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| Meredith.Helmick@Maine.edu | Bangor, ME |

**MEREDITH E. HELMICK**

# EDUCATION

**BS Environmental Geoscience,** Minor in Environmental Studies **January 2017 to June 2020**

* **Courses completed outside of the general studies requirements include:** one year General Chemistry, Physics, Independent Research, and GIS; Earth Systems; Historical Geology; Sedimentary Geology; Environmental Geology; Environmental Site Assessment; Minerology; Petrology; Volcanology; Structural Geology; Electron Microanalysis; Freshwater Ecology; Coastal Field Study; 2D Drawing; Engineering Graphics; Calculus; Elementary Statistics; Geography of Soils; Human Geography; Graphic Design
* A 6-hour Geology Field Course including Appalachian field study and JMARS remote mapping

# RESEARCH EXPERIENCE

**Concord University – Department of Geography**, Athens WV **Spring 2020**

* A temporal land cover study using MRCL datasets (2001, 2006, 2011, and 2016) as well as local hydrologic and atmospheric (precipitation) data to understand natural and anthropogenic causes of record flooding in June of 2016 (Greater Cherry River Watershed, WV)
* Maps, datasets, tables, etc. created in ArcGIS for semester long research project

**Concord University – Department of Geology**, Athens WV **Spring 2019 – Summer 2020**

* Independent undergraduate research funded by Geological Society of America Undergraduate Research Grant focused on using tephrochronology as a dating method to constrain the age model of a paleoenvironmental study
* Travel to UMN/LacCore for core sub-sampling. Sample preparation and Electron Microprobe Analysis performed at Concord University.

**Concord University – Department of Geology**, Athens WV  **Spring 2019 to Summer 2020**

* Multi-semester undergraduate research focusing on the origin of pseudotachylytes (PST) from the Homestake Shear Zone, Colorado, USA
* Petrographic and Electron Microprobe analysis to characterize pressure and depth of formation, mineral assemblages, and metamorphic deformation of PST samples

**University of Maine –** Kankakee Paleo Project Field/Research Assistant **Summer 2019**

* Invited by Dr. Katherine Glover (UMaine/Climate Change Institute) to assist on National Geographic funded research project
* Utilized historical and modern documents and data to construct a sampling plan of marsh sediments which met specific criteria
* Sediment cores retrieved using Livingstone Piston Corer and Russian Peat Borer

# WORK EXPERIENCE

**University of Maine,** School of Earth and Climate Science / CCI,Graduate Research Assistant  **Current Position**

* Preparing tephra samples extracted from ice cores
* Other duties as assigned

**Concord University Tephra Lab,** Data Processing Assistant  **August 2019 – Spring 2020**

* Assist with preparation and submission of data to publicly supported geoscience database
* Data focus: Field and laboratory studies of tephra produced by pyroclastic eruptions o Data retrieved from array of sources including, but not limited to: geographic location, laboratory/analytical methods used, samples collected, photographs, geochemical data, field notebooks, spreadsheets

**Concord University Microanalysis Laboratory,** Lab Assistant **January 2019 – May 2019**

* Assist with preparation of samples: crushing, sieving, cutting, polishing, separations, sample mounting, etc.
* Operation of the electron microprobe in support of science courses, research, and samples submitted by clients
* Processing microprobe data, cataloging samples, other work as necessary to support the Electron Microprobe Laboratory

# OTHER

**Concord University Geology Club,** President Elected November 2020

**AmeriCorps,** Twin Branch Environmental Steward Nov 2016 to May 2017

**WVU Extension Office,** 4-H Cabin Counselor and STEM Instructor Summer 2017

**Sigma Gamma Epsilon (*Theta Theta Chapter)***, Delegate