

Amanda Renee Falk
Assistant Professor of Biology
Centre College
600 West Walnut St.
Danville, KY 40422
859-238-5304
amanda.falk@centre.edu

EDUCATION

University of Kansas, Lawrence, KS

Ph.D. in Geology

2014

Dissertation: "Foot and hindlimb morphology, soft tissues, and tracemaking behaviors of Early Cretaceous birds from China and the Republic of Korea with a comparison to modern avian morphology and behavior"

Honors: Passed Oral Comprehensive Exam with Honors; Passed dissertation defense with Honors

Advisors: Larry D. Martin (deceased), David A. Burnham, Stephen T. Hasiotis

University of Kansas, Lawrence, KS

M.S. in Geology

2009

Thesis: "Interpreting behavior from Early Cretaceous bird tracks and the morphology of bird feet and trackways"

Advisors: Larry D. Martin, Stephen T. Hasiotis

Lake Superior State University, Sault Ste. Marie, MI

B.S. Honors in Biology

2007

Area of Concentration: Ornithology

Minor: Chemistry

Honors Thesis: "A history of the Chromo-helicase-DNA binding gene and a small experiment in eagle DNA."

TEACHING EXPERIENCE

Centre College, Danville, KY

2017-Present

Assistant Professor—"Ecology, Evolution, and Diversity"; "Paleontology"; "Big History"; "Vertebrate Morphology"; "Comparative Vertebrate Physiology"; "Natural History of the Vertebrates"; "Human Anatomy and Physiology I and II"

Developed syllabi and course materials, and created and administered exams and other forms of assessment for all of the above courses. Redesigned Comparative courses to include inquiry-based and collaborative learning laboratories.

Centre College, Danville, KY

2015-2017

Visiting Assistant Professor (Two-year, Visiting)—"Ecology, Evolution, and Diversity"; "Paleontology"; "Big History"; "Vertebrate Morphology"; "Comparative Vertebrate Physiology Lab"

Developed syllabi and course materials, and created and administered exams and other forms of assessment for all of the above courses. Worked closely with Comparative Vertebrate Physiology lecturer to unite lecture and lab material.

Southwestern Oklahoma State University, Weatherford, OK

2014-2015

Assistant Professor (One year, Temporary)—"Human Anatomy"; "Biological Concepts Lab"

Developed syllabus and worked with second Anatomy professor to organize and present both lecture and lab material to multiple sections of Human Anatomy,

dissected sheep brains and eyes, dissected cats, created and administered lecture exams and lab practicals; Worked with Biological Concepts Lab Coordinator and other faculty, presented labs in accordance with the department manual, created and administered quizzes and Lab Reports.

University of Kansas, Lawrence, KS

Lead Teaching Assistant – “Geology 103: Fundamentals of Geology Lab” **2013-2014**

Dealt with organization of class syllabus and schedule, handled field trip organization, ensured each lab was properly constructed and presented by each individual TA, and oversaw proper and fair administration of exams, quizzes, and in-class assignments.

Teaching Assistant – “Paleontology.” **2013**

Administered and graded exams in this joint Biology-Geology lecture course

Lecturer – “Higher Vertebrate Paleontology.” **2012**

Developed syllabus and overall course structure, wrote and proctored all exams and administered all grades.

Lab Instructor – “Paleontology Lab.” **2011, 2013**

Helped develop syllabus and overall course structure, and administered occasional lectures in a joint Biology-Geology course.

Lab Instructor – “Geology 103: Introduction to Geology Fundamentals Lab” **2010, 2013**

Taught lab/lecture combination for first-year majors and non-majors in geology, graded all labs, and administered all exams.

PUBLICATIONS AND PAPERS

- **Falk, A.R.**, Lamsdell, J. C., and Gong, E. 2021. Principal component analysis of avian hind limb and foot morphometrics and the relationship between ecology and phylogeny. *Paleobiology*, v. 47, p. 314-336.
 - Brewer, E. D. and **Falk, A. R.** 2020. Neoichnology: why should we care about peck marks and dust baths? *Ethology Ecology & Evolution*, DOI: 10.1080/03949370.2020.1769740.
 - O'Connor, J., **Falk, A. R.**, Wang, M., and Zhou, Z., 2020. First report of immature feathers in juvenile enantiornithines from the Early Cretaceous Jehol avifauna. *Vertebrata Palasiatica* v. 58(1), p. 24-44.
 - **Falk, A. R.**, O'Connor, J., Wang, M., & Zhou, Z. 2019. On the Preservation of the Beak in *Confuciusornis* (Aves: Pygostylia). *Diversity*, v. 11(11), p. 212
 - Congreve, C. R., **Falk, A. R.**, and Lamsdell, J. C., 2018, Biological hierarchies and the nature of extinction. *Biological Reviews*. v. 93, p. 811–826.
 - **Falk, A. R.**, Hasiotis, S. T., Gong, E., Lim, J.-D., and Brewer, E. D., 2017, A new experimental setup for studying avian neoichnology and the effects of grain size and moisture content on tracks: Trials using the domestic chicken (*Gallus gallus*). *Palaaios*, v. 32(11), p. 689-707.
 - Wang, X., Pittman, M., Zheng, X., Kaye, T. G., **Falk, A. R.**, Hartman, S. A., Xu, X., 2017, Basal paravian functional anatomy illuminated by the first high-detail body outline. *Nature Communications*, 8: 14576, doi: 10.1038/ncomms14576.
 - **Falk, A. R.**, Kaye, T. G., Zhou, Z., and Burnham, D. A., 2016, Laser fluorescence illuminates the soft tissues and life habits of the Early Cretaceous bird *Confuciusornis*. *PLOS One* <http://dx.doi.org/10.1371/journal.pone.0167284>
 - Gregory, A. L., Sears, B. R., Wooten, J. A., Camp, C. D., **Falk, A. R.**, O'Quin, K., and Pauley, T. K., 2016, Evolution of dentition in salamanders: relative roles of phylogeny and diet. *Biological Journal of the Linnean Society*, v. 119(4), p. 960-973.
 - Kaye, T. G., **Falk, A. R.**, Pittman, M., Sereno, P. C., Martin, L. D., Burnham, D. A., Gong, E., Xu, X., Wang, Y., 2015, Laser-Stimulated Fluorescence in Paleontology. *PLOS One*, 10(5): e0125923.
-

doi:10.1371/journal.pone.0125923

- Xing, L., Belvedere, M., Buckley, L., **Falk, A. R.**, Lockley, M. G., Klein, H., Nasrollah, A., Xianqiu, Z., Yonggang, T., 2014, First record of Paleogene bird tracks from China. *Palaeogeography, Palaeoclimatology, Palaeoecology* 404, p. 415-425.
 - **Falk, A. R.**, Lim, Jong-Deock, and Hasiotis, S. T., 2014, A behavioral analysis of fossil bird tracks from the Haman Formation (Republic of Korea) shows a nearly modern avian ecosystem. *Vertebrata Palasiatica*, v. 52(1), p. 129-152.
 - Xing, L., Lockley, M. G., and **Falk, A. R.**, 2013 First record of Cenozoic bird tracks from East Asia. *Ichnos*, v. 20(1), p. 19-23.
 - Gong, E., Martin, L. D., Burnham, D. A., **Falk, A. R.**, and Hou, L. H., 2012. A new species of *Microaptor* from the Jehol Biota of northeastern China. *Palaeoworld*, v. 21(2), p. 81-91.
 - **Falk, A. R.**, Martin, L. D., Hasiotis, S. T., 2011. A morphologic criterion to distinguish bird tracks. *Journal of Ornithology*, v. 152(3), p. 701-716.
 - **Falk, A. R.**, 2011. Tracking Mesozoic birds across the world. *Journal of Systematic Paleontology*, v. 9(1), pg. 85-90.
 - Burnham, D. A., Feduccia, A., Martin, L. D., and **Falk, A. R.**, 2011. Tree Climbing—A fundamental avian adaptation. *Journal of Systematic Paleontology*, v. 9(1), p. 103-107
 - **Falk, A. R.**, Hasiotis, S. T., Martin, L. D., 2010. Feeding traces associated with bird tracks from the Lower Cretaceous Haman Formation, South Korea. *Palaios*, v. 25, p. 730-741.
 - Alexander, D. E., Gong, E., Martin, L. D., Burnham, D. A. and **Falk, A. R.** 2010. Model tests of gliding with different hindwing configurations in the four-winged dromaeosaurid *Microaptor gui*. *Proceedings of the National Academy of Science*, v. 107(7), p. 2972–2976.
 - Gong, E., Martin, L. D., Burnham, D. A., and **Falk, A. R.** 2010. The birdlike raptor *Sinornithosaurus* was venomous. *Proceedings of the National Academy of Science*, v. 107(2), p. 766-768.
-

RESEARCH AND RELATED EXPERIENCE

Centre College, Danville, KY **2016-Present**

Undergraduate Research Mentor

Mentored undergraduate students in research using modern birds and fossils from Spring 2016 to present.

West Virginia University, Morgantown, WVA **2018**

Seminar speaker

Traveled to Morgantown, WV on Mar. 22 to give seminar talk as part of their Geology department colloquium series

Centre College, Danville, KY **2017-2018**

Birdwatching Club Faculty Advisor

Provided information and support to student members of the Birdwatching club

Duke University, Durham, NC **2016**

Seminar speaker

Traveled to Durham, NC on Mar. 25 to give a seminar talk as part of their Earth and Ocean Sciences seminar series

University of Kentucky, Lexington, KY **2016**

Seminar speaker

Traveled to Lexington, KY on Jan. 28 to give a lecture as part of their Earth and Environmental Sciences seminar series.

Southwestern Oklahoma State University, Weatherford, OK **2014-2015**

Curator of Vertebrate Collections

Began remediation and rehabilitation of small vertebrate collections as part of SWOSU's museum collection.

Carleton College, Carleton, MN **2013**

Seminar speaker

Traveled to Carleton College Feb. 18 to lecture as part of their Biology seminar series.

University of Kansas, Lawrence, KS **2012-2013**

Field research

Conducted observational field research on domesticated birds at local farms with IACUC permission.

Northeastern University, Shenyang, China **2011-2012**

Field and Museum study

Conducted museum research at multiple museums across northern China and, in the spring and summer of 2012, conducted multiple field trips to areas of northern China.

University of Kansas, Lawrence, KS **2007-2009**

Curatorial Assistant

Catalogued and accessioned specimens, prepared and preserved specimens as needed, and made casts and molds of specimens. Aided in manuscript preparation and submission when necessary.

UNIVERSITY AND COMMUNITY SERVICE

- **Centre College** Biology Search Committee **(Fall 2020-Spring 2021)**
 - **Centre College** Faculty Development Committee **(2020-present)**
 - **Centre College** Writing Committee **(2016-2019; 2020-present)**
 - **Centre College** Chinese Search Committee **(Fall 2019-Spring 2020)**
-

-
- **Center College** John C. Young Committee (**Fall 2019-Spring 2020**)
 - **Centre College** Biology Search Committee (**Fall 2018-Spring 2019**)
 - **Centre College** Biology Search Committee (**Fall 2017**)
 - **Centre College** Biology Program Assessment Subcommittee (**2017-present; chair summer 2020-present**)
 - **Centre College** College Council (**2017-2020**)
 - **Centre College** Off-Campus Programs Committee (**2017-2019**)
 - **Centre College Faculty Athletics Liaison** Field Hockey team (**2016-present**)
 - **Centre College Faculty Athletics Liaison** Swimming and Diving teams (**2015-present**)
-

ABSTRACTS FROM MEETINGS ATTENDED

- **Falk, A. R.**, 2018, Gliding Blind: Anchiornis, evolution, and changing avian hindlimb morphometrics. 2018 International Ornithological Congress, Vancouver, B.C. Canada, Aug. 18-26, 2018. (*Invited talk: co-symposium speaker*)
 - **Falk, A. R.** and Lamsdell, J. C., 2017, Analysis of modern and fossil avian hindlimbs suggests advanced ornithurine birds in the Early Cretaceous. American Ornithological Society Annual Meeting, Lansing, MI, USA, July 31-Aug 4, 2017.
 - **Falk, A. R.**, 2014, New insights into the life habits of *Confuciusornis*. American Ornithologists' Union Annual Meeting, Estes Park, CO, USA, Sep. 24-28, 2014. (*Invited talk*)
 - **Falk, A. R.**, 2013, The plumage of *Confuciusornis*: Primitive or modern? Society of Vertebrate Paleontology Annual Meeting, Los Angeles, CA, USA, Oct. 30-Nov. 2, 2013.
 - **Falk, A. R.**, and Hasiotis, S. T., 2013, A new experimental setup for testing the effects of media consistency on avian track morphology and behavior. Geological Society of America Annual Meeting, Denver, CO, USA, Oct. 27-30, 2013.
 - **Falk, A. R.**, 2013, Following in the footsteps of dinosaurs: ancient avian feeding behavior from the Haman Formation of South Korea. European Association of Vertebrate Paleontologists Annual Meeting, Villers-sur-Mer, France, June 10-14, 2013. (*Invited talk*)
 - **Falk, A. R.**, 2013, A simple answer to a complicated problem: A new method for collecting modern bird tracks. Society of Tertiary/Quaternary studies, Lawrence, KS, May 2013.
 - **Falk, A. R.** and Martin, L. D., 2011. Comparison of a Mesozoic avian ichnofauna with one from the Early Eocene of Wyoming, Transactions of the Kansas Academy of Science, v. 114(1), p. 157.
 - **Falk, A. R.**, Hasiotis, S. T., 2010. First report of specific bird feeding traces—probe and peck marks—from the Lower Cretaceous Haman Formation, South Korea. Geological Society of America Abstracts with Programs, vol. 42(5) p. 98.
 - **Falk, A. R.**, Martin, L. D. and Burnham, D. A., 2009. Tracking Cretaceous birds across the world. Journal of Vertebrate Paleontology v. 29(3 supp), p. 93A.
 - **Falk, A. R.** and Martin, L.D., 2009. Determining Mesozoic bird tracks with behavioral criteria. Transactions of the Kansas Academy of Science, v. 112(1), p. 139.
 - **Falk, A. R.**, 2008. Credibility of “unknown theropod tracks” with avian characteristics from the Late Triassic. Transactions of the Kansas Academy of Sciences, v. 111(1), p. 170-171.
-

GRANTS AND AWARDS

- Haworth Award for Outstanding PhD (University of Kansas, Department of Geology) **2014**
- Roger Kaesler Memorial Scholarship (University of Kansas, Dept. of Geology scholarship) **2013**
- 3rd Place, PhD Student oral presentation competition, Kansas Academy of Science Annual Meeting **2013**
- Critical Language Enhancement Award (part of Fulbright Grant) **2011**
- Fulbright Full Student Grant **2011-2012**
- 2nd Place, PhD Student oral presentation competition, Kansas Academy of Science Annual Meeting **2010**
- Foreign Language Area Scholarship **2009-2010**
- 3rd Place, Masters Student oral presentation Competition, Kansas Academy of Science Annual Meeting **2009**
- Geological Society of America Small Grant Award **2008**

LANGUAGES

- English – native language
 - Chinese- Advanced level; speak, read, and write with advanced competence.
-

MEMBERSHIPS

- American Ornithological Society
- Wilson Ornithological Society