

Bolton Howes

PhD Canddiate

Department of Geosciences, Princeton University

Guyot Hall, Princeton, NJ 08544

(720)-937-9891, bhowes@princeton.edu

Education

- 2017 →* **Princeton University**, Princeton, NJ
Ph.D., Geosciences
Thesis: The sedimentary and geochemical record of climate change at the Cretaceous–Paleogene Boundary
Advisor: Adam Maloof
- 2015–2017* **University of Georgia**, Athens, GA
M.Sc., Geology
Thesis: The application of sequence stratigraphic principles to constrain the onset of thrust load-induced subsidence: the Jurassic Twin Creek Limestone of Southwest Wyoming
Advisor: Steven Holland
- 2011–2015* **Macalester College**, St. Paul, MN
B.A., Geology
Thesis: Characterization of a regionally significant terrestrial bounding surface in the Upper Cretaceous Two Medicine Formation, northwestern Montana
Advisor: Raymond Rogers

Publications and Conference Abstracts

- 2014* **Bolton Howes** and Raymond Rogers. Revisiting a regionally significant terrestrial bounding surface in the Upper Cretaceous (Campanian) Two Medicine Formation, northwestern Montana. GSA Annual Meeting in Vancouver, British Columbia.
- 2018* **Bolton Howes**, Akshay Mehra, and Adam Maloof. Three-Dimensional Reconstructions of Holocene and Neoproterozoic Oolites to Measure Porosity, Permeability, and Volume-Shape Evolution of Ooids
- 2021* Paul Hoffman, Galen Halverson, Daniel Schrag, John Higgins, ... **Bolton Howes**. Snowballs in Africa: sectioning a long-lived Neoproterozoic carbonate platform and its bathyal foreslope (NW Namibia). *Earth-Science Reviews*
- 2021* **Bolton Howes**, Akshay Mehra, and Adam Maloof. Three-Dimensional Morphometry of Ooids in Oolites: a new tool for more accurate and precise paleoenvironmental interpretation. *Journal of Geophysical Research: Earth Surface*.
- 2022* Emily Geyman, Ziman Wu, Matthew Nadeau, Stacey Edmonsond, Andrew Turner, Sam Purkis, **Bolton Howes**, Blake Dyer, Anne-Sophie Ahm, Nan Yao. and Curtis Deutsch. The origin of carbonate mud and implications for global climate. *PNAS*.
- 2022* Adam Maloof, Ryan Manzuk, Emily Geyman, Akshay Mehra, Jaap Kaandorp, Mark Webster, Stacey Edmonsond, **Bolton Howes**, and Cedric Hagen. From modern analogs to three dimensions: Lessons learned for interpreting the stratigraphic record of the Proterozoic–Phanerozoic transition. GSA Annual Meeting in Denver, Colorado.
- 2022* Akshay Mehra, **Bolton Howes**, Ryan Manzuk, Alec Spatzier, Bradley Samuels, Adam Maloof. A novel technique for producing three-dimensional data using serial sectioning and semi-automatic image classification. *Microscopy and Microanalysis*.

Leadership and Service

- 2018–2021* Residential Graduate Student, Princeton University
- 2016–2017* Student Volunteer, Geological Society of America
- 2015* Leadership Committee of Macalester College Fellowship of Christian Athletes
- 2012–2013* Resident Assistant, Macalester College
- 2011–2014* Captain of Macalester College Football Team

Teaching Experience

<i>Spring 2021</i>	Teaching Assistant	ENV 354-GEO 368 Climate and Weather: Order in the Chaos
<i>Fall 2019</i>	Teaching Assistant	FRS 161: Earth: Crops, Culture, and Climate (in Italy)
<i>Fall 2018</i>	Teaching Assistant	GEOL 201: Measuring Climate Change: Data Analysis and Science Writing
<i>2016–2017</i>	Geology Tutor	University of Georgia Student-Athlete Academic Center
<i>Spring 2015</i>	Teaching Assistant	GEOL 165: History and Evolution of the Earth
<i>Fall 2014</i>	Teaching Assistant	GEOL 300: Paleobiology

Awards and Honors

<i>2017</i>	Masters Student of the Year, University of Georgia
<i>2015–2017</i>	Graduate Student Assistantship, University of Georgia
<i>2016</i>	Graduate Research Grant, Geological Society of America
<i>2016</i>	Watts-Wheeler Research Award, University of Georgia
<i>2015</i>	Henry Lepp Award for Dedication to Scientific Research, Macalester College

Fieldwork Experience

<i>2019 & 2022</i>	Bolivia	12 weeks	The K–Pg Boundary in lacustrine and fluvial settings
<i>2021</i>	southern Utah	2 weeks	Cyclicality in the Late Paleozoic Ice Age
<i>2019</i>	Calabria, Italy	1 week	Measuring climate change in olive orchards
<i>2019</i>	Yukon, Canada	5 weeks	Archeocyathid reefs and the Cambrian Explosion
<i>2018</i>	Spain and Italy	6 weeks	The K–Pg Boundary and slope sediments
<i>2018</i>	southern Namibia	4 weeks	Neoproterozoic and Paleozoic glacial deposits
<i>2018</i>	Western Australia	1 week	Modern and recent carbonate platforms
<i>2018</i>	Nevada/Arizona	3 weeks	Stratigraphy and Geochemistry of the late Paleozoic ice age
<i>2017</i>	northern Namibia	6 weeks	Field assistant to Paul Hoffman: Stratigraphy and mapping of Snowball Earth deposits of the Otavi Group
<i>2016</i>	western Wyoming	6 week	Sequence stratigraphy of the Jurassic Twin Creek Limestone
<i>2014</i>	NW Montana	2 weeks	Sequence stratigraphy and stratigraphic paleobiology of the Cretaceous Two Medicine Formation
<i>2014</i>	Patagonia, Chile	12 weeks	Restoration ecology and conservation biology in the Aysén Region
<i>2013</i>	NW Wyoming	5 weeks	Terrestrial Stratigraphy and paleobiology of the Cloverly Formation
<i>2014</i>	Tall Dhiban, Jordan	6 weeks	Archeological excavation Early Bronze Age through the 19th century

Continued Education

<i>2018</i>	Agouron Advanced Astrobiology and Geobiology Field School in central Namibia, Agouron Institute
<i>2016</i>	Reservoir Engineering, ExxonMobil
<i>2016</i>	Geochemistry of the Cretaceous Western Interior Seaway, Geological Society of America
<i>2015</i>	Sequence Stratigraphy for Graduate Students, ExxonMobil