

ELISA A. BONNIN

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EDUCATION

- 2019 **Ph.D., Oceanography**
University of Washington, Seattle, WA, USA
Advisor: Alexander C. Gagnon
Dissertation: Growth, chamber formation, and microscale heterogeneity in planktic foraminifera
Graduate Certificate in Climate Science, June 2019
- 2016 **Master of Science, Oceanography**
University of Washington, Seattle, WA, USA
Advisor: Alexander C. Gagnon
- 2013 **Bachelor of Science in Chemistry**
University of South Carolina, Columbia SC, USA
Summa cum Laude
With Honors from the South Carolina Honors College

PROFESSIONAL APPOINTMENTS

- 2019-present **Postdoctoral Researcher**
Department of Neuro- and Sensory Physiology
University Medical Center Göttingen, Göttingen, Lower Saxony, Germany
Advisor: Silvio O. Rizzoli
- 2013-2019 **Graduate Research Assistant**
School of Oceanography
University of Washington, Seattle, WA, USA
Advisor: Alexander C. Gagnon
- 2012 **Research Intern**
Ocean Acidification Project
Smithsonian Environmental Research Center, Edgewater, MD, USA
Advisors: Whitman Miller, Gerhard Riedel, and Charles Gallegos
- 2012 **Undergraduate Researcher**
Department of Chemistry, Department of Marine Science
University of South Carolina, Columbia, SC, USA
Advisors: Timothy J. Shaw and Seth G. John

PUBLICATIONS

Bonnin, E.A., Fornasiero, E.F., Lange, F., Turck, C.W., and Rizzoli, S.O. NanoSIMS observations of mouse retinal cells reveal strict metabolic controls on protein turnover. *BMC Molecular and Cell Biology*, *submitted*.

Bonnin E.A. and Rizzoli S.O. (2020) Novel Secondary Ion Mass Spectrometry Methods for the Examination of Metabolic Effects at the Cellular and Subcellular Levels. *Front. Behav. Neurosci.* 14:124. doi: 10.3389/fnbeh.2020.00124

Bonnin, E. A., Zhu, Z., Fehrenbacher, J. S., Russell, A. D., Hönisch, B., Spero, H. J., and Gagnon, A. C. (2019). Submicron sodium banding in cultured planktic foraminifera shells. *Geochimica et Cosmochimica Acta*, 253, 127–141. <http://doi.org/10.1016/j.gca.2019.03.024>

Johnson, S. C., Muller, E. A., Khatib, O., **Bonnin, E. A.**, Gagnon, A. C., and Raschke, M. B. (2019). Infrared Nano-Spectroscopic Imaging in the Rotating Frame. *Optica*, 6(4).

Branson O., **Bonnin E. A.**, Perea D. E., Spero H. J., Zhu Z., Winters M., Hönisch B., Russell A. D., Fehrenbacher J. S. and Gagnon A. C. (2016) Nanometer-Scale Chemistry of a Calcite Biomineralization Template: Implications for Skeletal Composition and Nucleation. *Proc. Natl. Acad. Sci. U. S. A.*, 201522864.

Bonnin, E.A., Spero, H.J., Gagnon, A.C. Diurnal heterogeneity of Sr/Ca and Li/Ca in *O. universa*, *in prep.*

TEACHING EXPERIENCE

Teaching Assistantships

- 2019 The Changing Oceans Online Course Development (OCEAN 102, development)
Marine Biogeochemical Cycles (OCEAN 330)
Climatic Extremes (OCEAN 450)
- 2018 Marine Geology and Geochemistry (OCEAN 310)
Marine Biogeochemical Cycles (OCEAN 330)
Deep Sea Exploration (OCEAN 121)
- 2017 Integrative Oceanography (OCEAN 210)
- 2015 The Changing Oceans (OCEAN 102)

HONORS AND AWARDS

- 2018 Certified Science Storyteller, Massive Science Consortium
- 2017 Pacific Science Center, Science Communication Fellowship
- 2016 ASLO Ocean Sciences Meeting, Student Travel Funding
- 2015 SCOR/IGBP Working Group 138 Travel Funding
- 2014 IGERT Program on Ocean Change Associate, University of Washington, Seattle WA
- 2013 Egdvedt Top Scholar, University of Washington, Seattle WA
- 2013 Ruth Weimer Mount Mortar Board Fellowship, University of South Carolina, Columbia, SC
- 2010 Phi Beta Kappa, University of South Carolina, Columbia, SC

CONFERENCE PRESENTATIONS

Bonnin et al. (2020). Testing the effect of crystal growth rate on foraminiferal calcite microchemistry using Sr/Ca of individual day/night bands. Abstract presented at the 2020 EGU Sharing Science Online.

Bonnin et al. (2018). Testing the effect of crystal growth rate on foraminiferal calcite microchemistry using Sr/Ca of individual day/night bands. Talk presented at the 2018 AGU Fall Meeting, Washington, DC.

Bonnin, et al. (2018). The effect of crystal growth rate on foraminiferal calcite geochemistry: Lessons from Sr/Ca ratios. Poster presented at the 2018 Ocean Sciences Meeting, Portland, OR.

Bonnin, et al. (2016). Systematic Sub-Micron Na/Ca Banding in *Orbulina universa* and *bilobata*. Poster presented at 2016 Ocean Sciences Meeting, New Orleans, LA.

Bonnin, et al. (2015). The influence of pH on the variability of the Mg/Ca temperature proxy and other metal/calcium ratios in planktonic foraminifera. Poster presented at the Graduate Climate Conference, Woods Hole, MA.

Bonnin, et al. (2015). Systematic Sub-Micron Na/Ca Banding in Cultured Planktic Foraminifera by SIMS. Poster presented at the AVS SIMS XX Conference, Seattle, WA.

Bonnin et al. (2015). Systematic Sub-Micron Na/Ca Banding in *Orbulina universa* and *bilobata*. Poster presented at the SCOR/IGBP Working Group 138: Planktonic Foraminifera and Ocean Changes workshop, Catalina Island, CA.

Bonnin et al. (2014). Systematic Sub-Micron Na/Ca Banding in Cultured Planktonic Foraminifera. Talk presented at the Goldschmidt Conference, Sacramento, CA.

PROFESSIONAL DEVELOPMENT

Earth and Environmental Sciences

2017 UW Program on Climate Change Summer Institute
"Population Health and Climate Change"
Friday Harbor Laboratories, Friday Harbor WA

2016 Summer School on Sustainable Climate Risk Management
Pennsylvania State University, State College PA

UW Program on Climate Change Summer Institute
"The Climate of Antarctica and the Southern Ocean"
Friday Harbor Laboratories, Friday Harbor WA

2015 UW Program on Climate Change Summer Institute
"Interactions between Terrestrial Ecosystems, Land Surface Processes and Climate"
Friday Harbor Laboratories, Friday Harbor WA

IGERT Program on Ocean Change Planning Retreat
Friday Harbor Laboratories, Friday Harbor WA

Teaching, Outreach, and Science Communication

2017 Pacific Science Center Science Communication Fellowship
Pacific Science Center, Seattle WA

2016 Young Scholar's Conference
Brown University, Providence RI

Engage Science Communication Seminar
University of Washington, Seattle WA

PROFESSIONAL SERVICE

- 2018 Graduate Climate Conference (GCC) Planning Committee
Logo and Pamphlet Committee Chair, Abstract Committee
- 2016-2019 Engage Science Communication Program Board of Directors
University of Washington, Seattle WA
Board Member
- 2016-2017 Hedges Visiting Scholar Planning Committee
School of Oceanography, Seattle, WA
Scheduling Committee
- 2016 Graduate Climate Conference (GCC) Planning Committee
Logo and Pamphlet Committee, Abstract Committee, Paleoclimate Session Chair

OUTREACH

- 2020-present Freelance Writer, SciShow
Complexly
- 2018 Workshop Leader, Engage Science Communication Workshop
Graduate Climate Conference, University of Washington, Seattle WA
- Speaker, *'Translating Earth's historical record...'*
Ignite Seattle 37, Seattle, WA
- Organizer, Written Science Communication Workshop
Share Your Science City Tour, The People's Science, Seattle WA
- Workshop Leader, Engage Science Communication Workshop
Women in Genome Sciences, University of Washington, Seattle WA
- Presenter, Sackler Student Symposium
Theme: "Role/Play: Collaborative Creativity and Creative Collaborations"
National Academy of Sciences, Washington DC
- 2017-2019 Member, Massive Science Consortium
Massive Science Inc., online
- 2017-2019 Science Communication Fellow
Pacific Science Center, Seattle WA
- 2017 Speaker, Science Talk Northwest
Oregon Museum of Science and Industry, Portland OR
- 2016-2018 EarthGames UW Narrative Writer and Science Advisor
University of Washington, Seattle WA
- 2016 Presenter, Youth Climate Action Network Action Fair
Woodland Park Zoo, Seattle WA
- Workshop Leader, Engage Science Communication Workshop
Clean Energy Institute, University of Washington, Seattle WA
- UW Science Now Speaker
Town Hall, Seattle WA

2014 Guest Speaker, Graduate Student Panel
 Mercer Slough Environmental Education Center, Bellevue WA

 Beach Naturalist
 Seattle Aquarium, Seattle WA

FIELD WORK

Planktonic Foraminifera Culturing, Wrigley Marine Science Center, Catalina Island, CA
 2014 Culture Season (6 weeks)
 2013 Culture Season (6 weeks)

PROFESSIONAL AFFILIATIONS

2018 American Geophysical Union
2016 Earth Science Women's Network
2015 The Oceanography Society
2014 Geochemical Society