

CURRICULUM VITAE

MICHAEL DENNIS CHERNEY

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EDUCATION

University of Michigan, Rackham Graduate School
Ph.D. in Geological Sciences 2016
Thesis: "Records of growth and weaning in fossil proboscidean tusks as tests of Pleistocene extinction mechanisms"

University of Michigan Rackham Graduate School
M.S. in Geological Sciences 2011
Thesis: "Two new species of the turtle genus *Cordichelys* (Pleurodira, Podocnemididae) from the Fayum Depression, Egypt and comments on the genus *Stereogenys*"

University of Michigan
B.A. in Anthropology 2002
Area of Concentration: Archaeology

EMPLOYMENT HISTORY

University of Michigan Museum of Natural History
Exhibit Preparator 2016 – Present

University of Michigan Museum of Paleontology
Postdoc researcher 2016 – Present

University of Michigan Exhibit Museum of Natural History
Exhibit Preparator 2004 – 2011
Assistant Exhibit Preparator 2001 – 2004

University of Michigan Museum of Paleontology
Fossil Preparator 2008 – 2011
Assistant Fossil Preparator 2001 – 2004

HONORS, AWARDS, AND GRANTS

Ermine Cowles Case Student Award, *University of Michigan* 2015
"Stable isotope patterns in a nursing mother-calf pair of African elephants (Loxodonta africana) as a modern analog for interpretation of fossil tusk records"

Rackham Graduate Student Research Grant, *University of Michigan Rackham Graduate School* 2015

Rackham Travel Grant, *University of Michigan Rackham Graduate School* 2015, 2014, 2012, 2011

Scott Turner Student Award, *Department of Earth and Environmental Sciences, University of Michigan* 2014, 2013

Rackham Centennial Spring/Summer Fellowship, *University of Michigan Rackham Graduate School* 2012

Ermine Cowles Case Student Award, *University of Michigan* 2012
"Two new species of the turtle genus Cordichelys (Pleurodira, Podocnemididae) from the Fayum Depression, Egypt and comments on the genus Stereogenys"

University Honors, *University of Michigan* 2001, 2000

TEACHING EXPERIENCE

University of Michigan
Graduate Student Instructor – "Paleontology Lab" – Earth and Environmental Sciences 419 2014, 2013, 2012
Lectured, prepared labs, developed quizzes and test materials, and organized optional field trip

Graduate Student Instructor – "Introduction to Geology" – Earth and Environmental Sciences 118/119 2011
Led lab and discussion sections associated with a large intro lecture taught by faculty

INVITED LECTURES

"Shift in weaning age supports hunting-induced extirpation of Siberian woolly mammoths"

Michigan Archaeological Society, Kelsey Museum, Ann Arbor, MI	2016
“Using weaning age to test hypotheses for extinction in Siberian woolly mammoths”	
Calvin College Biology Seminar, Grand Rapids, MI	2015
“Isotopic characterization of nursing and weaning for a mother-calf pair of African elephants”	
Elephant Managers Association Conference, Toledo, OH	2014
“Isotope analyses support use of CT scans for identifying annual increments in Snowmass mastodon tusks”	
Snowmastodon Science Meeting, Denver Museum of Nature and Science, Denver, Co.	2012

FIELD AND TECHNICAL EXPERIENCE

Fossil site survey and excavation

Excavating mammoth remains (Bristle Mammoth) in Chelsea, Michigan	2015
Excavating Pleistocene site in Snowmass Village, Colorado	2011
Surveying and excavating Eocene whales in Wadi El Hitan and the Qatarra Depression, Egypt	2010
Excavating mammoth remains on golf course in Saranac, Michigan	2010

Inter-institutional collaborations

Elephant hair and milk sampling and analysis (Toledo Zoo, Toledo, OH)	2012 – present
Analysis of deuterium and oxygen isotopes of hair keratin (Michael Hren, University of Connecticut)	2014 – present

Procedures and equipment

CT analysis using Amira 3D visualization software (FEI)	
Tusk micro-sampling using computer automated Merchantek micromill	
Pretreatment of tusk dentin for stable isotope analysis of carbonate (C, O) and collagen (C, N)	
Sampling hair for stable isotope analyses (C, N, O, H)	
Sampling and processing hair for cortisol analysis	
Preparing milk samples for isotope analysis of water (O, D), fat (C), casein (C, N), and other solids (C, N)	
Specimen preparation, consolidation, molding, and casting (extensive experience)	
Preparing samples for AMS ¹⁴ C dating analyses	
3D laser scanning equipment and software	
Photogrammetry	
Specimen photography including stereophotography	
Specimen illustrations for publication	

ATTENDED PROFESSIONAL MEETINGS AND SEMINARS

Equipping the next generation of Christian paleobiologists (part II) – Calvin College Seminar	2015
Biologos – Evolution and Christian Faith Conference	2015
Elephant Managers Association Conference	2014
Equipping the next generation of Christian paleobiologists - Calvin College Seminar	2014
VI International Conference on Mammoths and their Relatives	2014
Society of Vertebrate Paleontology Annual Meeting	2015, 2014, 2013, 2012, 2011

OTHER SKILLS AND CERTIFICATIONS

Licensed emergency medical technician (EMT-B; Michigan)	2005 – 2007 [expired]
Certified private pilot	since 2001

PROFESSIONAL MEMBERSHIPS

Society of Vertebrate Paleontology	since 2010
Geological Society of America	since 2012
The Paleontological Society	since 2013
ASA	since 2014

PUBLIC OUTREACH

St. Francis Vacation Bible School presentation on Paleontology, Ann Arbor, MI	2015
Reflections on creation and evolution from a “Darwinian” Catholic, St. Thomas Catholic Church, Ann Arbor	2015

PUBLICATIONS

Cherney, M. D. , Fisher, D. C., Rountrey, A. N. 20XX. Growth patterns and weaning age estimates support hunting-induced extirpation of Siberian woolly mammoths. <i>Anticipated publication in 2016.</i>	
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- Cherney, M. D.**, Fisher, D. C., Hren, M. 20XX. Stable isotope patterns in a nursing mother-calf pair of African elephants (*Loxodonta africana*) as a modern analog for interpretation of fossil tusk records. *Anticipated publication in 2016*.
- Cherney, M. D.**, Fisher, D. C., Rountrey, A. N. 2016. MicroCT analysis of mandibular tusks from the Ziegler Reservoir (Colorado, USA) mastodons. Quaternary International, Proceedings of the 6th International Conference on Mammoths and their Relatives, *in prep for publication in Spring 2016*.
- Cherney, M. D.**, Fisher, D. C., Rountrey, A. N. 2016. Evidence for time-averaging in Ziegler Reservoir mastodon remains. Quaternary International, Special volume in honor of L. Agenbroad, *in prep for publication in Spring 2016*.
- El Adli, J. J., **Cherney, M. D.**, Fisher, D. C., Harris, J. M. Farrell, A. B., Cox, S. M. 2015. Last years of life and season of death of a Columbian mammoth from Rancho La Brea. In: Harris, J. M. (Ed.), La Brea and Beyond: The Paleontology of Asphalt-Preserved Biotas, Nat. Hist. Mus. of L. A. County, Science Series 42, pp. 65-80.
- Fisher, D. C., **Cherney, M. D.**, Newton, C., Rountrey, A. N., Calamari, Z. T., Stuckey, R. K., Lucking, C. 2014. Taxonomy and tusk growth analyses of Ziegler Reservoir proboscideans. Quaternary Research 82(3):518-532.
- Miller, I. M., Pigati, J. S., Anderson, R. S., Johnson, K. R., Mahan, S. A., Ager, T. A., Baker, R. G., Blaauw, M., Bright, J., Brown, P. M., Bryant, B., Calamari, Z. T., Carrara, P. E., **Cherney, M. D.**, Demboski, J. R., Elias, S. A., Fisher, D. C., Gray, H. J., Haskett, D. R., Honke, J. S., Jackson, S. T., Jiménez-Moreno, G., Kline, D., Leonard, E. M., Lifton, N. A., Lucking, C., McDonald, H. G., Miller, D. M., Muhs, D. R., Nash, S. E., Newton, C., Paces, J. B., Petrie, L., Plummer, M. A., Porinchu, D. F., Rountrey, A. N., Scott, E., Sertich, J. J. W., Sharpe, S. E., Skipp, G. L., Strickland, L. E., Stucky, R. K., Thompson, R. S., and Wilson, J. 2014. A high-elevation, multi-proxy biotic and environmental record of MIS 6-4 from the Ziegler Reservoir fossil site, Snowmass Village, Colorado, USA. Quaternary Research 82(3):618-634.
- Cherney, M. D.**, Gingerich, P. D., Wilson, J. A., Zalmout, I., Antar, M. 20XX. Two New Species of the Turtle Genus *Cordichelys* (Pleurodira, Podocnemididae) from the Fayum Depression, Egypt and Comments on the Genus *Stereogenys*. Contributions of the U-M Museum of Paleontology. *In review. Anticipated publication in 2016*.
- Cherney, M. D.** 2009. Creating a multi-use polyurethane mold with a replaceable pour spout. In: Brown, M. A., Kane, J. F., and Parker, W. G. (Eds.), Methods in Fossil Preparation: Proceedings of the First Annual Fossil Preparation and Collections Symposium. Petrified Forest, pp 81-86.

ABSTRACTS

- Cherney, M.** 2015. Shift in weaning age supports hunting-induced extirpation of Siberian woolly mammoths (*Mammuthus primigenius*). Journal of Vertebrate Paleontology, Program and Abstracts, 2015, p. 106 ****Romer Prize Session talk****
- El Adli, J., Fisher, D., **Cherney, M.**, Labarca, R., Lacomat, F. 2015. First analysis of tusk growth rate and season of death of a South American gomphothere. Journal of Vertebrate Paleontology, Program and Abstracts, 2015, p. 120
- Cherney, M.**, Fisher, D., Hren, M. 2014. Comparing stable isotope compositions of hair in a mother-calf pair of elephants (*Loxodonta africana*) during nursing and weaning. Journal of Vertebrate Paleontology, Program and Abstracts, 2014, p. 108
- Cherney, M. D.**, Fisher, D. C., Rountrey, A. N. 2014. X-ray computed tomography as a tool for analyzing life history information in proboscidean tusks. (Abstracts of the Vith International Conference on Mammoths and Their Relatives)
- Fisher, D. C., **Cherney, M. D.**, Rountrey, A. N., Calamari, Z. T. 2013. Paleobiology of Snowmass proboscideans (Pleistocene, Colorado). Geological Society of America Abstracts with Programs, v. 45, no. 7, 2013, p. 854.
- Cherney, M.**, Calamari, Z., Fisher, D. 2013. No observed effects of climate change on Snowmass mastodon tusk growth. Journal of Vertebrate Paleontology, Program and Abstracts, 2013, p. 104.
- El Adli, J., **Cherney, M.**, Fisher, D., Harris, J. Farrell, A. 2013. Last years of life and season of death of a Columbian mammoth from Rancho La Brea. Journal of Vertebrate Paleontology, Program and Abstracts, 2013, p. 121.
- Cherney, M.**, Fisher, D., Rountrey, A., Calamari, Z. 2012. Isotope analyses support use of CT scans for identifying annual increments in Snowmass mastodon mandibular tusks. Journal of Vertebrate Paleontology, Program and Abstracts, 2012, p. 77.
- Cherney, M.**, Gingerich, P., Wilson, J., Zalmout, I., Antar, M. 2011. New specimens of *Cordichelys* (Pleurodira, Podocnemididae) from late Eocene marine strata of Fayum, Egypt and a reevaluation of *Cordichelys antiqua*. Journal of Vertebrate Paleontology, Program and Abstracts, 2011, p. 87.
- Cherney, M.**, Sanders, W., Gingerich, P., Zalmout, I., Antar, M. 2009. Production of multi-purpose molds for versatile, detailed replication of large-scale fossils: the Basilosaurus isis casting project as an exemplar. Journal of Vertebrate Paleontology, Programs and Abstracts, 2009, p. 77A.