

# DEVRA HOCK-REID, PH.D.

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## EDUCATION AND TRAINING

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### *Degrees*

- Ph.D. University of Nebraska-Lincoln, Earth and Atmospheric Sciences (2018 – current)  
GPA 4.0
- M.S. University of Nebraska-Lincoln, Earth and Atmospheric Sciences, spec. in Geology (2016 – 2018)  
GPA 3.95
- B.S. Montana State University, Earth Sciences, conc. in Paleontology (2012-2015)  
Minor, Montana State University, Museum Studies  
GPA 3.6 – Magna Cum Laude

### *Workshops/Training*

- URGE (Unlearning Racism in Geoscience), NSF and Woods Hole Oceanographic Institute (2021)
- Women in Paleontology Workshop, Annual Meeting of Society of Vertebrate Paleontology (2019)
- Diversity in Paleontology Luncheon, Annual Meeting of Society of Vertebrate Paleontology (2019)
- Write Winning Grant Proposals: John Robertson of Grant Writers' Seminars and Workshops LLC, UNL Office of Research and Economic Development (2017)
- Working with the IACUC: Investigators, Staff and Students, CITI Program, UNL (2016)
- Responsible Conduct of Research: Biomedical Responsibility of Research, CITI Program, UNL (2016)
- IIPP and Emergency Preparedness Training, UNL (2016)
- Situational Awareness Training, UNL (2016)
- Scanning Electron Microscope, Imaging and Chemical Analysis Laboratory, MSU (2015)
- X-Ray Diffraction, Imaging and Chemical Analysis Laboratory, MSU (2015)

## RELEVANT EXPERIENCE

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### **EDUCATION PROGRAMS ASSISTANT**

#### **University of Nebraska State Museum, 2023**

- Developed and designed activities for museum events on the subject of paleontology and ancient life
- Developed educational guides and activities for museum exhibit galleries
- Reviewed content of museum rental kits for scientific accuracy
- Assisted in planning, set-up, running, and take-down of museum events

### **DOCTORAL RESEARCHER**

#### **University of Nebraska-Lincoln, 2018 - 2022**

- Designed and implemented novel research on mammalian paleoecology
- Assisted in managing field work, including renting vehicles and lodging
- Strong data management skills, with experience in data collection and analysis
- Achieved high familiarity with identification of modern and fossil mammalian species
- Strong collaboration skills with fellow researchers

### **LAB INSTRUCTOR**

#### **University of Nebraska-Lincoln, 2016 - 2022**

- Demonstrated effective teaching strategies in undergraduate lab classrooms
- Developed new and updating existing instructional materials
- Trained in pedagogical and inquiry-based teaching methods
- Built and taught lectures and handouts for lab material
- Strong collaboration skills with lecture instructors, lab supervisors, and fellow lab instructors

## **CURATIONS ASSISTANT**

### **University of Nebraska State Museum, 2021 - 2022**

- Aided in intake and cataloguing of gifted Pleistocene collection (roughly 1000 specimens), recording data such as identified element, age, species, and location
- Managed fossil organization, including data synthesis, labeling, and curation of specimens

## **SCIENCE CAMP EDUCATOR**

### **Sternberg Museum Science Camps, 2021**

- Developed and taught new curriculum for virtual science camp on Permian Paleontology, including geology, climate, anatomy, and field skills
- Assisted in creating virtual field environment to mimic real-life Permian outcrops
- Analyzed students' performance with qualitative and quantitative surveys and deliverables

## **STEAM CAMP EDUCATOR**

### **Camp Summergold, 2018 - 2021**

- Developed and taught paleontology course using inquiry-based methods for grades 5 - 12
- Developed and implemented workshops focusing on areas of applied science in daily life, using inquiry-based techniques for grades 5 - 12
- Wrote and conducted pre- and post- course evaluations using survey questions and analyses

## **AFTER SCHOOL SCIENCE CLUB EDUCATOR**

### **University of Nebraska-Lincoln and The Boys & Girls Club of Lincoln, 2017**

- Taught after-school science club focused on evolution and paleontology
- Developed and implemented inquiry-based activities following the most recent Next Generation Science Standards
- Wrote, conducted, and analyzed pre- and post- evaluations using survey questions

## **PUBLICATIONS**

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### *Papers & Essays*

1. [Hock, D.](#) 2023. Exploring the Relationships between Mammalian Functional Trait Distributions and Regional Biomes, with Application to Miocene Paleoecology. Ph.D. Dissertation, Department of Earth and Atmospheric Sciences, University of Nebraska-Lincoln, Nebraska, USA.
2. [Hock, D.](#), and Secord, R. Loss of mammalian biodiversity in North American biomes over a century of continental landscape changes. In Progress.
3. Diamond, J., Achiam, M., and [Hock, D.](#) Designing for Diversity. in Amplifying Informal Science Learning, eds. Sherman Rosenfeld and Judy Diamond. Routledge, 2023.
4. [Hock, D.](#) 2018. A taxon-free, multi-proxy model for making paleontological interpretations of Neogene North American mammalian faunas. M.S. Thesis, Department of Earth and Atmospheric Sciences, University of Nebraska-Lincoln, Nebraska, USA.

### *Abstracts*

1. [Hock, D.](#), D. Levering, and B. Gomez. 2022. Using a virtual construct of the Permian Karoo Supergroup to teach high schoolers field survey skills, biostratigraphy, and evidence-based problem solving. Journal of Paleontology, Program and Abstracts 2022.
2. [Hock, D.](#) and R. Secord. 2019. Comparison of 'Big Data' uses in paleoecological multi-proxy models for North American mammalian paleoecological interpretations. Journal of Paleontology, Program and Abstracts 2019.
3. [Hock, D.](#) and R. Secord. 2018. A taxon-free, multi-proxy model for Miocene North American paleoecological interpretations. Journal of Vertebrate Paleontology, Program and Abstracts 2018.

4. [Hock, D.](#) 2017. Vertebrate species richness change from the late Miocene to early Pliocene of Lothagam, Turkana Basin, Kenya. *Journal of Vertebrate Paleontology, Program and Abstracts 2017.*
5. [Hock, D.](#) 2015. A comprehensive study of key paleoenvironmental changes using major faunal turnovers focusing in the Turkana Basin, Kenya. *Journal of Vertebrate Paleontology, Program and Abstracts 2015.*
6. [Hock, D.](#), J. Gardner, S. Scott, and H. Flora. 2014. Float 'N' Bloat: The Impact of Fluvial Processes on Transportation of Death Assemblages. *Montana State University Geomorphology Poster Symposium.*
7. [Hock, D.](#), C. K. Bingman, and Z. Reid. 2014. A new occurrence of dictyoolithus eggs from the cretaceous Tiantai basin, Zhejiang Province, China. *Montana State University Student Research Celebration.*
8. [Hock, D.](#), and C. K. Bingman. 2014. A new occurrence of dictyoolithus eggs from the cretaceous Tiantai basin, Zhejiang Province, China. *Montana State University Earth Science Colloquium.*

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## INVITED SPEAKER

### **Paleontology Guest Speaker.**

Skype a Scientist & Nepris. October – 2021-2022.

- Gave a short talk about what a fossil is, how fossils are made, and various aspects of paleontology to 2<sup>nd</sup>, 3<sup>rd</sup> grade classrooms and homeschooled/tutored grade students.

“Fossils and Paleontology.” Didyasarin International Preparatory School Bangkok. December 2020.

- Gave a short talk on what a fossil is, how fossils are made, and the importance of fossils and paleontology in today’s world. Took questions students had prepared on the topics of paleontology, fossils, and geology.

Mammoths, Dinosaurs & Mammoths, Oh My!” Fossil Friday Chats. Raymond M. Alf Museum of Paleontology & Western Science Center. November 2020.

- Who knew what started as a topic for a middle school science paper would turn into a career? Join Devra as she discusses where her love for science and paleontology came from and her journey in exploring that passion, from watching documentaries to pursuing her PhD.

“Fossils, Evolution & Natural History Museums.” University of Nebraska State Museum Science Café. April 2020.

- Discussed the science behind experiential learning, common conceptions of evolution and the fossil record, and how natural history museums can address them.

“Scientific Accuracies of Jurassic World.” University of Nebraska State Museum Bad Science Movie Night. March 2017.

- Gave a short talk about the scientific accuracy of Jurassic World regarding dinosaurs and paleontology while providing the actual current scientific counterpoints. Also discussed the current state of the field of dinosaur paleontology.

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## OUTREACH

### **Diversity Committee Member,**

Department of Earth & Atmospheric Sciences, UNL (Spring 2019; 2021-2022)

- Discussed and implemented ideas how to create a more inclusive and diverse environment for the department, as well as how to generate more interest in geoscience degrees
- Worked on modifying graduate student application rubrics, new hire rubrics, developing a new Code of Conduct, and helped write an abstract for AGU on our DEI work during URGE

### **Morrill Hall University of Nebraska State Museum**

Dinosaurs and Disasters. (February 2019; February 2017)

- Developed new paleontological activity “Paleontology Timeline” that examines important paleontological events throughout the history of the field.
- Developed and maintained a booth “Paleo Games”, modifying existing paleontological activities.

#### Museum Fossil Night. (October 2019)

- Ran paleontological activities with AWG Cornhusker Chapter members. Activities consisted of GoExtinct! board game, fossil dig boxes, and Diversity in Science matching game.

#### Student Ambassador. (September 2017 – April 2018)

- Attended public outreach events as ambassadors for the museum, supervised activities, lead drop-in tours of museum exhibits.
- YMCA After School Program – Elliot Elementary School: Talked to students about paleontology, passed around samples from the teaching collection and supervised dig boxes.
- Kids World Lincoln – Speedway Village: Represented Morrill Hall at booth at indoor kids all-day event, supervised “Mammoth Masks” activity, promoted Morrill Hall birthday events and a raffle for a free family admission pass.
- Fossil Night – Morrill Hall: Helped run fossil diatom activity, explaining how paleontologists use micro-fossils to determine environment and climatic changes over time.
- Nature Night – Eastridge Elementary School; Sheridan Elementary School: Represented University of Nebraska State Museum at nature/science event at local elementary schools, supervised the Fossil Dig Boxes, assisted with the Dung Beetle Activity, and informed parents of museum memberships and upcoming events.
- Highlights Tour – Morrill Hall: Lead visitors on drop-in tours in Morrill Hall
- Wild Adventures – Pioneers Park Nature Center: Represented University of Nebraska State Museum at nature/science event at local nature preserve and helped run habitat matching game, and promoted a raffle for a free family admissions pass.

#### Women in Science Conference and Banquet.

##### Center for Science, Mathematics and Computer Education (March 2019)

- Discussed EAS department and AWG Cornhusker Chapter with high school female students. Engaged in further discussion with smaller group during banquet about being a female in the STEM fields.

### INVITED SPEAKER

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- Myerly-Martin Award, Department of Earth & Atmospheric Sciences, University of Nebraska-Lincoln (2021)
- Presidential Exchange Award, Association for Women Geoscientists (2021)
- EAS Summer Fellowship, University of Nebraska-Lincoln (2020, 2019)
- Sam Treves Travel Endowment to present at SVP, University of Nebraska Lincoln (2019, 2018, 2017)
- GSA North Central Section Student Travel Grant (2017); Rocky Mountain Section Travel Grant (2015)
- Hubbard Fellowship, University of Nebraska Lincoln (2016-2017; 2017-2018)
- National Society of Collegiate Scholars at Montana State University (2013- 2015)
- Undergraduate Scholar Program Travel Grant for SVP and GSA, Montana State University (2015)
- Jackson School Travel Grant for SVP (2015)
- Dean’s Honor Roll, Montana State University (Fall 2015, Fall 2014, Spring 2014, Spring 2013, Fall 2012)
- Undergraduate Scholar Program, Montana State University (2014)
- NSF International Research Experience for Students, China, MSU Department of Earth Sciences (2013)

## REFERENCES

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Dr. Judy Diamond - jdiamond1@unl.edu; 402-472-4433  
Professor, University Libraries  
Professor & Curator  
University of Nebraska State Museum

David Levering - DALevering@fhsu.edu; 785-639-5249  
Camps Director  
GeoBio Education Metaverse Lead  
Sternberg Museum of Natural History  
Fort Hays State University

Dr. Debra Hanneman – whgeol@gmail.com; 406-287-5408  
President; Association for Women Geoscientists  
Whitehall GeoGroup, Inc.

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University of Nebraska-Lincoln  
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