., Thouret J.C., Aguilar R., Cabrera M., Bromley G., Manrique N., Edwards B., **Kochtitzky W.** 2016. Geological study of the ice-clad Nevado Coropuna volcanic complex (Peru). Abstract and poster. IAVCEI COV9 Cities on Volcanoes meeting, Puerto Varas, Chile.
- Kochtitzky, W.**, Edwards, B. 2016. El Niño Southern Oscillation controls snow cover on Nevado Coropuna: measurements using Landsat satellites. C33B-0779 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12 – 16 Dec.
- Edwards, B., Pollock, M., **Kochtitzky, W.** and Engen, C. 2016. 3-D Mapping Of Quarry Walls To Constrain The Internal Structure Of A Glaciovolcanic Tindar, SW Iceland. *Geological Society Of America Abstracts With Programs*. Vol. 48, No. 7.
- Thompson, A., Orden, M., Lembo, C., Wallace, C., Kumpf, B., Heineman, R., Engen, C., Edwards, B., Pollock, M. and **Kochtitzky, W.** 2016. Physical Characteristics Of Glaciovolcanic Pillow Lavas From Undirhlidar, Sw Iceland. *Geological Society Of America Abstracts With Programs*. Vol. 48, No. 7.
- Heineman, R., Lembo, C., Engen, C., **Kochtitzky, W.**, Wallace, C., Orden, M., Thompson, A., Kumpf, B., Edwards, B. and Pollock, M. 2016. New Insights On The Formation Of Glaciovolcanic Tindar Ridges From Detailed Mapping Of Undirhlidar Ridge, Sw Iceland. *Geological Society Of America Abstracts With Programs*. Vol. 48, No. 7.
- Wallace, C., Kumpf, B., Heineman, R., Lembo, C., Orden, M., Thompson, A., Engen, C., **Kochtitzky, W.**, Pollock, M., Edwards, B. and Hiatt, A. 2016. Geochemical Constraints On The Magmatic System And Eruptive Environment Of A Glaciovolcanic Tindar Ridge From Undirhlidar, Sw Iceland. *Geological Society Of America Abstracts With Programs*. Vol. 48, No. 7.
- Diamond, S., Plascencia, E., **Kochtitzky, W.**, Edwards, B., Marino, J. and Strock, K. E. 2016. Diatom Community Shifts in Response to Volcanic Activity and Long-term Climatic Change in a High Altitude South American Lake. SS17, #24 at Association for the Sciences of Limnology and Oceanography in Sante, Fe, NM.
- Kochtitzky, W.**, Edwards, B., Mariño, J. and Manrique, N. 2015. Peruvian Tropical Glacier May Survive Longer Than Previously Thought: Landsat Image Analysis of Nevado Coropuna Ice Cap, Peru. C21B-0729 presented at 2015 Fall Meeting, AGU, San Francisco, CA.
- Kochtitzky, W.**, Edwards, B., Mariño, J. and Manrique, N. 2015. Tropical Ice-Cap Found to be Melting Slower, the Case of Nevado Coropuna Volcanic Complex, Southern Peru. *Geological Society of America Abstracts with Programs*. Vol. 47 No. 7.

Edwards, B., and **Kochtitky, W.** 2015. Assessing the Global Potential for Volcano-Ice Interactions. Geological Society of America Abstracts with Programs. Vol. 47 No. 7.

Plazencia, E., **Kochtitzky, W.**, Strock, K., Edwards, B., Mariño, J. and Manrique, N. 2015. Analysis of Sediment and Ash from Lago Pallarcocha, Nevado Coropuna, Peru. Geological Society of America Abstracts with Programs. Vol. 47 No. 7.

Franceschi, J. O., Reinthal, M., Pollock, M., Edwards, B., Plasencia, E. and **Kochtitzky, W.** 2014. Preliminary Geochemical Constraints on the Evolution of Pillow Ridge Tindar, Edziza Volcanic Complex, NCVP. Geological Society of America Abstracts with Programs. Vol. 46 No. 6.

#### Current Certifications

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- Wilderness First Responder (WFR), 2013 to present
- Adult/Child CPR, AED, and Airway, 2013 to present

#### Software experience

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ArcGIS, ArcGIS Online, MatLab, Python, QGIS, ENVI, RADAN by GSSI, Photoscan by AgiSoft, Tremble Pathfinder Office, Trimble Business Center, TerraSync, SNAP, WordPress, Piktochart, Photoshop, Google Earth, Microsoft Office