

MARIAMA C. DRYAK

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EDUCATION

University of Maine, Orono, ME **2017 - Present**
M.Sc. in Climate Change Institute, School of Earth and Climate Sciences – in progress

- Advisor: Dr. Ellyn M. Enderlin
- Thesis: Understanding ocean forcing of ice sheet and glacier change around the Antarctic Peninsula using remotely-sensed iceberg melt data

Durham University, Durham, UK **2013 - 2017**
B.A. in Combined Honours in Social Sciences in Geography and Archaeology

- Advisor: Dr. David H. Roberts
- Dissertation: Post-Little Ice Age glacial change in Steinsholtsjökull outlet glacier, Southern Iceland: geomorphology and climatic drivers of retreat

AT A GLANCE

- Masters student and graduate research assistant at the University of Maine in the Climate Change Institute and School of Earth and Climate Sciences

APPOINTMENTS & RESEARCH EXPERIENCE

Graduate Teaching Assistant, University of Maine **2017 - 2018**

- Lab instructor for ERS 102: *Environmental Geology* under Dr. Amanda Olsen and Dr. Andrew Reeve

Graduate Research Assistant, University of Maine **2018 - Present**

- Digital elevation model (DEM)-construction for icebergs around Antarctica using World View imagery and the University of Maine supercomputer
- Iceberg melt rate production using DEMs in MATLAB
- Computer programming in UNIX

Undergraduate Research Projects **2014 - 2017**

- Measurement of glacial mass loss in Novaya Zemlya, Russia, using ERDAS Imagine remote sensing software
- 2-D modeling of past Little Ice Age glacial extent in Mosedale Valley, Lake District, UK
- Dissertation: Steinsholtsjökull, Iceland
 - Assessment of past glacial retreat rates through reconstructing glacial extents using historical aerial imagery in ArcGIS and dates derived from lichenometry
 - Statistical analysis of glacial retreat and its relationship with climatic and non-climatic variables

FIELD RESEARCH EXPERIENCE

Steinsholtsjökull and Gígjökull, Iceland **August 2016**

- Fieldwork skills: lichenometry, Schmidt Hammer testing, mapping, GPS use, clast form analysis, photo-logging, field notes
- Post-fieldwork skills: geomorphological mapping of glacial features and local field site

KvÍarjökull, Iceland **September 2016**

- Fieldwork skills: clast form analysis, GPS use, mapping, field notes
- Post-fieldwork skills: statistical analysis of results and ternary diagram clast analysis

Glenn Torra-Mhichaig, Isle of Skye, Scotland **March 2016**

- Fieldwork skills: moraine measurement, GPS use, sediment coring, field notes

- Post-fieldwork skills: statistical analysis of results, ArcGIS calculation of free-face area using a DEM

Mosedale Valley, Lake District, England

January 2016

- Fieldwork skills: glacial landsystem mapping, field notes

Western Arctic National Parklands, Alaska

Summer 2015

- Conducted archaeological survey assessing the coastal vulnerability of cultural resources in Northwest Alaska during a National Park Service internship
- Fieldwork skills: GPS Trimble recording of cultural features/artifacts, GPS use, field notes, photo-logging, test pit excavation, context logging

ABSTRACTS

Posters

- Dryak, M. C., E. M. Enderlin, 2018, E. E. Miller. Mapping Antarctic Peninsula Iceberg Melt Variability with Satellite Imagery, *POLAR 2018*.
- Dryak, M. C., E. M. Enderlin, 2018. Understanding Ocean Forcing of Polar Glacier Change Using Remotely-Sensed Iceberg Melt Data, *Harold W. Borns, Jr. Symposium*.
- Dryak, M. C., E. M. Enderlin, 2018. Understanding Ocean Forcing of Polar Glacier Change Using Remotely-Sensed Iceberg Melt Data, *UMaine 2018 Student Symposium*.

Talks

- Dryak, M. C., E. M. Enderlin, 2018. Understanding Ocean Forcing of Polar Glacier Change Using Remotely-Sensed Iceberg Melt Data, *APECS International Online Conference 2018*.

HONORS/AWARDS

- Tinker-Muse Prize for Science and Policy in Antarctica (2018) to attend POLAR2018 conference in Davos, Switzerland
- NSF Travel Award (2018) to attend SCAR Open Science Conference in Davos, Switzerland
- University of Maine Graduate Student Government Grant (2018) to attend POLAR2018 conference and APECS World Summit in Davos, Switzerland
- Remote-Ex Scholarship (2017) to attend Remote Sensing in the Cryosphere Course (GEO5540) at the University of Oslo, Norway
- Durham University Expeditions Group Grant (2016-2017) funded by the British and Foreign School Society for undergraduate dissertation work on *Post Little Ice Age glacial change in Steinsholtjökull outlet glacier, Southern Iceland: geomorphology and climatic drivers of retreat*
- Grey College Association Grant (2016)

SYNERGISTIC ACTIVITIES

US Representative: Association of Polar Early Career Scientists **2018 – Present**

- Represent the United States Association of Polar Early Career Scientists (USAPECS) on an international level

Co-Chair and Board Member: USAPECS **2018 – Present**

- Manage USAPECS science communication blog series

Convenor: *Changes in the Arctic* **2016 - 2017**

- Lead organizer and discussion panel moderator of 'Changes in the Arctic', an educational outreach event communicating the effects of climate change in the Arctic at Durham University
- Liaison between discussion panel speakers and Durham University student organizers
- Organized the attendance of academics, students, staff and event publicity

Intern: *Western Arctic National Parklands*

Summer 2015

- Produced informational videos on the impacts of climate change on cultural resources in Arctic Alaska for the National Park Service
- Interviewed subject experts on climate change in the Arctic
- Communicated the impacts of climate change in the Arctic to park visitors

Creator and Editor: *Let's Do Something BIG.*

2016 - Present

- Find writers, organize and edit science and environmentally-focused articles to be published on the 'Let's Do Something BIG.' (LDSB.) blog
- Organize and coordinate LDSB. community events such as 'Trash Run' litter clean-ups and educational outreach efforts
- Create and collect content for website for 'letsdosomethingbig.weebly.com'
- Maintain social media accounts (Twitter, Facebook)

OTHER AFFILIATIONS

Graduate Advisor

- Dr. Ellyn Enderlin (*Climate Change Institute, University of Maine*)

Undergraduate Advisors

- Professor David Roberts (*Department of Geography, Durham University*)
- Dr. Andrew Millard (*Department of Archaeology, Durham University*)

National Park Service Advisor

- Mike Holt (*Western Arctic National Parklands, National Park Service*)

REFERENCES: Available upon request.