

Melissa Doyle Boyd

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Rutgers University

Department of Earth and Planetary Sciences

Wright-Rieman Laboratories
610 Taylor Rd.
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GOALS

- To continue work in sedimentology, stratigraphy, and paleoenvironmental reconstruction at the post-doctoral level
- To continue to expand my knowledge in geochemistry, magnetostratigraphy, and computer modeling

RESEARCH INTERESTS

- Field geology
- Sedimentology
- Stratigraphy
- Geochronology
- Paleopedology
- Isotope geochemistry

SKILLS

- R Programming
- MATLAB
- ArcGIS Pro
- Illustrator
- Photoshop
- Seismic Unix
- Kingdom
- Tephra preparation
- Swahili
- French

CONTACT

- [Scholar](#)
- [Instagram](#)
- [Twitter](#)

EDUCATION, TRAINING, AND CERTIFICATIONS

Rutgers University

Doctor of Philosophy in Geological Science

- Dissertation Title: *Paleoenvironments of the Turkana Basin, Northern Kenya: Climate, Tectonics, and Landscape Change*
- Advisor: Craig S. Feibel

New Brunswick, NJ

2016 - present

Rutgers University

Bachelor of Science in Evolutionary Anthropology

High Honors

- Honors Thesis: *The Circumstances of the Accumulation, Burial, and Preservation of Specimens of Australopithecus anamensis at Kanapoi, northern Kenya*
- Advisor: Craig S. Feibel

New Brunswick, NJ

2015

Rutgers University

Bachelor of Science in Geological Science

- Honors Thesis: *A Paleoenvironmental Reconstruction of the Geology of Central Anatolia*
- Minor: English Literature

New Brunswick, NJ

2012

FIELD AND RESEARCH EXPERIENCE

Paleo Primate Project Gorongosa

Mozambique, Gorongosa National Park

Project Geologist

2022 - present

- Field work covering the structure, stratigraphy, and depositional environments of the southern terminus of the East African Rift
- U-Pb geochronology

Turkana Miocene Project

Graduate Collaborator

2020 - present

- Member of Earth, DEI, and Media teams
- Stratigraphic sections, mapping, and facies analysis of Miocene age deposits in the Turkana Basin, including Lothagam, Topernawi, Locherangan, Napudet, and Buluk

West Turkana Paleo Project

Project geologist

2018 - present

- Facies and depositional environment analyses involving the sedimentology, stratigraphy, and paleontology of the Lomekwi Member of the Nachukui Formation

Lomekwi, Kenya

Rutgers University Paleoenvironmental Research Lab

Graduate Research Assistant

2016 - present

- Tephra sample preparation, ostracod picking and preparation, generating Bayesian age models, general computing, and lab social media

FIELD AND RESEARCH EXPERIENCE CONTINUED

Field Assistant, 2014 to 2018

- Turkana Basin, Kenya
 - [Hominin Sites and Paleolakes Drilling Project](#)
 - [West Turkana Archaeological Project](#)
 - [Turkana Cyclostratigraphy Project](#)

South Dakota School of Mines & Technology

Taşkesti, Turkey

Geology Field School 2012

- Six-week field school involving preparation of stratigraphic columns, structural cross sections, geologic maps, and completion of formal reports

TEACHING EXPERIENCE - RUTGERS UNIVERSITY

Instructor

- [Geology 201: Earthquakes and Volcanoes](#) 2020 - 2021
- Rutgers IT: Introduction to UNIX 2012 - 2015
- Rutgers IT: Advanced UNIX 2012 - 2015

Adjunct

- [Anthropology 111: Extinction](#) 2015

Teaching Assistant

- [Geology 100: Planet Earth](#) 2017 - 2020
- [Geology 303: Paleontology Lab](#) 2017 - 2019
- [Geology 103: Introduction to Geology Lab](#) 2016, 2019
- [Anthropology 201: Evolution & Human Behavior](#) 2016 - 2018
- [Physics 194: Physics for the Sciences II](#) 2011 - 2012
- [Physics 193: Physics for the Sciences](#) 2011 - 2012

Guest Lecturer

- Anthropology 394: Geological Context in Paleoanthropology 2015
"Kanapoi: A Problem in Complex Lithostratigraphy"
- Anthropology 213, Environment and Human Evolution 2015
"Cenozoic World"

GRANTS, HONORS, AND AWARDS

- Albert Fellows Dissertation Research Grant, Rutgers Center for Human Evolutionary Studies, 2020
- Rutgers Graduate Assistantship, 2020 - 2022
- Rutgers Earth & Planetary Sciences Teaching Assistantship, 2016 - 2020
- The William & Grace Sparks Graduate Student Research Award, 2018
- GSA Travel Grant, 2016, 2018
- TA/GA Professional Development Award, 2018
- TA/GA Professional Development Award, 2017
- Army Women's Foundation, 2016
- National Military Family Association, 2016
- School of Arts and Sciences Excellence Award, 2015
- Bigel Endowment Award for Undergraduate Research in Anthropology, 2015
- Rutgers School of Arts and Sciences Paul Robeson Scholar, 2014 - 2015
- Steven K. Fox Award, Department of Earth and Planetary Sciences, 2012

MEETINGS, ABSTRACTS, AND PRESENTATIONS

- "Middle and Late Miocene paleoclimates from clumped isotopes of soil carbonates, Turkana Basin, East Africa" [Talk]. AGU 2021 Annual Meeting, 13-17 December 2021, New Orleans, LA. Authors: Saslaw, Mae, Henkes, Gregory A., Beck, Catherine C., Liutkus-Pierce, Cynthia, Feibel, Craig S., Rowan, Christian M., and **Boyd, Melissa D.**
- "Analyzing Coastal Geomorphology at The Rutgers University Marine Field Station with Remote Sensing Technology" [Poster]. NEGSA 2021 Annual Meeting, 14-15 March 2021, Hartford, CT (online). Authors: Williams, Rachel G., Neitzke Adamo, Lauren, and **Boyd, Melissa D.**
- "Facies Associations and Depositional Environments of the Lomekwi Member, West Turkana, Kenya" [Poster]. AGU 2018 Annual Meeting, 10-14 December 2018, Washington, D.C. Authors: **Boyd, Melissa D.**, Feibel, Craig S., Manthi, Frederick Kyalo, Ward, Carol V. and Plavcan, J. Michael.
- "Using Facies and Grain-size Analyses to Assess Feasibility of a Bentonite to Tephra Correlation in the Kaitio Member, West Turkana, Kenya" [Poster]. AGU 2018 Annual Meeting, 10-14 December 2018, Washington, D.C. Authors: Beck, Catherine C., van der Lubbe, Jeroen, Feibel, Craig S., Joordens, Josephine J., **Boyd, Melissa K.**, Cohen, Andrew S., and Campisano, Christopher J.
- "A Synthesis of Multi-proxy Paleoenvironmental Reconstruction Methods: The Depositional Environments of the Lomekwi Member, Nachukui Formation, West Turkana" [Poster]. GSA 2018 Annual Meeting, 4-7 November 2018, Indianapolis, IN. Authors: **Boyd, Melissa D.**, Feibel, Craig S., Manthi, Frederick Kyalo, Ward, Carol V. and Plavcan, J. Michael.
- "Facies Analysis and Depositional Environments of the Lomekwi Member, Nachukui Formation, West Turkana" [Poster]. AFQUA: The African Quaternary Environments, Ecology and Humans 2nd International Conference and Workshops, 14-22 July 2018, Nairobi, Kenya. Authors: **Boyd, Melissa D.**, Feibel, Craig S., Manthi, Frederick Kyalo, Ward, Carol V. and Plavcan, J. Michael.
- "Why Lomekwi? Geology and Depositional Context of the Lomekwi 3 Archaeological Site in Kenya: A Sedimentary Facies Analysis" [Poster]. GSA 2016 Annual Meeting, 25-28 September 2016, Denver, CO. Authors: **Boyd, Melissa D.**, Feibel, Craig S., Manthi, Frederick Kyalo, Ward, Carol V. and Plavcan, J. Michael.
- "The Circumstances of the Accumulation, Burial, and Preservation of the Australopithecus anamensis Specimens at Kanapoi in Kenya" Poster presentation for Rutgers Anthropology Honors Symposium
- "Teaching Physics I and II Using the Investigative Science Learning Environment" 2012. Poster presentation for Rutgers University's Teaching Assistant Program

PROFESSIONAL DEVELOPMENT

- **StraboSpot** Virtual Workshop for Structural Geology, 2020
 - digital field notebook and data management system for structural geology data
- **Advanced Sequence Stratigraphic Applications** for Exploration and Production Short Course, AAPG ACE, 2020
- **Sequence Stratigraphy Basics** Short Course, AAPG ACE, 2020
- **Detrital Zircon Geochronology**: Best Practices for U-Pb Data Acquisition, Reduction, Analysis, and Archiving Course, GSA, Phoenix, 2019
- **Radiocarbon dating and age-models** course, AFQUA, Nairobi, 2018
 - R-programming
- **Geoscience Data Analysis** Short Course, University of Arizona, 2016
 - MATLAB

OUTREACH AND ACTIVITIES

- Rutgers Earth and Planetary Sciences Graduate Student Organization 2021 - present
 - Treasurer and Social Chair
- The Turkana Miocene Project Diversity, Equality, and Inclusion Committee 2020 - present
- Rutgers EPS Support, Inclusion, Diversity, and Equity (S.I.D.E.) Committee 2020 - present
- Volunteer, Rutgers Geology Museum 2019 - 2020
- Member, [500 Women Scientists](#) 2018 - present
- Judge, Rutgers Aresty Undergraduate Research Symposium 2016 - present
- [Center of Human Evolutionary Studies \(CHES\)](#) 2015 - present
- Rutgers Quaternary Studies Association (QSA) 2014 - present
- Rutgers Undergraduate Anthropology Club 2012 - 2015

PROFESSIONAL AFFILIATIONS

- Geological Society of America
- American Geophysical Union
- [Society for Sedimentary Geology](#)
- [Association for Women Geoscientists](#)
- [Sigma Delta Epsilon](#)
- [Earth Science Women's Network](#)
- American Association of Petroleum Geologists
- American Association of Physical Anthropologists