

Graham Harper Edwards

Earth & Planetary Sciences
University of California Santa Cruz
1156 High Street EMS A232
Santa Cruz, CA 95060 U.S.A.

Email: ghedwards@ucsc.edu
Phone: 1.920.559.2279
Website: grahamedwards.github.io

EDUCATION

University of California Santa Cruz 2016 – Present
Doctoral Studies, Earth & Planetary Sciences
Candidacy Fall 2018
Proposed Dissertation Title: Applications of the uranium decay chain to diverse problems in deep time and Quaternary studies: chronologic insights into processes of planetary interiors and the bases of glaciers.
Advisor: Prof. Terrence Blackburn
Committee: Profs. Slawek Tulaczyk (*Chair*, UCSC), Myriam Telus (UCSC), Kurt Cuffey (UC Berkeley)

Bowdoin College Brunswick, ME 2014
Bachelor of Arts: Earth and Oceanographic Science with Honors, Classics minor
Summa cum Laude, *ΦBK Society*

PUBLICATIONS

4. T. Blackburn, G.H. Edwards, S. Tulaczyk, M. Scudder, G. Piccione, B. Hallet, J.C. Zachos, B. Cheney, N. McLean, J.T. Babbe. *In press*. Ice retreat in Wilkes Basin of East Antarctica during a warm interglacial. *Nature* (583), 554-559. doi: [10.1038/s41586-020-2484-5](https://doi.org/10.1038/s41586-020-2484-5). Press in [National Geographic](#).
3. G.H. Edwards, T. Blackburn. 2020. Accretion of a large LL parent planetesimal from a recently formed chondrule population. *Science Advances* (6), eaay8641. doi: [10.1126/sciadv.aay8641](https://doi.org/10.1126/sciadv.aay8641)
2. G.H. Edwards, T. Blackburn. 2018. Detecting the extent of ca. 1.1 Ga Midcontinent Rift plume heating using U-Pb thermochronology of the lower crust. *Geology* (46), 911–914. doi: [10.1130/G45150.1](https://doi.org/10.1130/G45150.1)
1. G.H. Edwards. 2014. Geochemical and stratigraphic analysis of the Linnévatnet sediment record: a study of Late Holocene cirque glacier activity in Spitsbergen, Svalbard. [*Honor's Thesis*] Bowdoin College: Brunswick, ME, U.S.A. 73 p. [[Undergraduate Research Commons](#)]

TEACHING

University of California Santa Cruz
Graduate Teaching Assistant
Fall 2019 *Elements of Field Geology*
Spring 2018 *Geochemistry of the Solar System*
Winter 2018 *Geologic Principles*

Bozeman & Livingston Public Schools MT, U.S.A. 2015
Substitute Teacher

- Instructor and paraprofessional in K-12 classrooms.
- Taught students with various educational needs in diverse subjects.

Bowdoin College Brunswick, ME, U.S.A. 2012 – 2013
Laboratory Teaching Assistant

- Assisted coordination and instruction of field and laboratory activities for an introductory geoscience course.

OUTREACH & PUBLIC SERVICE

Santa Cruz Museum of Natural History 2018 – Present
Volunteer Scientist

- Create educational content and host geoscience educational activities at monthly museum events.
- During covid-19 pandemic shelter-in-place orders, prepared and performed in weekly educational video streams covering geoscience topics. Archived *Rockin' Pop-Up* videos are available [here](#).

Geoscientists Encouraging Openness and Diversity in the Earth Sciences (GEODES) 2019 – 2020
Student Leader

- Organize and implement outreach events centered on promoting awareness of issues facing underrepresented groups in the geosciences and cultivating a culture of inclusivity in the UCSC Dept. of Earth & Planetary Sciences.
- One of six graduate student leaders responsible for the operation and development of GEODES.

Skype a Scientist 2019 – 2020
Volunteer Scientist

- Prepare educational content and host video calls with elementary classrooms.
- Teach geoscience concepts and share stories about experiences as a scientist.

Peary-MacMillan Arctic Museum Brunswick, ME, U.S.A. 2015 – 2016
Curatorial Intern

- Developed outreach programming and exhibition content.
- Supplemented undergraduate courses with lectures drawing on museum collections.
- Mentored and trained undergraduate student interns and employees.

AWARDS & HONORS

ARCS Foundation Scholar Award (Fellowship)	2020 – 2021
UCSC Earth & Planetary Sciences Outstanding TA Award (Honorable Mention)	2020
Aaron and Elizabeth Waters Award	2019
<i>Issued annually for the most outstanding proposal for PhD research in the UCSC Earth & Planetary Sciences Dept.</i>	
UC Santa Cruz Regent's Fellowship	2016 – 2017
National Association of Geoscience Teachers Outstanding TA Award	2014
Sarah and James Bowdoin Scholar (Dean's List)	2011 – 2013
Grua/O'Connell Research Award	2013
Freedman Summer Research Fellowship in Coastal/Environmental Studies	2012

CONFERENCE ABSTRACTS (1ST AUTHOR)

A comprehensive list of abstracts is available on [Google Scholar](#).

6. G.H. Edwards, T. Blackburn, S. Tulaczyk, G.G. Piccione. 2019. [Poster]: U-series isotopics of silts from Taylor Valley, Antarctica: Applying comminution dating methods on polar desert tills and implications for the timeframe of valley incision. *American Geophysical Union Fall Meeting*, San Francisco, CA, U.S.A.
5. G.H. Edwards, T. Blackburn, S. Tulaczyk, G.G. Piccione. 2019. [Poster]: U-Series isotopics constrain timescale of bedrock comminution and glacial incision in Taylor Valley, Antarctica. *Goldschmidt Annual Meeting*, Barcelona, ES.

4. G.H. Edwards, T. Blackburn, G.G. Piccione. 2018. [Talk]: Cooling and disruption of the LL chondrite parent body. *Lunar and Small Bodies Graduate Forum (LunGradCon)*, Mountain View, CA, U.S.A.
3. G.H. Edwards, T. Blackburn, C.M.O'D. Alexander. 2017. [Talk]: Accretion and disruption histories of the ordinary chondrite parent bodies. *Meteoritical Society Annual Meeting*, Santa Fe, NM, U.S.A.
2. G.H. Edwards, T. Blackburn, K.V. Smit. 2017. [Poster]: Timescales of crustal cooling of the Superior Craton near Attawapiskat, Ontario, Canada, and implications for extent of Keweenawan plume heating. *American Geophysical Union Fall Meeting*, New Orleans, LA, U.S.A.
1. G.H. Edwards. 2014. [Poster]: Geochemical and stratigraphic analysis of the Linnévatnet sediment record: a provenance study of Late Holocene cirque glacier activity in Linnédalen, Spitsbergen, Svalbard. *44th International Arctic Workshop*, Boulder, CO, U.S.A.

ACADEMIC SERVICE, EXPERIENCE

Reviewer for: *Geochronology*

Mentored Undergraduates

- Paul Colosi (2017-2018)
- Alexander Levinson (2018)
- Michael Scudder (2018-2020), thesis (2020)
- Linh Phan (2020)
- Cosmo Varah-Sikes, (2019-2020), planned thesis (2021)

Conference Sessions

- 2017 AGU Fall Meeting | Co-Chair/Co-Convener: *Applications of Thermochronology to Understand Crustal Systems*

Seminars and Talks

Whole Earth Seminar Organizer, Department of Earth & Planetary Sciences, UCSC Spring 2019

- One of two graduate student organizers that coordinated a departmental seminar series.
- Contacted and scheduled speakers from diverse disciplines with in Earth and planetary sciences.

Society Affiliations: Geochemical Society, Geological Society of America, Meteoritical Society, American Geophysical Union.

Analytical Experience:

Expert: TIMS

Proficient: MC-ICP-MS, ICP-MS, SEM EDS

Limited: ICP-OES, XRF, XRD

Additional Work Experience: Server and Bartender (Trio Restaurant, Fish Creek, WI – 2014), Wildland Firefighter (USFS handcrew, Winthrop, WA – 2015).

Non-Academic Interests: Rock climbing, cross-country skiing, birdwatching, bread, classical history and literature.