

DANIEL I. HEMBREE
Ohio University
Department of Geological Sciences
316 Clippinger Laboratories, Athens, OH 45701
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Education

Ph.D. Geology 2005

UNIVERSITY OF KANSAS, LAWRENCE, KS

Dissertation: *Biogenic Structures of Modern and Fossil Continental Organisms: Using Trace Fossil Morphology to Interpret Paleoenvironment, Paleoecology, and Paleoclimate*

Advisors: Stephen T. Hasiotis, Robert H. Goldstein, Roger L. Kaesler, Larry D. Martin, Linda Trueb

M.S. Geology 2002

UNIVERSITY OF KANSAS, LAWRENCE, KS

Thesis: *Paleontology and Ichnology of an Ephemeral Lacustrine Deposit within the Middle Speiser Shale, Eskridge, KS*

Advisors: Larry D. Martin, Robert H. Goldstein, Roger L. Kaesler

B.S. Geology 1999

UNIVERSITY OF NEW ORLEANS, NEW ORLEANS, LA

Undergraduate thesis: *A reexamination of Confuciusornis sanctus*

Advisor: Kraig Derstler

Professional Experience

2018-present	Professor DEPARTMENT OF GEOLOGICAL SCIENCES Ohio University, Athens, OH
2012-2018	Associate Professor DEPARTMENT OF GEOLOGICAL SCIENCES Ohio University, Athens, OH
2007-2012	Assistant Professor DEPARTMENT OF GEOLOGICAL SCIENCES Ohio University, Athens, OH
2006-2007	Instructor DEPARTMENT OF GEOLOGICAL SCIENCES Ohio University, Athens, OH
2005-2006	Postdoctoral Research Associate DEPARTMENT OF GEOLOGICAL SCIENCES Ohio University, Athens, OH

2000-2001 **Coordinator of Laboratories**
DEPARTMENT OF GEOLOGY
University of Kansas, Lawrence, KS

1999-2000,
2001-2002,
2004-2005 **Graduate Teaching Assistant**
DEPARTMENT OF GEOLOGY
University of Kansas, Lawrence, KS

External Research Grants and Fellowships Awarded

- W.M. Keck Foundation, “Disentangling the Drivers of Human Evolution: Tectonics, Climate, and Habitat,” 1/1/22-12/31/24, \$1,200,000 (\$60,500 to OHIO), PIs Beverly Saylor (Case Western Reserve University), Yohannes Haile-Selassie (Cleveland Museum of Natural History), Naomi Levin (University of Michigan), Denise Su (Cleveland Museum of Natural History), Kaye Reed, David Feary, Christopher Campisano (Arizona State University), Alan Deino (Berkeley Geochronology Center), Sara Feakins (University of Southern California)
- National Geographic Society, “Investigation of the Soils and Burrowing Biota of the Sonoran Desert: Improving the Recognition of Semi-Arid Ecosystems in Deep Time,” 12/1/14-12/1/15, \$16,530, co-PIs Brian Platt (University of Mississippi), Ilya Buynevich (Temple University), Jon Smith (Kansas Geological Survey).
- American Chemical Society Petroleum Research Fund Type UR Proposal, “Vertical and lateral variability of Pennsylvanian and Permian paleosols and continental ichnofossils of the Dunkard basin: resolving local complexity and regional patterns to reconstruct landscapes,” 9/1/13-8/31/16, \$65,000.
- National Science Foundation, EAR Sedimentary Geology and Paleobiology, “Using modern burrowing organisms to interpret the paleoenvironmental, paleoecological, and paleoclimatic significance of continental ichnofossils,” 6/1/09-5/31/13, \$156,000 (direct and indirect costs).
- American Chemical Society Petroleum Research Fund Type UNI Proposal, “Using actualistic studies to interpret the paleoenvironmental, paleoclimatic, paleoecological, and sequence stratigraphic significance of continental ichnofossils,” 9/1/09-8/30/11, \$50,000.
- National Geographic Society, “Taphonomy of a subtidal *Nautilus* population, Lifou Island, near New Caledonia,” 12/08-12/09, \$19,574. Co-PI with Royal Mapes.
- Society of Vertebrate Paleontology, Bryan Patterson Award, 2004, \$2400
- American Association of Petroleum Geologists, Merrill W. Haas Memorial Grant, 2004, \$2000
- Colorado Scientific Society, Ogden Tweto Memorial Research Grant, 2004, \$1000
- Geological Society of America, Grant-in-Aid, 2004, \$1600
- Paleontological Society, Stephen J. Gould Grant-in-Aid, 2003, \$500

Internal Research Grants and Fellowships Awarded

- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 7/1/21-6/30/22, \$2610.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 7/1/20-6/30/21, \$2610.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 7/1/19-6/30/20, \$2565.

- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 7/1/18-6/30/19, \$2565.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 8/1/16-7/31/17, \$2430.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 8/1/15-7/31/16, \$2430.
- Ohio University Program to Aid Career Exploration (PACE), “Web Designer for Continental Ichnology Research Laboratory,” 8/1/15-7/31/16, \$2430.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 8/1/14-7/31/15, \$2385.
- Ohio University Program to Aid Career Exploration (PACE), “Web Designer for Continental Ichnology Research Laboratory,” 8/1/14-7/31/15, \$2385.
- Ohio University Program to Aid Career Exploration (PACE), “Continental Ichnology Research Assistant,” 8/1/13-7/31/14, \$2355.
- Ohio University, Office of the Vice President for Research, Research Challenge Award, 2012, \$5000
- Ohio University Baker Fund, “Taphonomy of *Nautilus* in shallow marine and cave environments: modern analogs for interpreting ancient environments and ecosystems,” 7/1/11-6/30/12, \$12,000.
- Ohio University Research Committee, “Using modern burrowing organisms to interpret the paleoenvironmental, paleoecological, and paleoclimatic significance of continental ichnofossils,” 7/08-7/09, \$7927.
- Ohio University, Office of the Vice President for Research, Research Challenge Award, 2006, \$5000
- Post-Doctoral Research Fellowship, Ohio University, 2005, \$25,000
- Panorama Society Small Grant, University of Kansas Biodiversity Research Center, 2004, \$700
- Selig Summer Field Research Grant, KU Department of Geology, 2004, \$1200
- Panorama Society Small Grant, University of Kansas Biodiversity Research Center, 2003, \$350
- Selig Summer Field Research Grant, KU Department of Geology, 2003, \$1500
- Selig Summer Field Research Grant, KU Department of Geology, 2001, \$900

Honors and Awards

- Outstanding Teaching Award 2020-21, Department of Geological Sciences, Ohio University
- Outstanding Service Award 2020-21, Department of Geological Sciences, Ohio University
- Outstanding Teaching Award 2017-18, Department of Geological Sciences, Ohio University
- Outstanding Teaching Award 2013-14, Department of Geological Sciences, Ohio University
- Outstanding Research Award 2009-10, Department of Geological Sciences, Ohio University
- Outstanding Teaching Award 2009-10, Department of Geological Sciences, Ohio University
- Honorable Mention Best Paper 2007, PALAIOS
- Erasmus S. Haworth Distinguished Graduate Award, Ph.D., University of Kansas Department of Geology, 2005
- Henbest Scholarship, KU Department of Geology, 2004-2005, \$2000
- Joseph Patterson Scholarship, KU Department of Geology, 2002, \$2000
- Henbest Scholarship, KU Department of Geology, 2001, \$9000

- Joseph Patterson Scholarship, KU Department of Geology, 2001, \$750
- Henbest Scholarship, KU Department of Geology, 2000-2001, \$2500
- Henbest Scholarship, KU Department of Geology, 1999-2000, \$2000
- UNO Phi Beta Kappa Award in Science, 1999
- Mobil Foundation Undergraduate Scholarship, 1997, \$500
- Jules and Olga Braunstein Undergraduate Scholarship, 1996-1999, \$6000

Professional Societies

- Geological Society of America
- Paleontological Society
- Society for Sedimentary Geology
- International Ichnological Association

Professional Service

- SEPM Nominating Committee, 2021-present
- Associate Editor, *Ichnos*, 2020-present.
- Executive Editor, *Palaeontologia Electronica*, 2019-present.
- Proposed, organized, and chaired “Behavioral Innovations and Environmental Feedbacks: Insights from the Trace Fossil Record and Other Archives,” Tarhan, L., Hembree, D.I., Smith, J.J., Gehling, J., 11th North American Paleontological Convention, 2019, Riverside, CA.
- Paleontological Society Medal Committee, 2018-present.
- Proposed, organized, and chaired “Recent advances in ichnology,” Hembree, D.I., Smith, J.J., Platt, B.F., Geological Society of America 2018 Annual Meeting, Indianapolis, IN.
- Member of Organizing Committee, IGCP Project 653: Onset of the Great Ordovician Biodiversification Event, 2018 Annual Meeting, June 3-7, Ohio University.
- Proposed, organized, and chaired “Omnipresent Ichnology: Traces of Life from Mountain Slopes to the Deep Sea,” Buynevich, I.V., and Hembree, D.I., North Central/Northeastern Section Geological Society of America 2017 Meeting, Pittsburg, PA. Session contained 14 presentations (oral and poster).
- Handling Editor, *Palaeontologia Electronica*, 2015-2019.
- Participated in iDigBio Paleontology Imaging Workshop, University of Texas at Austin, 2014.
- Participated in National Science Foundation EarthCube Workshop for Sedimentary Geologists, University of Utah, 2013.
- Proposed, organized, and chaired “Lessons from the Living: Paleontological Investigations Using Modern Analogs,” Hembree, D.I., Platt, B.F., Smith, J.J., Geological Society of America 2011 Annual Meeting, Minneapolis, MN. Session contained 24 presentations (oral).
- Member, Paleontological Society Regional Resource People, 2008-present.
- Proposed, organized, and chaired. “Neontological Solutions to Paleontological Problems: Actualistic Studies of the Morphology, Behavior, and Ecology of Modern Analogs for Ancient Organisms,” Hembree, D.I., Platt, B.F., Smith, J.J. Geological Society of America 2008 Annual Meeting, Houston, TX. Session contained 16 presentations (oral).

- Editorial Board, The Open Paleontology Journal, Bentham Press, 2008 to present.
- Proposed, organized, and chaired “Fossils and Modern Analogs: Using Modern Organisms to Improve Paleontological Interpretations,” Hembree, D.I., Platt, B.F., Smith, J.J., Geological Society of America 2007 North Central – South Central Section Meeting, Lawrence, KS. Session contained 9 presentations (oral).
- Proposal reviews for NSF EAR Sedimentary Geology and Paleobiology Program, NSF EAR Postdoctoral Fellowship Program, American Chemical Society’s Petroleum Research Fund, 2005-present.
- Textbook reviewer/consultant for Brooks-Cole/Cengage, John Wiley and Sons, McGraw-Hill Geosciences, Oxford University Press, Prentice Hall, W.H. Freeman & Co., W.W. Norton & Co., 2005-present.
- Journal article reviews (2004-present) for Catena, Cretaceous Research, Ethology, Ecology and Evolution, Geology, GSA Today, Ichnos, Journal of Paleontology, Journal of Biogeography, Journal of Sedimentary Research, Journal of South American Earth Sciences, Journal of Vertebrate Paleontology, Lethaia, Neues Jahrbuch für Geologie und Paläontologie, Palaeogeography, Palaeoclimatology, Palaeoecology, PALAIOS, Palaeontology, Palaeontologia Electronica, Paleobiology, Soil Science, The Open Paleontology Journal, The Science of Nature.

Courses Taught

- Introduction to Geology, GEOL 1010, Ohio University, Department of Geological Sciences 2007-2014
- Geology of National Parks, GEOL 1300, Ohio University, Department of Geological Sciences, 2008
- Dinosaurs and the Mesozoic World, GEOL 1400, Ohio University, Department of Geological Sciences 2014-2021
- Introduction to Oceanography, GEOL 2110, Ohio University, Department of Geological Sciences, 2007
- Earth and Life History, GEOL 2210, Ohio University, Department of Geological Sciences, 2007
- Historical Geology, GEOL 2550, Ohio University, Department of Geological Sciences, 2009-2013, 2018-2021
- Stratigraphy/Sedimentology, GEOL 3500/550, Department of Geological Sciences, 2020
- Ichnology, GEOL 4440/5440, Ohio University, Department of Geological Sciences, 2009-2019
- Paleopedology, GEOL 4560/5560, Ohio University, Department of Geological Sciences, 2010-2016
- Sedimentary Processes and Environments, GEOL 5520, Ohio University, Department of Geological Sciences, 2021

Thesis Committees

- *Skyler Houser, M.S., Geological Sciences, 2021-present (Committee chair)
- *Jennifer Crowell, M.S., Geological Sciences, 2020-present (Committee chair)
- *Joe Wislocki, M.S., Geological Sciences, 2019-2021 (Committee chair)
- *Hayden Thacker, B.S., Geological Sciences, 2019-2020 (Committee chair)
- *Connor McFadden, M.S., Geological Sciences, 2017-2019 (Committee chair)
- *Raymond Lukama, M.S., non-thesis, Geological Sciences, 2018-2019 (Committee chair)
- *Connor Moore, M.S., non-thesis, Geological Sciences, 2017-2018 (Committee chair)
- *Sarah Kogler, M.S., Geological Sciences, 2016-2018 (Committee chair)
- *Emma Swaninger, B.S., Geological Sciences, 2016-2017 (Committee chair)

*Jennifer Carnes, M.S., Geological Sciences, 2015-2017 (Committee chair)
 *Michael Blair, M.S., Geological Sciences, 2013-2015 (Committee chair)
 *Lauren Johnson, B.S., Geological Sciences, 2013-2015 (Committee chair)
 *J. Mike Hils, M.S., Geological Sciences, 2012-2014 (Committee chair)
 *Jared Bowen, M.S., Geological Sciences, 2011-2013 (Committee chair)
 *Angeline Catena, M.S., Geological Sciences, 2010-2012 (Committee chair)
 *Nicole Dzenowski, M.S., Geological Sciences, 2010-2012 (Committee chair)
 *Bart Rasor, B.S., Geological Sciences, 2009-2010 (Committee chair)
 *Krista Smilek, M.S., Geological Sciences, 2007-2009 (Committee chair)
 Caitlyn Trickey, M.S., thesis, Geological Sciences, 2021-present
 Luke Linville, M.S., thesis, Geological Sciences, 2021-present
 Kelly O'Meara, B.S. thesis, Geological Sciences, 2020-2021
 Ceara Purcell, M.S., thesis, Geological Sciences, 2020-2021
 James Fox, M.S., non-thesis, Geological Sciences, 2019-2021
 Eric Gibbs, M.S., thesis, Geological Sciences, 2018-2020
 Shaolin Censullo, M.S., thesis, Geological Sciences, 2019-2020
 Kelli Baxstrom, M.S., thesis, Geological Sciences, 2018-2019
 Lucas Howard, M.S., thesis, Geological Sciences, 2018-2019
 Ranjeev Epa, M.S., thesis, Geological Sciences, 2016-2017
 Dreadnaught Stubbs, M.S., thesis, Geological Sciences, 2016-2018
 Nilmani Perera, M.S., thesis, Geological Sciences, 2016-2017
 Christopher Jorgensen, M.S., thesis, Geological Sciences, 2015-2016
 James Anderson, B.S. thesis, Geological Sciences, 2016
 Wesely Parker, B.S. thesis, Geological Sciences, 2014-2015
 Jennifer Bauer, M.S. thesis, Geological Sciences, 2012-2014
 Audrey Blakeman, M.S. thesis, Geological Sciences, 2012-2014
 David Wright, M.S., Geological Sciences, 2010-2012
 Heather Weismiller, M.S., Geological Sciences, 2010-2012
 Robert Swisher, M.S., Department of Geological Sciences, 2007-2009
 Kaitlin Maguire, M.S., Department of Geological Sciences, 2006-2008
 Zach Wallace, B.S., Geological Sciences, 2007-2008
 Jonathan Bachtel, B.S., Geological Sciences, 2007-2008
 Dillon Strahler, M.S., Russ College of Engineering and Technology, 2018-present (outside rep.)
 Rebecca Santana, Ph.D., Department of Physics, 2013-present (CAS representative)
 Tyler Danley, Ph.D., Department of Physics, 2016-2018 (CAS representative)
 Ashley Morhardt, Ph.D., Department of Biological Sciences, 2013-2016 (CAS representative)
 Angela Horner, Ph.D., Department of Biological Sciences, 2006-2010 (CAS representative)
 Michael Jorgensen, Ph.D., Department of Biological Sciences, 2009-2013 (CAS representative)

Graduate (M.S.) Theses Directed

- Skyler Houser, in progress. "Neoichnology of terrestrial invertebrates." M.S. thesis, Geological Sciences, Ohio University.
- Jennifer Crowell, in progress. "Climate-induced changes in fluvial ichnofossil assemblages of the Pennsylvanian-Permian Appalachian Basin." M.S. thesis, Geological Sciences, Ohio University.
- Joe Wislocki, 2021, "Understanding larval to adult beetle ichnofossils using experimental neoichnology." M.S. thesis, Geological Sciences, Ohio University.

- Connor McFadden, 2019, “Analysis of landscape variability through the Pennsylvanian and Permian Monongahela and Dunkard groups, southeastern Ohio, USA.” M.S. thesis, Geological Sciences, Ohio University.
- Sarah Kogler, 2018, “Influences of modern pedogenesis on paleoclimate estimates from Pennsylvanian and Permian paleosols, southeast Ohio, USA.” M.S. thesis, Geological Sciences, Ohio University.
- Jennifer Carnes, 2017, “Response of soils and soil ecosystems to the Pennsylvanian-Permian climate transition in the upper fluvial plain of the Dunkard Basin, southeastern Ohio, USA.” M.S. thesis, Geological Sciences, Ohio University.
- Michael Blair, 2015, “A paleopedological and ichnological approach to spatial and temporal variability in Pennsylvanian-Permian strata of the Lower Dunkard Group.” M.S. thesis, Geological Sciences, Ohio University.
- Mike Hils, 2014, “Neoichnology of the burrowing spiders *Gorgyrella inermis* (Araneae: Mygalomorphae) and *Hogna lenta* (Araneae: Araneomorphae).” M.S. thesis, Geological Sciences, Ohio University.
- Jared Bowen, 2013, “The neoichnology of juliform millipedes and Upper Monongahela to Lower Dunkard group paleosols: a multi-proxy approach to paleolandscape variability.” M.S. thesis, Geological Sciences, Ohio University.
- Angeline Catena, 2012, “Neoichnology of two scincoid lizards and Pennsylvanian paleosols: improving interpretations of continental tracemakers and soil environments.” M.S. thesis, Geological Sciences, Ohio University.
- Nicole Dzenowski, 2012, “The neoichnology of two ambystomatid salamanders, Pennsylvanian paleosols, and their use in paleoenvironmental, paleoecological, and paleoclimatic interpretations.” M.S. thesis, Geological Sciences, Ohio University.
- Krista Smilek, 2009, “Using ichnology and sedimentology to determine the paleoenvironmental and paleoecological conditions of a nearshore depositional environment: case studies from the Pennsylvanian Ames Limestone and modern holothurians.” M.S. thesis, Geological Sciences, Ohio University.

Undergraduate (B.S.) Theses Directed

- Hayden Thacker, 2020, “Neoichnological study of burrowing darkling beetles (Coleoptera: Tenebrionidae) from larval to adult stages.” B.S. thesis, Geological Sciences, Ohio University.
- Emma Swaninger, 2017, “Large burrows in fluvial deposits of the Early Permian (Asselian) Dunkard Group, southeast Ohio, U.S.A.” B.S. thesis, Geological Sciences, Ohio University.
- Lauren Johnson, 2015, “Understanding anuran burrows: neoichnology of the eastern spadefoot toad, *Scaphiopus holbrookii*,” B.S. thesis, Geological Sciences, Ohio University.

- Bart Rasor, 2010. "Taphonomy and sedimentology of a modern *Nautilus* deposit in a nearshore paleoenvironment." B.S. thesis, Geological Sciences, Ohio University.

Service and Committee Appointments at Ohio University

Department of Geological Sciences

- Online MS Program Coordinator, 2021-present
- Graduate Program Coordinator, 2017-present
- Geological Sciences Alumni Liaison, 2016-2018, 2020-present
- Promotion and Tenure Committee Chair, 2020-present
- Diversity and Inclusion Committee, 2020-present
- Geological Sciences Ad hoc Tenure Guideline Revision committee, 2017
- Geological Sciences Strategic Planning Working Group, co-Chair, 2017
- Geological Sciences Ad hoc Non-thesis Masters of Science degree committee, 2016-17
- Geological Sciences Ad hoc Learning Outcomes committee, 2015
- Sigma Gamma Epsilon Advisor, 2013-15
- Promotion and Tenure Committee, 2012-present
- Geology Club Advisor, 2011-13
- Department Colloquium Committee, Chair, 2008-09
- Ohio University Geological Sciences Alumni Research Grant Committee, Chair, 2007-13, 2015-16
- Department Library Coordinator, 2007-14

College of Arts and Sciences

- Faculty Learning Community, Evaluating Student Evaluations of Teaching, 2016-17
- Themes Steering Committee, 2014-16
- Ohio: Sense of Place Curricular Theme, Leader, 2014-16
- Knowing the Future Curricular Theme, Member, 2014-2018

Ohio University

- Ohio University Lab Group, 2020-2021
- Ohio University Student Research and Creative Activity Expo judge, 2017, 2019
- Ohio University Research Council Grant Committee, 2015-2018
- Glidden Visiting Professorship Selection Committee, 2015-2018
- Dean Evaluation Committee, 2014
- Ohio University Library Committee, 2011-14

Outreach and Professional Websites

- Hembree, D.I., 2007-17. Ichnology Research Lab. <http://www.ohio.edu/people/hembree/>
- Hembree, D.I., 2015-17. Continental Neoichnology Database. <http://www.continentalneoichnology.org/>

Publications

Journal Articles (Peer-Reviewed)

Thacker, H.A., **Hembree, D.I.**, 2021. Neoichnological study of burrowing darkling beetles (Coleoptera: Tenebrionidae) from larval to adult stages. *Ichnos*.

Hembree, D.I., McFadden, C.J., 2020. Analysis of climate and landscape change through the Pennsylvanian and Permian Monongahela and Dunkard Groups, Southeastern Ohio, USA. *Journal of Sedimentary Environments*, v. 5, p. 321-353.

Hembree, D.I., 2019. Burrows and ichnofabric produced by centipedes: modern and ancient examples. *PALAIOS*, v. 34, p. 468-489.

*Kogler, S.J., **Hembree, D.I.**, 2019. Influences of modern pedogenesis on paleoclimate estimates from Pennsylvanian and Permian paleosols, southeast Ohio. *Journal of Sedimentary Research*, v. 89, p. 227-241.

Hembree, D.I., *Carnes, J.L., 2018. Response of soils and soil ecosystems to the Pennsylvanian–Permian climate transition in the upper fluvial plain of the Dunkard Basin, southeastern Ohio, USA. *Geosciences*, v. 8 (203), p. 1-35.

Hembree, D.I., *Swaninger, E.S., 2018. Large *Camborygma* isp. in fluvial deposits of the Early Permian (Asselian) Dunkard Group, southeast Ohio, U.S.A. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 491, p. 137-151.

*Catena, A.M., **Hembree, D.I.**, Saylor, B.Z., Croft, D.A., 2017. Paleosol and ichnofossil evidence for significant Neotropical habitat variation during the late middle Miocene (Serravallian). *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 487, p. 381-398.

Hembree, D.I., 2017. Neoichnology of tarantulas (Araneae: Theraphosidae): recognition of spider burrows in the fossil record. *Palaeontologia Electronica* 20.3.45A: 1-30.

Hembree, D.I., Smith, J.J., Buynevich, I.V., Platt, B.F., 2017. Neoichnology of semiarid environments: soils and burrowing animals of the Sonoran Desert, Arizona, U.S.A. *PALAIOS*, v. 32, p. 620-638.

Hembree, D.I., *Bowen, J., 2017. Paleosols and ichnofossils of the Upper Pennsylvanian-Lower Permian Monongahela and Dunkard groups: a multi-proxy approach to unraveling complex variability in ancient terrestrial landscapes. *PALAIOS*, v. 32, p. 295-320.

Hembree, D.I., 2016. Using experimental neoichnology and quantitative analyses to improve the interpretation of continental trace fossils. *Ichnos*, v. 23, p. 262-297.

Hembree, D.I., *Blair, M.G., 2016. A paleopedological and ichnological approach to interpreting spatial and temporal variability in Early Permian fluvial deposits of the Lower Dunkard Group, West Virginia, U.S.A. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 454, p. 246-266.

*Catena, A.M., **Hembree, D.I.**, Saylor, B.Z., Anaya, F., Croft, D.A., 2016. Paleoenvironmental analysis of the Neotropical fossil mammal site of Cerdas, Bolivia (middle Miocene) based on ichnofossils and paleopedology. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v.459, p. 423-439.

Suess, B., Wisshak, M., Mapes, R., **Hembree, D.**, Landman, N., 2016. Microbial bioerosion of erratic sub-fossil *Nautilus* shells in a karstic cenote (Lifou, Loyalty Islands, New Caledonia). *Ichnos*, v. 23, 108-115.

*Johnson, L., **Hembree D.I.**, 2015. Understanding anuran burrows: neoichnology of the eastern spadefoot toads, *Scaphiopus holbrooki*. *Palaeontologia Electronica*, 18.2.43A: 1-29.

Suess, B., **Hembree, D.**, Wisshak, M., Mapes, R., Landman, N., 2015. Taphonomy of deep marine versus backshore collected *Nautilus macromphalus* conchs (New Caledonia). *PALAIOS*, v. 30, p. 503-513.

*Hils, J.M., **Hembree, D.I.**, 2015. Neoichnology of the burrowing spiders *Gorgyrella inermis* (Mygalomorphae: Idiopidae) and *Hogna lenta* (Araneomorphae: Lycosidae). *Palaeontologia Electronica*, 18.1.7A: 1-62.

Lignier, V., Mapes, R., **Hembree, D.**, Landman, N., Couchoud, I., Goiran, C., Folcher, E., Gunkel-Grillon, P., Manca, E., 2015. Le cenote d'Ani-e-Wee (Lifou, Nouvelle-Caledonie) et son gisement exceptionnel de *Nautilus macromphalus*. *Karstologia*, v. 61, p. 37-44.

Hembree, D.I., Mapes, R.H., Goiran, C., 2014. The impact of high energy storms on shallow water *Nautilus* (Cephalopoda) taphonomy, Lifou (Loyalty Islands). *PALAIOS*, v. 29, p. 348-362.

*Catena, A., **Hembree, D.I.**, 2014. Swimming through the substrate: the neoichnology of *Chalcides ocellatus* and biogenic structures of sand-swimming vertebrates. *Palaeontologia Electronica*, 17.3.37A: 1-19.

*Bowen, J., **Hembree, D.**, 2014. Neoichnology of two spirobolid millipedes: improving the understanding of the burrows of soil detritivores. *Palaeontologia Electronica*, 17.1.18A: 1-48.

Stigall, A.L., **Hembree, D.I.**, Gierlowski-Kordesch, E.H., Weismiller, H.C., 2014. Evidence for sexual mating system in a new spinicaudatan genus (Crustacea: "Conchostraca") from the Early Jurassic Kalkrand Basalt of Namibia. *Palaeontology*, v. 57, p. 127-140.

Landman, N., Mapes, R.H., Cochran, J.K., Lignier, V., **Hembree, D.I.**, Goiran, C., Folcher, E., Brunet, P., 2014. An unusual occurrence of *Nautilus macromphalus* in a cenote in the Loyalty Islands (New Caledonia). *PLoS ONE*, v. 9 (12), e113372 doi:10.1371/journal.pone.0113372.

Hembree, D.I., 2013. Neoichnology of the whip scorpion *Mastigoproctus giganteus*: complex burrows of predatory terrestrial arthropods. *PALAIOS*, v. 28, p. 141-162.

Hembree, D.I., *Johnson, L.M., *Tenwalde, R.W., 2012. Neoichnology of the desert scorpion *Hadrurus arizonensis*: burrows to biogenic cross lamination. *Palaeontologia Electronica*, 15. 1.10A: 1-34.

*Smilek, K.R., **Hembree, D.I.**, 2012. Neoichnology of the holothurian *Thyonella gemmata*. Open Paleontology Journal, v. 4, p. 1-10.

*Catena, A., **Hembree, D.I.**, 2012. Recognizing vertical and lateral variability in terrestrial landscapes: a case study from the paleosols of the Casselman Formation (Conemaugh Group), Southeast Ohio, U.S.A. Geosciences, v. 2, p. 178-202.

*Dzenowski, N., **Hembree, D.I.**, 2012. Examining local climate variability in the Late Pennsylvanian through paleosols: an example from the Lower Conemaugh Group of southeastern Ohio. Geosciences, v. 2, p. 260-276.

Hembree, D.I., Nadon, G., 2011. A paleopedologic and ichnologic perspective of the terrestrial Pennsylvanian landscape in the distal Appalachian basin, USA. Palaeogeography, Palaeoclimatology, Palaeoecology v. 312, p. 138-166.

Hembree, D.I., Nadon, G., King, R., 2011. Large, complex burrow systems from freshwater deposits of the Monongahela Group (Virgilian), southeast Ohio, USA. Palaeogeography, Palaeoclimatology, Palaeoecology v. 300, p. 128-137.

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*= *Student*

Invited University Colloquia and Public Lectures

Hembree, D.I., 2018, What made that? Interpretation of trace fossils through experimental neoichnology. Department of Earth, Environmental, and Planetary Sciences, Case Western Reserve University, Cleveland, Ohio.

Hembree, D.I., 2016, What made that? Interpretation of trace fossils through experimental neoichnology. Department of Earth and Environmental Sciences, University of Illinois at Chicago, Illinois.

Hembree, D.I., 2016. Open access publishing in the natural sciences. Open In Action: The Practicalities and Pitfalls, OHIO Libraries.

Hembree, D.I., 2015, The role of trace fossils in paleoenvironmental and paleoecological reconstructions. Paleoecology Symposium Research Workshop, Cleveland Museum of Natural History, Cleveland, Ohio.

Hembree, D.I., 2015, Late Paleozoic landscapes and ecosystems of southeast Ohio: insights from paleosols and ichnofossils. Department of Geology, University of Dayton, Dayton, Ohio.

Hembree, D.I., 2014, Exploring the unknown: the role of exploration science in geology and paleontology. Science on the Screen Series, Athena Theater, Ohio University

Hembree, D.I., 2013, What made that? Improving the interpretation of trace fossils through experimental neoichnology. Ohio University, Department of Geological Sciences, Fall Colloquium Series.

Hembree, D.I., 2011, The Secrets of Burrowing Biota. Science Cafe Series, Ohio University.

Hembree, D.I., 2010, Neoichnology of terrestrial burrowing organisms: the key to interpreting continental ichnofauna. Nanjing Institute of Geology and Palaeontology Colloquium, Chinese Academy of Sciences, Nanjing, China.

Hembree, D.I., 2010, Neoichnology of terrestrial arthropods: the key to interpreting Pennsylvanian Continental ichnofossils of the Appalachian Basin. Department of Geology and Environmental Science Colloquium, University of Akron, Akron, OH.

Hembree, D.I., 2006, The identification and interpretation of reptile trace fossils through modern studies. Ohio University, Department of Biological Sciences, Ecology and Evolutionary Biology Colloquium.

Hembree, D.I., 2005, The identification and interpretation of burrowing reptile ichnofossils through actualistic studies. Ohio University, Department of Geological Sciences, Fall Colloquium Series.

Hembree, D.I., Hasiotis, S.T., 2005, Variations in vertebrate trace fossil morphology. University of Kansas, Natural History Museum and Biodiversity Research Center, Panorama Society Lecture Series.

Hembree, D.I., Hasiotis, S.T., 2004, Traces of burrowing animals: methods for improving our understanding of biogenic structures and sediment mixing of terrestrial organisms. University of Kansas, Natural History Museum and Biodiversity Research Center, Panorama Society Lecture Series.