

# Nicole Murray

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## 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 2024.  
2018-2020 **M.S. in Geology**, *University of Illinois*, Urbana-Champaign.  
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*.  
**Minor in Sustainability**

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## Research

- 2020-Present **Graduate Research Assistant**, *UIUC*, advised by Jessica Conroy.  
*Novel frameworks for stable oxygen isotopes in the hydrologic cycle*  
Details:  
○ Current project: Surface ocean  $\delta^{18}\text{O}$  - salinity water regions as revealed by machine learning
- 2018-2020 **Graduate Research Assistant**, *UIUC*, advised by Jessica Conroy.  
*Assessing ecological changes in response to episodic eutrophication at Kettle Lake, North Dakota, Northern Great Plains, USA*  
Details:  
○ 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.  
Three months collecting data for 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 Researcher**, *UIUC*, advised by Dr. Rebecca Stumpf.  
Individual research focusing on oxytocin role in female dispersion of Eastern chimpanzee (*Pan troglodytes schweinfurthii*) communities.

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## Presentations

- Fall 2021 **Murray, N.K.**, Munoz, Alexander R., Conroy, J.L., *Surface ocean  $\delta^{18}O$  – salinity water regions as revealed by machine learning* American Geophysical Union, Fall Meeting.
- Fall 2020 **Murray, N.K.**, Munoz, Alexander R., Conroy, J.L., *Applying neural network learning to deconvolve the  $\delta^{18}O$  – 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.

## Community

- 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,  $\delta^{18}O$ , and the hydrologic cycle
  - Guide students in collecting seawater and precipitation samples
  - Lectures in general ocean, atmospheric and climate science
- Fall 2021 **Session Convener**, "*WATER ISOTOPE SYSTEMATICS*", AGU Fall Meeting.
- Fall 2019-Summer 2021 **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*

## Field Work

- November 2021 **Galápagos, Ecuador**, *Fog, precipitation, groundwater and seawater collection for isotope and salinity analyses..*
- 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.*

## 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.

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## 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