

EDWARD B. DAVIS

November 14, 2014

Department of Geological Sciences
1272 University of Oregon
Eugene OR 97403
(541)346-3461

Museum of Natural and Cultural History
University of Oregon
1680 East 15th Ave
Eugene, OR 97403

edavis@uoregon.edu

PROFESSIONAL PREPARATION

Ph.D., University of California, Berkeley, Department of Integrative Biology, 2005
B.S., University of Tennessee, Knoxville, Summa Cum Laude, Honors Geological Sci., 1999

PROFESSIONAL EMPLOYMENT

2013-current Assistant Professor, UO Department of Geological Science
2008-current Fossil Collections Manager, UO Museum of Natural and Cultural History
2008-2013 Instructor, UO Department of Geological Science
2007 Faculty Fellow, University of Oregon
2006 Postdoctoral Research Fellow, UC Museum of Vertebrate Zoology
2002, 2004 Graduate Student Research Assistant, MIOMAP project
2001 Graduate Student Coordinator, North American Paleontology Convention
2000-2003 Graduate Student Research Assistant, UC Museum of Paleontology
1999-2005 Graduate Student Instructor, UCB Depts. of Int. Bio., Earth & Plan. Sci.

PUBLICATIONS (29)

Refereed Journal Articles (23)

Gilmour, D.M., Butler, V.L., O'Connor, J.E., **Davis, E.B.**, Culleton, B.J., Kennett, D.J., Hodgins, G. *Accepted*. Chronology and ecology of late Pleistocene megafauna in the northern Willamette Valley, Oregon. *Quaternary Research*. 49 MS pp.

Sertich, J.W., Graham, R.W., Stucky, R.K., McDonald, H.G., Newton, C., Fisher, D.C., Scott, E., Demobski, J.R., Lucking, C., McHorse, B.K., and **Davis, E.B.** *Accepted*. High-elevation Late Pleistocene (MIS 5-6) vertebrate faunas from the Zeigler Reservoir fossil site, Snowmass Village, Colorado. *Quaternary Research*. 54 MS pp.

Gavin, D.G., Fitzpatrick, M.C., Gugger, P.F., Heath, K.D., Rodríguez-Sánchez, F., Dobrowski, S.Z., Hampe, A., Hu, F.S., Ashcroft, M.B., Bartlein, P.J., Blois, J.L., Carstens, B.C., **Davis, E.B.**, de Lafontaine, G. Edwards, M.E., Fernandez, M., Henne, P.D., Herring, E.M., Holden, Z.A., Kong, W.-s., Liu, J., Magri, D. Matzke, N.J., McGlone, M.S., Saltré, F., Stigall, A.L., Tsai, Y.-H.E., Williams, J.W. 2014. Climate refugia: joint inference

from fossil records, species distribution models and phylogeography. *New Phytologist*. 204(1): 37-54.

Davis, E.B., McGuire, J.L., and Orcutt, J.D. 2014. Ecological niche models of mammalian glacial refugia show consistent bias. *Ecography*. 37(11): 1133-1138.

Famoso, N.A., and **Davis, E.B.** 2014. Occlusal enamel complexity in middle Miocene to Holocene Equids (Equidae: Perissodactyla) of North America. *PLoS: ONE* 9(2): e90184.

Davis, E.B., and McHorse, B.K. 2013. A method for improved identification of postcrania from mammalian fossil assemblages: multivariate discriminant function analysis of camelid astragali. *Palaeontologia Electronica*. 16.3.27A. <http://palaeo-electronica.org/content/2013/539-discriminant-id-of-postcrania>

Famoso, N.A., Feranec, R.S., and **Davis, E.B.** 2013. Occlusal enamel complexity and its implications for lophodonty, hypsodonty, body mass, and diet in extinct and extant ungulates. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 387:21-216.

McGuire, J.L., and **Davis, E.B.** 2013. Using the palaeontological record of *Microtus* to test species distribution models and reveal responses to climate change. *Journal of Biogeography*. 40(8): 1490-1500.

Davis, E.B. and Calède, J.J.-M. 2012. Extending the utility of artiodactyl postcrania for species-level identifications using multivariate morphometric analyses. *Palaeontologia Electronica*. 15.1.1A. <http://palaeo-electronica.org/content/2012-issue-1-articles/68-artiodactyl-postcrania>

McHorse, B.K., Orcutt, J.D., and **Davis, E.B.** 2012. The carnivoran fauna of Rancho La Brea: average or aberrant? *Palaeogeography, Palaeoclimatology, Palaeoecology*. 329-330: 118-123. DOI: 10.1016/j.palaeo.2012.02.022

Atwater, A.L., and **Davis, E.B.** 2011. Topographic and climate change differentially drive Pliocene and Pleistocene mammalian beta diversity of the Great Basin and Great Plains provinces of North America. *Evolutionary Ecology Research* 13: 833-850.

Calède, J.J.-M., Hopkins, S.S.B., and **Davis, E.B.** 2011. Turnover in burrowing rodents: The roles of competition and habitat change. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 311: 242-255.

Davis, E.B., Brakora, K., and Lee, A. 2011. Evolution of ruminant headgear: A review. *Proceedings of the Royal Society B*. 278: 2857-2865.

Hopkins, S.S.B., and **Davis, E.B.** 2009. Quantitative morphological proxies for fossoriality in small mammals. *Journal of Mammalogy*. 90: 1449-1460.

- Crowley, B.E., Koch, P.L., and **Davis, E.B.** 2008. Stable isotope constraints on the elevation history of the Sierra Nevada Mountains, California. *GSA Bulletin*. 120:588-598.
- Davis, E.B.**, Koo, M.S., Conroy, C., Patton, J.L., and Moritz, C. 2008. The California Hotspots Project: identifying regions of rapid diversification of mammals. *Molecular Ecology*. 17:120-138.
- Prothero, D.R., **Davis, E.B.**, and Hopkins, S.S.B. 2008. Magnetic stratigraphy of the Massacre Lake beds (late Hemingfordian, early Miocene) and the "Proboscidean Datum" in North America. *New Mexico Museum of Natural History and Science Bulletin* 44: 233-238.
- Prothero, D.R. and **Davis, E.B.** 2008. Magnetic Stratigraphy of the upper Miocene (early Hemphillian) Thousand Creek Formation, northwestern Nevada. *New Mexico Museum of Natural History and Science Bulletin* 44:239-245.
- Carrasco, M.A., Barnosky, A.D., Kraatz, B.P., and **Davis, E.B.** 2007. The Miocene Mammal Mapping Project (MIOMAP): An Online Database of Arikareean through Hemphillian Fossil Mammals. *Bulletin of Carnegie Museum of Natural History* 39:183-188.
- Davis, E.B.** and Pyenson N.D. 2007. Diversity biases in terrestrial mammalian assemblages and quantifying the differences between museum collections and published accounts: a case study from the Miocene of Nevada. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 250:139-149.
- Davis, E.B.** 2005. Comparison of climate space and phylogeny of *Marmota* (Mammalia: Rodentia) indicates a connection between evolutionary history and climate preference. *Proceedings of the Royal Society of London B*. 272:519-526.
- Davis, E.B.** 2005. Mammalian beta diversity in the Great Basin, western USA: Paleontological data suggest deep origin of modern macroecological structure. *Global Ecology and Biogeography*. 14:479-490.
- Barnosky, A.D., Carrasco, M.A., and **Davis, E.B.** 2005. The impact of the species-area relationship on estimates of paleodiversity. *Public Library of Science: Biology*. 3(8):1356-1361.
- Refereed Book Chapters (3)**
- Polly, D.P., Cardini, A., **Davis, E.B.**, and Stepan, S. *Accepted*. Marmot evolution and global change in the last 10 million years. 59pp. In: *Rodent Evolution*, Hautier, L., and Cox, P. Cambridge University Press.
- Davis, E.B.**, Brakora, K., and Stilson, K.T. *Accepted*. The evolution, development, and functional role of horns in cattle. 21 pp. In: *The Evolution of Wild Cattle*, Meletti, M. and Burton, J. eds. Cambridge University Press.

Davis, E.B. 2007. Antilocapridae. Pp. 227-240. In: *The Artiodactyla*, Prothero, D. and Foss, S. eds. Johns Hopkins Press, Baltimore, MD.

Editor-reviewed Papers (3)

McGuire, J.L., and **Davis, E.B.** 2014. Conservation paleobiogeography: the past, present and future of species distributions. *Ecography*. 37(11): 1092-1094.

Dawson, M.N., Algar, A.C., Antonelli, A., Dávalos, L.M., **Davis, E.B.**, Early, R., Guisan, A., Jansson, R., Lessard, J.-P., Marske, K.A., McGuire, J., Stigall, A.L., Swenson, N.G., Zimmermann, and N.E., Gavin, D.G. 2013. An horizon scan of biogeography. *Frontiers of Biogeography*. 5(2): 130-157.

McDonough, K.N., Swisher, M.E., Jenkins, D.L., O'Grady, P.W., and **Davis, E.B.** 2013. An analysis of artifact, bone, and coprolite distributions in Paisley Caves Younger Dryas (Botanical Lens) and underlying Pleistocene deposits. *Current Archaeological Happenings in Oregon* 38(4): 17-19.

Papers in Submission (4)

Emery, M.M., **Davis, E.B.**, Hopkins, S.S.B. *In revision*. Reassessment of the agriochoerid oreodont from the Hancock Mammal Quarry, Clarno (Eocene: Duchesnean), Oregon. *Journal of Vertebrate Paleontology*. 28 MS pp.

Famoso, N.A., **Davis, E.B.**, Feranec, R.S. *In revision*. Are hypsodonty and occlusal enamel complexity evolutionarily correlated in ungulates? *Journal of Mammalian Evolution*. 16 MS pp.

Levering, D.L., Hopkins, S.S.B., and **Davis E.B.** *In revision*. Decreasing limb inertia among North American ungulates across the Oligocene Miocene boundary. *Palaeo3*. 25 MS pp.

AWARDS AND HONORS

- 2014 Invited participant, EarthCube Cyberinfrastructure for Paleogeoscience RCN workshop
- 2013 Invited participant, NESCent catalysis group: Integrating Phylogeography, Fossils, and Landscape History
- 2013 Invited participant, EarthCube workshop: PaleoGeosciences
- 2012 Invited participant, PAGES workshop on Glacial Refugia
- 2006 Invited participant, NESCent meeting: Taxonomic Databases for the 21st Century
- 2005 Invited participant, GEON Cyberinfrastructure Summer Institute for Geoscientists
- 2004 George D. Louderback Award, UC Museum of Paleontology
- 1999 Phi Beta Kappa Honor Society
- 1995 Roddy Merit Scholar— Four-year full academic scholarship

GRANTS AND FELLOWSHIPS

- 2014 Oregon Historical Society development grant, \$5632
- 2010 BLM Funding for MNCH fossil cabinets: \$20,000
- 2006-2007 Postdoctoral Fellowship sponsored by California State Parks
- 2001-2005 National Science Foundation Graduate Research Fellow
- 2004 GSA Research Grant
- 2002 Sigma Xi Grants-in-Aid of Research

INVITED TALKS/ BLOG POSTS

- 2014 Reel Science: Dinosaur 13. Oregon Museum of Science and Industry.
- 2013 Evolutionary Hotspots. Eugene Public Library Lecture Series.
- 2012 In Search of Missing Field Books. Smithsonian Field Book Project, Guest Blog Post.
- 2012 Oregon's Saber-Toothed Salmon: A Story of Natural and Sexual Selection. Geology Lecture Series at SW Oregon Community College.
- 2012 Global Climate Change: What Can We Learn from Eugene's Fossils? Eugene Public Library Lecture Series, part of Eugene@150 Celebration.
- 2011 My, What Big Antlers You Have! Ruminations on the Evolution of Headgear. Science Pub Eugene (Public Lecture).
- 2011 Oregon's Saber-Toothed Salmon: A Story of Natural and Sexual Selection. UO MNCH Darwin-Condon Lecture Series.
- 2009 Dinosaurs and the Origins of Birds. Evergreen Aviation and Science Museum, *Dinosaurs Come Alive!* event.
- 2007 Bringing the Condon Collection into the 21st Century. UO MNCH Public Lecture Series.

NATIONAL MEETING ABSTRACTS (45)

Titles available upon request

- 2014 North American Paleontological Congress: 3 abstracts, 1 first-authored abstract.
- 2013 Society of Vertebrate Paleontology Meeting, Los Angeles, CA: 8 abstracts, 1 first-authored.
- 2012 Geological Society of America Meeting, Charlotte, NC: 1 first-authored abstract.
- 2012 Society of Vertebrate Paleontology Meeting, Raleigh, NC: 6 abstracts, 1 first-authored.
- 2012 Fossil Preparation And Collections Symposium, Seattle, WA: 1 abstract.
- 2011 Society of Vertebrate Paleontology Meeting, Las Vegas, NV: 5 abstracts, 1 first-authored.
- 2011 Geological Society of America Meeting, Minneapolis, MN: 1 abstract.
- 2011 Society of Integrative and Comparative Biology Meeting, Salt Lake City, UT: 1 abstract.
- 2010 Society for American Archaeology, St. Louis MO: 1 abstract.
- 2010 Great Basin Anthropological Conference, Layton Utah: 1 abstract.
- 2010 Society of Vertebrate Paleontology Meeting, Pittsburgh, PA: 3 abstracts, 1 first-authored.
- 2009 Geological Society of America Meeting, Portland, OR: 4 abstracts, 1 first-authored.
- 2008 Society of Vertebrate Paleontology Meeting, Cleveland, OH: 1 first-authored abstract.
- 2007 Geological Society of America Meeting, Denver, CO: 2 abstracts, 1 first-authored.
- 2007 Society of Vertebrate Paleontology Meeting, Austin TX: 2 abstracts, 1 first-authored.
- 2007 American Society of Mammalogists Meeting, Albuquerque NM: 1 first-authored abstract.

2007 Evol. Change in Human-altered Environments: Int'l Summit, Los Angeles, CA: 1 abstract.
 2006 Society of Vertebrate Paleontology Meeting, Ottawa, Ontario: 1 first-authored abstract.
 2005 Geological Society of America Meeting, Salt Lake City, UT: 2 abstracts, 1 first-authored.
 2005 Society of Vertebrate Paleontology Meeting, Mesa, AZ: 1 first-authored abstract.
 2004 Geological Society of America Meeting, Denver, CO: 2 abstracts, 1 first-authored.
 2004 Society of Vertebrate Paleontology Meeting, Denver, CO: 3 abstracts, 1 first-authored.
 2003 Society of Vertebrate Paleontology Meeting, St. Paul, MN: 1 first-authored abstract.
 2003 Geological Society of America Meeting, Seattle, WA: 1 first-authored abstract.
 2002 Society of Vertebrate Paleontology Meeting, Norman, OK: 1 first-authored abstract.
 2001 Society of Vertebrate Paleontology Meeting, Bozeman, MT: 1 first-authored abstract.
 2001 North American Paleontological Convention, Berkeley, CA: 1 first-authored abstract.

TEACHING EXPERIENCE

Lead Instructor

Geology 103	The Evolving Earth
Geology 304	The Fossil Record
Geology 305	Evolution of the Dinosaurs
Geology 308	Geology of Oregon and the Pacific Northwest
Geology 418/518	Analysis of Environmental Data
Honors 209H	Evolution of the Domestic Animals
Honors 424H	The Legacy of Thomas Condon: The Role of Religion in Science

Graduate Teaching Assistant

Analysis of Environmental Data
 Evolution
 Principles of Biodiversity
 General Biology
 Natural History of the Vertebrates
 Morphology of the Vertebrate Skeleton

CURATORIAL WORK

2008-current	Oversee up to 12 volunteers and 3-4 student workers
2011-current	Consulting on design of Explore Oregon natural history exhibit
2011-2012	Installation of 70 new museum cabinets, reorganization of vertebrate collections into these new cabinets
2010-2012	Transfer of UO fossil collections database to Specify 6
2008-2012	Increased UO fossil electronic catalog from 6,000 to 41,000 specimen records
2011	Instituted new preparation guidelines
2010-2011	Oversaw creation of 10 fossil-themed web galleries
2008-2011	Oversaw rapid digitization of >9500 specimens
2010-2011	Coordinated 'living exhibit' volunteer curators in PaleoLab exhibit: 15,000 specimens cataloged

2009-2010 Consulted on design of PaleoLab exhibit
2010 Implemented centralized server for UO fossil collection
2009 Developed MOU between UO and UO Forest Service
2009 Brought UO fossil collection in line with BLM DM 4.11 standards:
–Installation of alarm system
–Instigation of climate monitoring activities
–Instigation of pest monitoring activities
–Creating and implementing museum policy handbook
–Move of all non-essential books and records from collections vault to curation space
–Instigation of new accession records policy

PROFESSIONAL SERVICE

2014- Member, EarthCube ad hoc Science Steering Committee
2013- Journal of Vertebrate Paleontology Editorial Board Member
2013 Invited symposium organizer: “The convergence of conservation paleontology and biogeography”, International Biogeography Society Meeting
2012 FWF (Austrian Science Fund) proposal reviewer
2012- Paleontological Society Student Grants in Aid reviewer
2010- NSF proposal reviewer
2009-2012 SVP committee member: Ad Hoc Fossil Repositories and Collections Guidelines
2002-2005 PaleoBios Associate Editor

Peer-reviewer

2014: Lethaia, Biology Letters (2), Paleobiology, Journal of Vertebrate Paleontology, Ecography
2013: Journal of Biogeography, Journal of Mammalogy, Biology Letters
2012: Biological Journal of the Linnean Society, Journal of Paleontology, Rocky Mountain Geology, Palaeo3, *Evolution of Wild Cattle* Book, Biology Letters
2011: C.R. Biologies, New Mexico Museum Bull. (2), Acta Palaeont. Polonica
2009: PaleoBios, PNAS
2008: Molecular Ecology, Proceedings B
2007: Geology, Palaeo3
Data not collected for 2006 and earlier.

DEPARTMENTAL/UNIVERSITY SERVICE

2012-current UO Department of Geological Sciences Computer Committee
2012 UO Museum of Natural and Cultural History IT Specialist Search Committee
2007-current UO Department of Geological Sciences Website Committee

STUDENTS MENTORED

Emery, Meaghan Ph.D. exp. 2017
Atwater, Amy B.S. 2013

Famoso, Nicholas M.S. 2013 Ph.D exp. 2017

PROFESSIONAL SOCIETIES

Geological Society of America
Society of Vertebrate Paleontology
Paleontological Society
American Society of Mammalogists
International Biogeography Society
Society for Preservation of Natural History Collections