

# Graham Harper Edwards

Earth & Planetary Sciences  
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## 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.
- Museum of the Rockies** Bozeman, MT, U.S.A. 2015  
*Security Volunteer*
- Enforced museum rules as an introductory volunteer (docents required multi-year training).
  - I dedicated the bulk of my time to answering visitors' questions and facilitating interpretive discussions about natural history exhibits.

## 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  
*Issued annually for the most outstanding proposal for PhD research in the UCSC Earth & Planetary Sciences Dept.*
- 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 (1<sup>ST</sup> 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.

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### 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.