

Fabian Cerón Hardy

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EDUCATION

- 2023 **Ph.D. Earth and Environmental Sciences, University of Michigan**, Ann Arbor, MI
Advisor: Catherine Badgley
Faunal change, paleoecology, and landscape history in the middle Miocene
Dove Spring Formation, California
- 2015 **M.S. Geoscience, University of Nevada Las Vegas**, Las Vegas, NV
Advisor: Stephen M. Rowland
Stable Isotope Analysis of *Bison latifrons* and Paleocological Inferences
- 2012 **B.S. Geology, University of Nevada Las Vegas**, Las Vegas, NV

EMPLOYMENT/EXPERIENCE

- 2023- **University of Michigan**, Postdoctoral Research Fellow
Department of Ecology and Evolutionary Biology (Badgley Lab) and Museum of
Paleontology
- 2017-2018 **BEC Environmental**, Environmental Scientist II and Paleontologist
- 2016-2018 **College of Southern Nevada**, Adjunct Professor, Geology and Geography
Department of Physical Sciences
- 2015-2016 **Las Vegas Isotope Science Laboratory**, Research Assistant and Lab Manager

RESEARCH INTERESTS

Paleoecology, biogeography, sedimentology and stratigraphy, vertebrate paleontology, stable isotope geochemistry, quantitative analysis of the fossil record

PUBLICATIONS

- In prep* **Hardy, F.**, Badgley, C., Wang, X., Levin, N., Stable isotope ecology of Miocene ungulates in the context of paleontology: Insights from the Dove Spring Formation, California, USA.
- In review* **Hardy, F.**, Rowland, S. M., Stable isotopic analysis of *Bison* tooth enamel indicates flexible dietary ecology across Pleistocene North America. *Quaternary Science Reviews*.
- 2023 **Hardy, F.**, Badgley, C., Mammalian faunal change of the Miocene Dove Spring Formation, Mojave region, southern California, USA, in relation to tectonic history. *GSA Bulletin (in press)*. <https://doi.org/10.1130/B37082.1>

- 2020 Loughney, K., **Hardy, F.**, Fossil-bearing facies of extensional basins: Examples from the Miocene Barstow and Dove Spring Formations, Mojave Region, California. *Proceedings of the Desert Symposium Annual Volume*, p. 27-34.
- 2015 **Hardy, F.**, and Bonde, J., Stomping around the Sump: Miocene pygmy gomphothere from Esmeralda County, Nevada. *New Concepts and Discoveries, Proceedings of the Geological Society of Nevada Symposium* 1:929-937.

FELLOWSHIPS, AWARDS, AND GRANTS

Fellowships and Awards

- 2021 Leo J. Hickey Award, the Paleontological Society – \$1200
- 2019 First Place Poster, 15th Annual Michigan Geophysical Union – \$500
- 2018 Department of Earth and Environmental Sciences Fellowship – \$75,749
National Science Foundation Graduate Research Fellowship Program – Honorable Mention
- 2014 First Place, GSA Student Poster Competition, the Paleontological Society – \$250
Outstanding Graduate Poster Award, GSA Rocky Mountain/Cordilleran Section – \$500
Edwards & Olswang Geology Scholarship, University of Nevada Las Vegas – \$500
Bernarda French Scholarship, UNLV – \$700
- 2012 Second Place Undergraduate Poster, UNLV Geosymposium – \$200

Grants

- 2022 Rackham Ph.D. Candidate Research Grant, University of Michigan – \$3000
- 2021 Turner Student Research Grant, University of Michigan – \$2150
- 2020 Geological Society of America Student Research Grant – \$2500
Turner Student Research Grant, University of Michigan – \$1240
- 2019 Rackham Pre-candidate Research Grant, University of Michigan – \$1000
Turner Student Research Grant, University of Michigan – \$1500
- 2013 Graduate and Professional Student Association Grant, UNLV – \$300

Total Funding Awarded: \$91,289

TEACHING EXPERIENCE

Graduate Student Instructor (UofM Department of Earth and Environmental Sciences)

- 2022 Ecosystem Science at Camp Davis (EARTH 450) Instructor: Gregory Dick
- 2021 Geochronology (EARTH 485) Instructor: Robert Holder

- Ecosystem Science at Camp Davis (EARTH 450) Instructors: Joel Blum and Don Zak
- 2020 Geological Field Methods (EARTH 496) Instructor: Nathan Niemi
- Physical Geography (EARTH 201) Instructor: James Gleason
- 2019 Sedimentology (EARTH 305) Instructor: Kacey Lohmann
- 2018 Physical Geography (EARTH 201) Instructor: James Gleason

Instructor of Record (College of Southern Nevada)

- 2018 Environmental Science (ENV 101)
- Physical Geography (GEOG 103)
- 2016, 17 Physical Geology (GEOL 101)

Teaching Assistant (UNLV Department of Geoscience)

- 2015 Historical Geology (GEOL 102) Instructor: Joshua Bonde
- 2014 Paleontology (GEOL 330) Instructor: Stephen M. Rowland
- Graphic Design for Presentations (Short course)
- 2013 Historical Geology (GEOL 102) Instructor: Ganqing Jiang

Guest Lecturer

- 2021 Invited Speaker: Miocene basins, depositional environments, and fossil mammals of California – Friends of the UofM Museum of Paleontology, Ann Arbor, MI
- 2020 Invited Speaker: Mojave Region: Way back then and now – Scientist Spotlight, UMMNH, Ann Arbor, MI
- 2019 Volunteer: Mapping ancient environments with fossil mammals – Scientist Spotlight, UMMNH, Ann Arbor, MI
- Invited Speaker: Meteorites, Chicxulub, and North Dakota – Summer Reading Program, Dexter District Library, MI
- 2016 Field Guide at Tule Springs Fossil Beds National Monument for United States Department of Interior Deputy Director, Las Vegas, NV
- 2015 Invited Speaker: The inside scoop on Nevada's ancient elephants – Las Vegas Natural History Museum and Geological Society of Nevada
- Invited Speaker: Fossil Mythbusters – Nevada State Museum, Las Vegas, NV
- 2014 Invited Speaker: A trip to Mars – Coronado High School, Las Vegas, NV

Student Mentorship

- 2022 Brandon Agcopra (undergraduate, University of Nevada Las Vegas)

- 2021–22 Maggie Zeh (undergraduate, University of Michigan)
 2021 Hannah Bradburn (undergraduate, University of Michigan)

PROFESSIONAL CONFERENCE PRESENTATIONS

- 2022 **Hardy, F.**, Badgley, C., and Wang, X., Dietary paleoecology of ungulates in relation to environmental change in the Miocene Dove Spring Formation, California, Society of Vertebrate Paleontology. Toronto, ON.
- Hardy, F.**, Badgley, C., and Wang, X., Dietary paleoecology of ungulates in relation to environmental change in the Miocene Dove Spring Formation, California, Geological Society of American National Meeting. Denver, CO.
- Hardy, F.**, and Badgley, C., Comparing observed vs estimated mammalian diversity in the middle Miocene Dove Spring Formation, Desert Symposium 2022. Zzyzx, CA.
- 2021 Badgley, C., **Hardy, F.**, Kravitz, K., Yanites, B., Is montane mammal diversity captured in the fossil record? Society of Vertebrate Paleontology Annual Meeting. (Online)
- Bonde, J., Lanan, M., **Hardy, F.**, and Humphrey, R., Silicified Miocene maggots found in a gomphothere skull provide a model for soft-tissue preservation in terrestrial settings, Geological Society of America Cordilleran Section Meeting. (Online)
- 2020 **Hardy, F.** and Badgley, C., Testing the tectonic controls on preservation and mammal species richness in a Miocene basin from Southern California, Society of Vertebrate Paleontology Annual Meeting. (Online)
- 2019 **Hardy, F.** and Badgley, C., Tectonic influences on species richness of mammals in the middle Miocene Dove Spring Formation, California, Geological Society of America National Meeting. Phoenix, AZ.
- 2018 **Hardy, F.**, and Bonde, J. W., A revised late-Miocene faunal assemblage, including an occurrence of exceptional preservation of insect larvae, from the Esmeralda Formation of Fish Lake Valley, Nevada: Geological Society of America National Meeting. Indianapolis, IN.
- 2017 **Hardy, F.**, and Bonde, J. W., A Great Basin Miocene biota from the Esmeralda Formation of Nevada as an ecological constraint on the timing of Sierran uplift: Geological Society of America National Meeting. Seattle, WA.
- 2016 **Hardy, F.**, and Rowland, S. M., 2016, *Bison latifrons* was a mixed feeder: isotopic analysis of tooth enamel: Geological Society of America National Meeting. Denver, CO.
- 2015 **Hardy, F.**, and Bonde, A., 2015, Old bones and neon signs: A century of research at Tule Springs Fossil Beds National Monument: Geological Society of America National Meeting. Baltimore, MD
- 2014 **Hardy, F.**, and Rowland, S., 2014, Rumble in the Pleistocene: *Bison latifrons* paleoecology and megafaunal competition: Geological Society of America National Meeting. Vancouver, BC.

Hardy, F., and Rowland, S., 2014, Great Basin *Bison latifrons*: Stable isotope paleoecology: Geological Society of America Abstracts with Programs, v. 46, no. 5, p. 13.

2011 Rowland, S., **Hardy, F.**, and McLaurin, B., 2011, The Wilkin Quarry Rancholabrean biota of Lincoln County, Nevada. Society of Vertebrate Paleontology Annual Meeting. Las Vegas, NV.

ADDITIONAL EXPERIENCE

Fieldwork

2018– Dove Spring Formation (Miocene), Cantil, CA
 2015 Aztec Formation (Jurassic), Moapa, NV
 2014–18 Esmeralda Formation (Miocene), Dyer, NV
 2012 Panaca Formation (Pliocene–Pleistocene), Panaca, NV
 2010–18 Las Vegas Formation (Pleistocene), Tule Springs Fossil Beds National Monument; Ice Age Fossils State Park, Las Vegas, NV

Museum Collections

2023 Sternberg Museum of Natural History, Hays, KS
 2018– Natural History Museum of Los Angeles County, Los Angeles, CA
 University of Michigan Museum of Paleontology, Ann Arbor, MI
 2016–17 Nevada State Museum, Las Vegas, NV
 2014 Western Science Center, Hemet, CA
 Florida Museum of Natural History, Gainesville, FL
 Idaho Museum of Natural History, Pocatello, ID
 2013, 15 Denver Museum of Nature & Science, Denver, CO
 2011–18 Las Vegas Natural History Museum, Las Vegas, NV

PROFESSIONAL SERVICE

Department Service

2023 Search Committee, Assistant Professor in Earth and Environmental Sciences and Curator in the Museum of Paleontology, University of Michigan
 2021–22 GeoClub Faculty meeting note-taker, University of Michigan

Peer Review

2023 *Palaeogeography, Palaeoclimatology, Palaeoecology*

Conference Planning

- 2023 12th Annual North American Paleontological Convention (Organizing Committee)
- 2022 Michigan Geophysical Union (Organizing Committee Chair)
- 2021 Michigan Geophysical Union (Abstracts and Program Chair)
- 2015 UNLV 10th Annual Geosymposium (Abstracts and Program Chair)
- 2014–16 Geological Society of America (Student Advisory Council)

Professional Affiliations

- 2019– North American Rodents, Landscapes, Ecology, and Evolution (NSF Working Group)
- 2015– The Paleontological Society
- 2014– Geological Society of America
- 2011– Society of Vertebrate Paleontology

REFERENCES

Catherine Badgley (Ph.D. advisor and Postdoc mentor), Ph.D., Professor, Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI 48109; cbadgley@umich.edu

Xiaoming Wang (Ph.D. committee member and collaborator), Ph.D., Curator, Natural History Museum of Los Angeles County, Los Angeles, CA 90007, xwang@nhm.org

Gregory Dick (Teaching supervisor), Ph.D., Professor, Department of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI 48109, gdick@umich.edu

Naomi Levin (Ph.D. committee member), Ph.D., Professor, Department of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI 48109, nelevin@umich.edu