

# Alexandra Buczek

Richard Gilder Graduate School at the American Museum of Natural History  
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## EDUCATION

**Richard Gilder Graduate School  
at the American Museum of Natural History**

New York, NY • Expected Degree October 2020

- Ph.D. Comparative Biology

**Brown University**

Providence, RI • September 2012 – May 2016

- B.Sc. Geology-Biology with Honors

**University of Bristol**

Bristol, UK • January 2015 – July 2015

- Study Abroad Program

## PUBLICATIONS

Velazco, P. M., **Buczek, A. J.**, & Novacek, M. J. (2017). Two New Tritylodontids (Synapsida, Cynodontia, Mammaliomorpha) from the Upper Jurassic, Southwestern Mongolia. *American Museum Novitates*, 3874(3874), 1–35. <http://doi.org/10.1206/3874.1>

## PRESENTATIONS

**Buczek, AJ.**, Hendy, A., Hopkins, M., Sessa, J.A. (2017). Does Grain Size Matter?: Variable bivalve shell microstructure preservation in the fine-grained and coarse-grained members of the Careaga Sandstone (Pliocene, Santa Maria, CA). Abstract and Poster Presentation. Geological Society of America Annual Meeting. October 22-25 2017. Seattle, WA.

**Buczek, AJ.** (2016). Examination of a correlation between global fossil mammal diversity and sea surface alkenone data: Implications for terrestrial environments during the Pliocene Epoch. Senior Thesis Paper and Oral Presentation. Brown University Department of Earth, Environmental, and Planetary Sciences Senior Thesis Presentation. May 2016. Providence, RI.

**Buczek AJ.** (2014) The Morphobank Matrix Reloaded: The Importance of Key Fossil Taxa in the Diversification of Placentals. Abstract and Oral Presentation. American Museum of Natural History Summer REU Symposium. August 2014. New York, NY.

## AWARDS AND HONORS

<b>RGGS Sydney Anderson Travel Award, \$1250</b>	2018
<b>AMNH Lerner Gray Memorial Fund, \$2000</b>	2017 – 2018
<b>Paleontological Society Student Research Grant, \$800</b>	2017 – 2018
<b>GSA Graduate Student Research Grant Program, \$1550</b>	2017 – 2018
<b>NSF Graduate Research Fellowship, \$34000/yr</b>	2017 – 2020
<b>RGGS Graduate Fellowship, \$30040/yr</b>	2016 – 2020
<b>Brown University DEEPS B.Sc. with Honors</b>	May 2016

## RESEARCH EXPERIENCE

**Richard Gilder Graduate School, Ph.D. Student**

New York, NY • September 2016 – Present

- Studying response of fossil marine molluscs to periods of global climate change

**Brown University**, research assistant Providence, RI • August 2015 – May 2016

- Compared articular surfaces of ruminant metapodials to find phylogenetic applications
- Analyzed correlations between sea surface temperatures and terrestrial mammal diversity
- Wrote and presented senior thesis

**University of Bristol**, research assistant Bristol, United Kingdom • June 2015 – December 2016

- Calculated body size of Paleogene birds from femur and tarsometatarsal length
- Constructed and dated phylogenetic tree of Paleogene birds

**American Museum of Natural History**, research intern New York, NY • August 2015

- Analyzed phylogenetic relationships between tritylodonts
- Reconstructed CT scans of cynodonts
- Photographed fossil specimens using Scanning Electron Microscope
- Coded cranial, dental, and postcranial characters of fossil specimens
- Completed phylogenetic analyses using PAUP and TNT

**American Museum of Natural History**, REU New York, NY • May-August 2014

- Reconstructed CT scans of Mesozoic mammals
- Coded cranial, dental, and postcranial characters of fossil specimens
- Completed phylogenetic analyses using PAUP and TNT
- Analyzed phylogenetic relationships between leptictids

## OUTREACH EXPERIENCE

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**Home School Day**, Natural History Museum of LA County Invertebrate Paleontology June 2017

- “Become a Paleontologist” activity
- Explained the process of finding fossils in bulk sediment to home-schooled children
- Identified mollusc fossils found by children in mobile dig pit

## TEACHING EXPERIENCE

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**Teacher and Content Expert**, AMNH Lang Science Program New York, NY • July-December 2018  
Mollusks Research Team

**Adjunct Professor**, Hunter College New York, NY • September-December 2018  
CSci, 127 Introduction to Computer Science

## SKILL SET

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**Languages:** Polish • Spanish  
**Technical:** Python • R • Analyseries • MS Office • QGIS • VG Studio • PAUP\* • RAxML • MrBayes • TNT • MaxEnt • MatLab • HTML  
**Laboratory:** SEM • Large database analyses • Phylogenetic Analyses • Ecological niche modeling

## PROFESSIONAL AFFILIATIONS

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<b>Geological Society of America</b>	2016-present
<b>Paleontological Society</b>	2016-present
<b>Sigma Xi</b>	2016-Present
<b>Association for Women in Science</b> , New York Women in Natural Sciences Chapter	2016-Present

## RELEVANT COURSEWORK

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**Richard Gilder Graduate School**

- Systematics; Grantsmanship and Ethics; GIS; Evolution; Microscopy and Imaging; Extinction Science; Advanced Python and Statistics for Data Analysis

**Columbia University**

- Quantitative Methods of Data Analysis

**Brown University**

- Processes in Geology, Fossil Record, Principles of Ecology, Evolution of a Habitable Planet, Evolutionary Biology, Comparative Biology of the Vertebrates, Biogeochemistry and Terrestrial Ecosystems, Ocean Biogeochemical Cycling, Evolution of the Biosphere, Stratigraphy and Sedimentation, Environmental Geochemistry

**Bristol University**

- Macroevolution, Geobiology, Atmospheric Processes, Cambrian Explosion