Megan E. Thompson-Munson

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(a) Education and Research

University of Colorado, Boulder, CO — May 2025 (expected)
PhD in Atmospheric and Oceanic Sciences (ATOC) | GPA: 4.0/4.0
Advisor: Dr. Jan T.M. Lenaerts
Research: Ice sheet and climate interactions

University of Wyoming, Laramie, WY — May 2020
MS in Geology | GPA: 4.0/4.0
Advisor: Dr. Neil F. Humphrey
Thesis: *Observations and implications of three-dimensional deformation in the Greenland Ice Sheet*

University of Massachusetts, Amherst, MA — May 2017
BS in Geology, BS in Environmental Science | GPA: 3.8/4.0
Advisor: Dr. Isla S. Castañeda
Thesis: *Understanding the Environments in which Early Humans Lived: Insights from Organic Geochemical Analyses of East African Rift Valley Paleolakes*
Commonwealth Honors College Scholar with Greatest Distinction, *cum laude*

(b) Field and Laboratory Experience

Late Agnes Rock Glacier Field Work — Oct 2019
Field Assistant | State Forest State Park, CO | Duration: 1 day
- Collected seismic refraction data on an active region of a rock glacier

Southern Sierra Nevada Critical Zone Observatory Field Work — Jul 2018, Jul 2019
2019: Field Assistant | Sierra Nevada, CA | Duration: 11 days
2018: Field Assistant | Sierra Nevada, CA | Duration: 14 days
- Collected seismic refraction data in the southern Sierra Nevada foothills
- Assisted with soil and saprolite core recovery from a Geoprobe
- Surveyed vegetation while mentoring high school students in the Hands on the Land program

Cold Regions Analysis Group Field Work — May–Jun 2018, May–Jan 2019
2019: Field Assistant | Ilulissat, Greenland | Duration: 31 days
2018: Field Assistant | Kangerlussuaq, Greenland | Duration: 32 days
- Established first two years of a new firn project in the Greenland Ice Sheet's percolation zone
- Hot-water drilled boreholes, extracted firn cores from boreholes, and logged cores
- Traveled several kilometers by ski and snowmobile to collect data along a transect

University of Massachusetts Biogeochemistry Laboratory — May 2015–May 2017
Undergraduate Research Technician | Amherst, MA
- Prepared 369 paleolake sediments for geochemical analysis to detect biomarkers
- Quantified biomarker abundances to infer paleoenvironmental conditions in east Africa

University of Massachusetts Soil Science Laboratory — Sep–Dec 2013
Undergraduate Research Technician | Amherst, MA
- Evaluated the role of biochar in sustainable agriculture by monitoring field and greenhouse growth of crops grown in nutrient-rich and nutrient-poor soils

(c) Publications and Conferences

Peer-Reviewed Publications:

[2] **Thompson-Munson, M.E.**, Humphrey, N.F., Harper, J.T., and Meierbachtol, T.W. (In prep). Measurements of cross-flow deformation in the Greenland Ice Sheet reveal sensitivity of basal ice to underlying topography

[1] Lam, A., Bauer, J.E., Fraass, S., Sheffield, S., Limbeck, M.R., Borden, R.M., **Thompson-Munson, M.E.**, Fraass, A.J., Hills, J.M., Muskelly, C.E., Hartshorn, K.R., and Bryant, R. (2019). Time Scavengers: An Educational Website to Communicate Climate Change and Evolutionary Theory to the Public through Blogs, Web Pages, and Social Media Platforms. The Journal of STEM Outreach, 2(1)

Theses:

[2] **Thompson-Munson, M.E.** (2020). Observations and implications of three-dimensional deformation in the Greenland Ice Sheet. Master's thesis, University of Wyoming.

[1] **Thompson-Munson, M.E.** (2017). Understanding the Environments in which Early Humans Lived: Insights from Organic Geochemical Analyses of East African Rift Valley Paleolakes. Bachelor's thesis, University of Massachusetts.

Conference Abstracts and Presentations:

[10] **Thompson-Munson, M.E.**, Humphrey, N.F., Harper, J.T., and Meierbachtol, T.W. (2020). In-Situ Measurements of Three-Dimensional Deformation in the Greenland Ice Sheet. AGU Fall Meeting.

[9] Dunmire, D.R., **Thompson-Munson, M.E.**, Lenaerts, J., Wever, N., Keenan, E., Banwell, A.F., and Datta, R. (2020) Improving Understanding of Future Antarctic Ice-Shelf Vulnerability to Atmospheric Warming. AGU Fall Meeting.

[8] **Thompson-Munson, M.E.**, Humphrey, N.F., Harper, J.T., and Meierbachtol, T.W. (2019). Multi-day summer speed-up events in western Greenland's ablation zone driven by non-local ice sheet motion. AGU Fall Meeting, San Francisco, CA.

[7] **Thompson-Munson, M.E.** (2019). Evidence of cross-flow deformation in the Greenland Ice Sheet's ablation zone. Northwest Glaciologists Conference, Corvallis, OR.

[6] Castañeda, I.S., **Thompson-Munson, M.E.**, Gilchrist, S., Lupien, R., Russell, J.M., Salacup, J., Feibel, C.S., and Cohen, A.S. (2018). Early Pleistocene temperature history of Paleolake Lorenyang, West Turkana Basin (Kenya). AGU Fall Meeting, Washington, D.C.

[5] Lam, A.R., Bauer, J., Sheffield, S.L., Muskelly, C.E., **Thompson-Munson, M.E.**, Limbeck, M., Hils, J.M., Hartshorn, K.R., Fraass, A., Fraass, S., Borden, R. (2018). Time Scavengers: A Website to Disseminate Climate Change and Evolutionary Principles to Increase Public Literacy. AGU Fall Meeting, Washington, D.C.

[4] **Thompson-Munson, M.E**. and Castañeda, I.S. (2017). Understanding the Environments in which early humans lived: Insights from organic geochemical analyses of East African Rift Valley paleolakes. Massachusetts Undergraduate Research Conference, Amherst, MA.

[3] **Thompson-Munson, M.E.**, Castañeda, I.S., Lupien, R., and Russell, J.M. (2017). Evaluation the potential for isoprenoid and branched GDGT temperature reconstructions in West Turkana and Northern Awash Basin sediments. Hominin Sites and Paleolakes Drilling Project Annual Meeting, Tempe, AZ.

[2] **Thompson-Munson, M.E.** and Castañeda, I.S. (2015). Late Pliocene and Early Pleistocene temperature reconstructions from paleolakes of the West Turkana and North Awash basins, East Africa. GSA Annual Meeting, Baltimore, MD.

[1] Castañeda, I.S., **Thompson-Munson, M.E.**, Lupien, R., Russell, J.M. (2015). Late Pliocene and Early Pleistocene temperature reconstructions from paleolakes of the West Turkana and North Awash Basins, East Africa. AGU Fall Meeting, San Francisco, CA.

(d) Teaching Experience

ATOC 1070: Weather and Atmosphere Lab Aug–Dec 2020
Teaching Assistant | University of Colorado | Fall 2020: 64 students

GEOG 1010: Physical Geography Aug 2019–May 2020
Teaching Assistant | University of Wyoming | Fall 2019: 60 students, Spring 2020: 45 students

GEOG 3600 Earth and Mineral Resources Aug–Dec 2018
Teaching Assistant | University of Wyoming | Fall 2018: 31 students

Attended Teaching Workshops:

Teaching about Our Changing Climate, GETSI 26 Jan 2021
Teaching in the Era of COVID-19, University of Colorado 9 Sep 2020
Universal Design for Learning, University of Colorado 20 Aug 2020
Using Dialogue in the Classroom, University of Colorado 20 Aug 2020
How to Be an Anti-Racist in the Classroom, University of Colorado 19 Aug 2020
Classroom Management, University of Colorado 19 Aug 2020

(e) Outreach, Service, and Other Employment

Interviews and Articles:

[3] **Thompson-Munson, M.E.** 29 March 2021. *Icebergs.* AntarcticGlaciers.org. http://www.antarcticglaciers.org/glacier-processes/glacier-types/icebergs/

[2] Interviewed for the article: Amos-Landgraf, I. 12 March 2021. *How Does an Iceberg Really Float?* GlacierHub. https://blogs.ei.columbia.edu/2021/03/12/iceberg-really-float/

[1] Interviewed about icebergs for *Breakfast with Sammy J* on ABC Radio Melbourne. 2 March 2021.

Outreach:

Colorado STEM Academy, Visiting Scientist 9 Apr 2021
Laramie Middle School, Visiting Scientist 5 Mar 2020
Time Scavengers Science Outreach Blog, Collaborator, Writer 2017–2019
University of Minnesota Paleoclimate Class, Virtual Presenter Apr 2019
Girls Inc. Eureka! STEM Career Development, Activity Developer Jun 2015

Service:

Colorado State Science Fair, Judge 9 Apr 2021
ATOC Justice, Equity, Diversity, and Inclusion Committee, Member Aug 2020–present
ATOC Outreach Committee, Member Aug 2020–present
ATOC Forum Committee, Member Aug 2020–present
AGU Flash Freeze Competition, Judge Dec 2010
ATOC Graduate Application Mentorship Program, Mentor, Developer Aug–Dec 2020
Research Lunch Seminar Series, Lead and Co-Organizer Jan 2018–Dec 2019
Wyoming State Science Fair, Judge Mar 2018, Mar 2019
Virtual Climate Scientist Project, Ice Sheet Consultant Dec 2018

Other Employment:

Mount Rainier National Park, Park Ranger Intern May–Sep 2016

(f) Awards and Grants

Women in Quaternary Science Award, Shlemon Center for Quaternary Studies, $5,761 2019
Outstanding Student Award, Association for Women Geoscientists 2019
Anne Kirtland Selden Lowe Scholarship, University of Wyoming, $1,500 2019
Page Jenkins Memorial Scholarship, University of Wyoming, $2,200 2019
Geology & Geophysics Meritorious Graduate Research Grant, University of Wyoming, $1,260 2018
Walter Harrison and Constance Chatterton Spears Fellowship, University of Wyoming, $2,500 2018
Bozanic Student Support, University of Wyoming, $1,000 2018
S H Knight Geology Scholarship, University of Wyoming, $900 2018
Outstanding Geology Senior Award, University of Massachusetts 2017
Education Award, AmeriCorps, $1,500 2016
New York Farmers Scholarship, University of Massachusetts, $1,000 2016
Angelo Tagliacozzo Memorial Geological Scholarship, NEAIPG, $2,000 2016
Ascension Farms Scholarship, University of Massachusetts, $1,000, $7,000 2014, 2016
Dean's Award, University of Massachusetts, $2,000 2013–2016
John & Abigail Adams Tuition Waiver, University of Massachusetts 2013–2016

(g) Organizations and Affiliations

American Geophysical Union, Student Member 2019–present
American Institute of Professional Geologists, Student Member 2019
Phi Kappa Phi, Student Member 2017
University of Massachusetts Geosciences Club, Vice President 2015–2017
Phi Sigma Pi, Student Member, Education Chair, Regional Delegate 2014–2017
Geological Society of America, Student Member 2014–2017