

Nicole Murray

Curriculum Vitae

Department of Geology
University of Illinois, Urbana-Champaign
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Education

- 2020-Present **Ph.D. in Geology**, *University of Illinois*, Urbana-Champaign, Expected 2023.
- 2018-2020 **M.S. in Geology**, *University of Illinois*, Urbana-Champaign.
Thesis: *Holocene guano influences on eutrophication and lacustrine ecology at Kettle Lake, North Dakota.*
- 2015-2018 **B.S. in Animal Sciences**, *University of Illinois*, Urbana-Champaign.
- 2011-2015 **B.S. in Earth & Space Exploration (Geological Sciences)**, *Arizona State University*, Tempe.
Minor in Sustainability

Research

- 2020-Present **Graduate Research Assistant**, UIUC, advised by Jessica Conroy.
Using water isotopologues to better understand the water cycle: past, present and future
○ Current project: Deconvolving the $\delta^{18}\text{O}$ - salinity relationship in the near surface global ocean using neural network learning
- 2018-2020 **Graduate Research Assistant**, UIUC, advised by Jessica Conroy.
○ Using $\delta^{15}\text{N}$ and bulk N measurements from lake sediment core to characterize changes in nitrogen cycling
- 2016 **Animal Behavior Intern**, PDX WILDLIFE, advised by Dr. Meghan Martin-Wintle.
Giant Panda behavioral research at Bifengxia Panda Reserve in Ya'an, Sichuan, People's Republic of China. Personality & stereotypic behavior data collected for 30+ pandas and contributed to preliminary maternal care studies.
- 2016 **Undergraduate Reseacher**, UIUC, advised by Dr. Rebecca Stumpf.
Individual research focusing on oxytocin role in female dispersion of Eastern chimpanzee (*Pan troglodytes schweinfurthii*) communities.

Presentations

- Fall 2020 **Murray, N.K., Munoz, Alexander R., Conroy, J.L., Applying neural network learning to deconvolve the $\delta^{18}\text{O}$ - sea surface salinity relationship in the global ocean** American Geophysical Union, Fall Meeting.

Fall 2019 **Murray, N.K.**, Conroy, J.L., Punyasena, S.W., Grimm, E.C., Donovan, J.J., *Mid-Holocene guano influences on eutrophication and lacustrine ecology at Kettle Lake, North Dakota*. American Geophysical Union, Fall Meeting.

Field Work

June 2019 **Kiribati, Kiritimati**, *Lake core and water sample collection in 31 hypersaline lakes*.

May 2019 **Western Ireland, County Clare**, *Characterizing soft-sediment deformation and mass flows in Cyclothem IV, Spanish Point*.

Outreach

Fall 2019-Present **Department Mentor**, DEPARTMENT OF GEOLOGY, University of Illinois, Urbana Champaign.
Individual mentoring of undergraduate student in geology

Fall 2020 **Virtual Mentoring Panel**, STEMSEAS, Lamont Doherty Earth Observatory.
Online panel provide graduate and career advice for STEMseas alumni and prospectives

August 2019-Present **Graduate Mentor**, STEMSEAS, Lamont Doherty Earth Observatory.
NSF funded program providing undergraduate experiences aboard ships
Details:

- Introductory activities on water stable isotopes, $\delta^{18}\text{O}$, and the hydrologic cycle
- Guide students in collecting seawater and precipitation samples
- Lectures in general ocean, atmospheric and climate science

Awards and Honors

Spring 2020 **Department Teaching Award**, *University of Illinois, Urbana Champaign*.

2015-2017 **Dean's List**, *University of Illinois, Urbana Champaign*, Fall 2015, Spring 2016, Spring 2017.

Fall 2015 **College of ACES Pay it Forward Scholarship**, *University of Illinois, Urbana Champaign*.

2011-2015 **Regents High Honors Endorsement**, *Arizona State University*, Four year academic scholarship.

Teaching

Fall 2019 **Teaching Assistant**, *University of Illinois, Urbana Champaign*, GEOL 208: Historical Geology.

- Listed as teacher ranked as excellent by their students

Fall 2018 **Teaching Assistant**, *UIUC*, GEOL 143: History of Life.

Fall 2018 **Teaching Assistant**, *UIUC*, GEOL 118: Natural Disasters.

Fall 2017 **Course Assistant**, *UIUC*, ANTH 243: Sociality of the Great Apes.

Professional

2016-2018 **Laboratory Manager**, UNIVERSITY OF ILLINOIS, URBANA CHAMPAIGN, Stumpf Primate Laboratory.

Management of Primate Evolutionary Biology & Microbiome group in the Department of Anthropology

Details:

- Drafting and editing NIH and NSF grant proposals
- Organization and maintenance +3,000 non-human primate sample catalog
- Lab compliance to BSL-2 standards at the Institute for Genomic Biology
- Overseeing data entry and management of three distinct databases
- Assistance with graduate and undergraduate student projects