

**Curriculum Vitae**  
**Julia Allison Clarke**

**Current Appointments:**

(2018-) John A. Wilson Professor in Vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin.

(2018-) HHMI Professor (Howard Hughes Medical Institute)

(2014-) Ecology and Evolutionary Biology, Graduate Faculty, The University of Texas at Austin

(2008-) Research Associate, Dept. of Geology, Field Museum of Natural History

(2004-) Research Associate, Div. of Paleontology, American Museum of Natural History

**Previous Appointments:**

(2016-2018) Professor and John A. Wilson Centennial Fellow in Vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin.

(2009-2016) Associate Professor and John A. Wilson Centennial Fellow in Vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin.

(2004-2009) Assistant Professor, Dept. of Marine, Earth, and Atmospheric Sciences, North Carolina State University

(2004- 2009) Research Curator, Dept. of Paleontology, North Carolina Museum of Natural Sciences

(2002-2004) Frick Postdoctoral Fellow, Div. of Paleontology, American Museum of Natural History

(1995-1996) Fulbright Research Fellow, United States Department of State, "Naturalizing the Nation: Scientific Travel Writing and Nationalism in 19th Century Argentina."

**Education:**

2002 Ph.D. Yale University (Department of Geology and Geophysics)

1995 B.A. Brown University (Geology-Biology & Comparative Literature)

•*magna cum laude*

**Honors:**

Royal Society of Biology, Fellow, (FRSB) (2018)

American Ornithological Society, Elective Member, an honorary membership category that recognizes contributions to ornithology (2017).

Outstanding Service Award, Jackson School of Geoscience (2017, shared with 7 others)

Knebel Distinguished Graduate Teaching Award, Jackson School of Geosciences (2017)

Humboldt Research Prize, a career achievement award from the Humboldt Foundation (2016)

Provost's Teaching Fellow, University of Texas at Austin (2016)

Outstanding Research Award, Jackson School of Geoscience (2013)

Knebel Distinguished Undergraduate Teaching Award, Jackson School of Geosciences (2012)

Gigapan Science Outreach Fellow, Fine Foundation/NASA/Carnegie Mellon Robotics (2010)

Outstanding Faculty Engaged in Outreach and Extension, North Carolina State University (2008)

G.G. Simpson Award, Yale University, best paper among recent alumni or current graduate students concerning evolution and the fossil record (2006)

Argentine Fulbright Commission, 50<sup>th</sup> anniversary volume, distinguished alumna (2006).

Orville Prize, Yale University Department of Geology and Geophysics, best dissertation (2001)

G.G. Simpson Award, Yale University (2001)

Hutchinson Prize Fellowship, Yale Institute for Biospheric Studies (2000)

Estwing Hammer Prize, Yale University, outstanding research in Geology (2000)

Henry Gardiner Ferguson Fellowship in Geology, Yale University (1999)

National Science Foundation, Graduate Student Fellowship (1997-2000)

Samuel T. Arnold Fellowship, Brown University, for undergraduate achievement and an original research project (\$15,000; declined to accept Fulbright Grant; 1995).

## Research Grants and Fellowships:

2018-2023 **Howard Hughes Medical Institute**, Grant #GT10473 Professor Program. “Teaching Curiosity to question through an integrated curriculum focused on tiered mentorship and experiential learning. **\$1,000,000 over 5 years (Clarke sole PI)**. “The program empowers and raises the visibility of scientists with high research credibility as exemplars of and advocates for excellence in science education.”

2014-2018(NCE) **Gordon and Betty Moore Foundation**. Grant 4498. The evolution of avian vocalization: an integrative approach utilizing the fossil record, physiology of vocal behavior, and comparative transcriptomics (**Clarke PI [Lead] \$740,000+65,000 supplement in 2017**, with T. Reide, F. Goller, and C. Tabin, subawards).

2015 University of Texas, Faculty Research Grant. Fall Semester.

2014-2018 **NSF EAR 1355292 Collaborative Research: Phylogenomics of palaeognathous birds and understanding the evolution of flightlessness. (PI \$376,610 to Clarke**, with Davis, Clamp, Edwards [Lead PI], A. Baker; total award \$950,000).

2013-2017 **NSF EAR 1251922 Collaborative Research: The mechanisms and evolution of plumage color in birds and other dinosaurs. (PI \$164,003; with M. Shawkey [Lead PI] and L. D’Alba: total award \$350,000).**

2012-2016 **NSF OPP ANT-1141820 “Collaborative Research: Late Cretaceous-Paleogene Vertebrates from Antarctica: Implications for Paleobiogeography, Paleoenvironment, and Extinction in Polar Gondwana. (PI: \$70,872 to Clarke** with M. Lamanna [Lead PI], R. Mcphee, K Claesson, and P. O’Connor; Total award ~\$280,000).

2010-2014 **NSF DEB 0949897 Collaborative Research: Wings to Flippers - Phylogenetics, character acquisition, and feather biomechanics in the evolution of wing-propelled diving (PI [Lead]: \$241.279; with K. Middleton, D. Ksepka; Total award ~\$470,000).**NCE 2013-Oct. 2014.

2011 Madrono Ranch, Environmental Writing Fellowship.

2009-2010 **National Geographic Society, Committee for Research and Exploration, Interpreting the color of feathers in fossil birds and dinosaurs. Senior Personnel with D. Briggs, J. Vinther (Richard Prum: PI, \$15,000).**

2009-2010 **Royal Society International Joint Project: Chinese feathered dinosaurs and the evolution of bipedalism. Senior personnel (J. Hutchinson, PI: \$~12,000).**

2007-2011 **NSF EAR 0938199 (0719758)\_Collaborative Research: Integrated study of an exceptional avifauna from the Eocene Green River Formation: new data on avian evolution and taphonomy (PI [Lead], \$150,000)** with D. Briggs, L. Grande and R. Prum (Total award: ~\$270,000). REU supplement in 2009 (\$10,000). NCE: 2010-2011.

2007-2010 **NSF OPP 0927341 New approaches and rapid assessment of key avian fossils from the Cretaceous of Antarctica (SGER; Lead PI, \$34,800 with Judd Case, CoI)**

- 2007-2009 NSF OISE supplement to above OPP award for minority student participation in research on Mesozoic ornithurine birds in China (**Lead PI, \$7,000**).
- 2007- 2008 National Geographic Society, Expedition Council, New Insight into Penguin Evolution and Biogeography (**PI, \$20,000**)
- 2006- 2007 NSF OISE US-Peru Planning Visit: Collaborative Research on Penguin Evolution and Biogeography 0621574 (**PI, \$4,900**).
- 2006-2008 National Center for Evolutionary Synthesis: CLOCKWORK: a triangle working group redefining interfaces for molecular biology and paleontology (**PI, ~\$10,000**).
- 2005-2006 National Geographic Society, Exploration Fund (Co-investigator, Zhou, Clarke, Zhang): \$30,000 (including \$10,000 cost sharing, IVPP; \$5,000 NCMNS) for fieldwork in Gansu Province, PRC.
- 2004-2006 NSF OPP Morphological study of a key avian fossil from Antarctica: new data provided by X-ray computed tomography and histology (SGER; **PI, \$13,617**).
- 2002 AAAS WISC Program: Collaborative Research in China (**PI, \$4,990**)
- 2002-2007 NSF ATOL "Collaborative Research: Archosaur Phylogeny - A Total Evidence Approach at Fine Taxonomic Levels" Senior Personnel (Norell PI: \$1,733,737.00).
- 2002 American Museum of Natural History, Frick Fund
- 2000 Yale University, Council on East Asia Studies
- 1999, 2000 American Museum of Natural History, Chapman Grant
- 1999 Geological Society of America
- 1999 Explorers Club, Exploration Fund Grant
- 1999 Yale University, Enders Fellowship
- 1999 Field Museum of Natural History, Visiting Scientist Fellowship
- 1998 American Museum of Natural History, Research Internship
- 1994 Ford Foundation, Travel Grant
- 1993, 1994 Brown University, Undergraduate Teaching/ Research Assistantships
- 1993, 1995 Brown University, "CAP" Fellowships for research in-aid of curricular development.

### **Technical Publications and Manuscripts in Press:**

*85 total since 2000; 10 Nature or Science, 5 Proceedings of the Royal Society/Bioletters, 3 PNAS/Nature Communications, 2 Systematic Biology 2 Evolution, 3 100+ page monographs. H index: 30; total citations: 3618; 12 papers with 100+ cites each, 6 of these as first author. Source: Google Citations.*

85. \*Smith. N.A. \*DeBee, A. and **J. A. Clarke** 2018. An alphataxonomic and phylogenetic assessment of Zygodactylidae (Aves, Neognathae) from the Eocene Green River Formation of Wyoming, USA. *PeerJ*. [10.7717/peerj.4950](https://doi.org/10.7717/peerj.4950) 1-46 pp.

84. \*Li, Z. F.Yan, R. A. Ketcham, M. W. Colbert, and **J. A. Clarke**. 2018. Mass-transfer based modeling to explain iodine staining. *Paleoworld*, Special volume.

83. \*Li Z., Z. Zhou. and **J.A. Clarke**. 2018. Convergent evolution of a mobile and protrusible bony tongue in flighted dinosaurs and pterosaurs. *Plos One*. <https://doi.org/10.1371/journal.pone.0198078>
82. \*Kulp, F. L. D'Alba, Shawkey M. **Clarke. J.A.** 2018. Insights into feather microstructure and coloration in penguins. *The Auk* 135: 777-787. <https://doi.org/10.1642/AUK-18-2.1>
81. \*Li, Z. **J. A. Clarke**, C.M. Eliason, T. A. Stidham, T. Deng, and Z. Zhou. 2018. Vocal specialization through tracheal elongation in an extinct Miocene pheasant from China. *Nature Scientific Reports*. (2018) 8:8099 | DOI:10.1038/s41598-018-26178-x
80. ^Wang, X. Y. Hu, J. Liu, J. Huang, and **J. A. Clarke**. 2018. The earliest evidence for a supraorbial salt gland in dinosaurs in new Early Cretaceous ornithurines. *Nature Scientific Reports*. (2018) 8:5969 | DOI:10.1038/s41598-018-22412-8
79. Hu, D. **J. A. Clarke**, ^C. M. Eliason, R Qiu, Q. Li, M. Shawkey, C. Zhao, L. D'Alba, J. Jiang, X. Xu. 2018. A bony-crested Jurassic dinosaur with iridescent plumage highlights complexity in early paravian evolution. *Nature Communications*. Co-corresponding author with Hu and Xu. <http://rdcu.be/EKSI>
78. ^Eliason, C.E., \*Hudson L., \*Watts, T., \*Garza H, and **J.A. Clarke**. 2017. Exceptional preservation and the fossil record of tetrapod integument. *Proceedings of the Royal Society Series B*. 284: 20170556. <http://dx.doi.org/10.1098/rspb.2017.0556> Co-corresponding author. \*Undergraduate students
77. \*J. A. Peteya, **J. A. Clarke**, Q. Li, K-Q Gao, M.D. Shawkey. 2017. The plumage and coloration of a basal enantiornithine bird from the Cretaceous of China. *Paleontology*.60:1-3.
76. **Clarke, J. A.**, S.Chatterjee, \*Z. Li, T.Riede, F. Agnolin, F.Goller, M. P. Isasi, D.R. Martinioni, F.J. Mussel, F.E. Novas 2016. A fossil avian vocal organ from the Mesozoic. *Nature*. 538: 502-505. DOI: 10.1038/nature19852.

**New York Times and other media outlets. BBC film News and Views feature, and Story behind the Science, Nature Ecology and Evolution.**

75. \*Bono, R. K., Clarke, J.A., Tarduno, J. A., & Brinkman, D. 2016. A Large Ornithurine Bird (*Tingmiatornis arctica*) from the Turonian High Arctic: Climatic and Evolutionary Implications. *Scientific Reports*, 6. 38876 doi:10.1038/srep38876

**Featured in New York Times.**

- 74.\*Li Z., R. A. Ketcham, F. Yan, J. A. Maisano and **J. A. Clarke**. 2016. Comparison and evaluation of the effectiveness of two approaches of diffusible iodine-based contrast-enhanced X-ray computed tomography (diceCT) for avian cranial material. *Journal of Experimental Biology*. Online first. 11 August 2016 DOI: 10.1002/jez.b.22692
73. Riede T, ^Eliason C, Miller EH, Goller F, **Clarke J.A.** 2016. Coos, booms and hoots: The evolution of closed beak vocalization in birds. *Evolution* 70:1734–1746. Online first June 27.

**Science widely featured in media outlets (NPR, All Things Considered etc.). Top 100 science stories in Discovery.**

72. \*<sup>^</sup>Li, Z, **Clarke J.A** Zhou, Z., and Deng T. 2016. A new Old World Vulture (Aves: Accipitridae) from the late Miocene of China sheds light on Neogene shifts in the diversity and distribution of Gyptinae. *The Auk* 133: 615-625.

71. <sup>^</sup>Nesbitt, S.J. and **Clarke, J.A.**, 2016. The Anatomy and Taxonomy of the Exquisitely Preserved Green River Formation (Early Eocene) Lithornithids (Aves) and the Relationships of Lithornithidae. *Bulletin of the American Museum of Natural History*, pp.1-91.

**90 pages printed. Featured in media: Audubon etc.**

70. Huang J, <sup>^</sup>Wang X., Hu Y, Liu, J. \*J. Peterya and **J. A. Clarke**. 2016. A new ornithurine bird from the Early Cretaceous of China provides new evidence for the timing and pattern of evolution in the avian skull. *PeerJ*. DOI 10.7717/peerj.1765

69. <sup>^</sup>Elliason, C. Shawkey, M and **J. Clarke**. 2016. Shifts in the melanin-based color system of birds. *Evolution* 70: 445-455.

68. \*Proffitt, JV, **JA Clarke**, P Scofield. 2016. Novel insights into early neutoranatomical evolution in penguins from the oldest penguin brain endocast. *Journal of Anatomy*. DOI: 10.1111/joa.12447

67. P. M. Gignac, N. J. Kley, **J. A. Clarke**, M. W. Colbert, A. C. Morhardt, D. Cerio, I. N. Cost, P. G. Cox, J. D. Daza, C. M. Early, M. S. Echols, R. M. Henkelman, A. N. Herdina, C.M. Holliday, \*Z. Li, K. Mahlow, S. Merchant, J. Müller, C. P. Orsbon, Daniel J. Paluh, M L. Thies, H.P. Tsai, L. Witmer. 2016. Diffusible iodine-based contrast-enhanced computed tomography (diceCT): an emerging tool for rapid, high-resolution, 3-D imaging of metazoan soft tissues. *Journal of Anatomy*. 228:889-909; doi/10.1111/joa.12449

**Publication from an NSF sponsored workshop I co-organized (alphabetical after first 4 authors).**

66. \* Li Z., **Clarke J. A.**, Ketcham R. A., Colbert M. W, and F. Yan. 2015. The efficacy and mechanism of enhanced contrast X-ray Computed Tomography utilizing iodine for large specimens. *BMC Physiol*. 2015; 15: 5. doi: 10.1186/s12899-015-0019-3

65. <sup>^</sup>Wang, X and **J.A. Clarke**. 2015. The evolution of avian wing shape and a previously unrecognized importance for covert feathers. *Proceedings of the Royal Society, Series B. Corresponding author*. 282: 20151935. DOI: 10.1098/rspb.2015.1935

64. Balanoff A., Bever. G., M. W. Colbert, B-A S. Bhullar, **J. A. Clarke**, F. Degrange, D. Field, P.M. Gignac, <sup>^</sup>D.T. Ksepka, R. Ridgely, \*N. A. Smith, \*C. Torres, S. Walsh, and L. Witmer. 2015. Best Practices for Digitally Constructing Endocranial Casts: Examples from Birds and their Dinosaurian Relatives. *Journal of Anatomy*. Online first 9/27/2015

63. \*Li Z. and **J. A. Clarke**. 2015. The craniolingual morphology of waterfowl (Aves, Anseriformes) and its relationship with feeding mode revealed through enhanced-contrast X-ray computed tomography and 2D morphometrics. *Evolutionary Biology*.

62. \*Li, Z. and **J.A. Clarke**. 2015. New insight into the anatomy of the hyolingual apparatus of *Alligator mississippiensis* and implications for reconstructing feeding in extinct archosaurs. *Journal of Anatomy*. *Journal of Anatomy*, 227: 45–61. doi: 10.1111/joa.12320
61. \*Smith, N. A, Chiappe, L, **Clarke J.A.** Edwards, S, Nesbitt S, Norell M, Stidham, T, Turner A, van Tuinen, M, Vinther J, Xu, X. 2015. Rhetoric vs. reality: A commentary on “Bird Origins Anew” by A. Feduccia. *The Auk*. 132:467-480.
60. Ksepka DT and **Clarke JA**. 2015. Phylogenetic vetted and stratigraphically constrained fossil calibrations for Aves. *Paleontologica Electronica*. 18.3FC (2015): 1-25.
59. Lowe. C. **J.A. Clarke**. A. Baker, D. Haussler. S. Edwards. 2015. Feather development genes and most associated regulatory innovation predate the origin of Dinosauria. *Molecular Biology and Evolution*. 32.1:23-28. \* *co-corresponding author* with Lowe and Edwards.
58. **Clarke J.A.** and \*Boyd, C. 2015. Methods for the Quantitative Comparison of Molecular Estimates of Clade Age and the Fossil Record. *Systematic Biology*. 64:25-41.
57. \*Smith N.A. and **Clarke J.A.** 2014. Systematics and Evolution of the Pan-Alcidae (Aves, Charadriiformes) *Journal of Avian Biology*. Online first. DOI: 10.1111/jav.00487
56. ^Wang X. and **Clarke, J.A.** 2014. Phylogeny and forelimb disparity in waterbirds. *Evolution*. *Online first DOI: 10.1111/evo.12486. Corresponding author. Invited to become Associate Editor after this publication – declined.*
55. \*Li, Z. Zhou, Z. Deng, Li, **Clarke, JA**. 2014. A falconid from the late Miocene of China yields further evidence of shifts in late Neogene steppe communities. *The Auk*. 131: 335-350.
54. Roberts, E. M., Lamanna, M., **Clarke, J. A.**, Sertich, J., Meng, J, Gorscak, E., O’Connor, P. Claeson, K. and R. MacPhee, 2014. Latest Cretaceous And ?Earliest Paleogene Paleoecosystems Of Vega Island, James Ross Basin, Antarctica: Stratigraphy, Fossils, And Implications. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 402, 55-72.
53. Li Q., **JA Clarke**, KQ Gao, CF Zhou, Q. Meng, D. Li, L. D’Alba, M. D. Shawkey 2014. Melanosome evolution indicates a key physiological shift within feathered dinosaurs. *co-corresponding author*. *Nature* 507: 350–353 doi:10.1038/nature12973
52. \*Li Z. Z. Zhou, **J.A. Clarke**. 2014. A new specimen of the basal enantiornithine *Bobaiornis* from China and the inference of feeding ecology in Mesozoic birds. *Journal of Paleontology*. 88: 99-108. doi:10.1666/13-052.
51. \*Smith, N.A. and **J.A. Clarke**. 2014. Osteological histology of the Pan-Alcidae (Aves, Charadriiformes): Correlates of wing-propelled diving and flightlessness. *Anatomical Record*. (online first, DOI 10.1002/ar.22841.2013) Print: 297:188-199. (**Cover**)
50. **Clarke, J.A.** 2013. Taxonomy in a Phylogenetic Framework. *In*, *The Princeton Guide to Evolution*. Princeton University Press. 880pp. Ed. J. Losos. (*Invited*)
49. **Clarke, J.A.** 2013. Perspective: Feathers Before Flight. *Science*. 340.6133 (2013): 690-692. (*Invited*).

48. Ksepka, D, **J.A. Clarke**, S.Nesbitt, \*F. Kulp L. Grande. 2013. Fossil evidence of wing shape in a stem relative of swifts and hummingbirds (Aves, Pan-Apodiformes). Proceedings of the Royal Society Series B 280: doi: 10.1098/rspb.2013.0580.

47. \*Smith N.D, L. Grande, and **J.A. Clarke**. 2013. A new species of Threskiornithidae-like bird (Aves, Ciconiiformes) from the Green River Formation (Eocene) of Wyoming. Journal of Vertebrate Paleontology. 33: 363-381.

46. \*Smith N.A. and **J.A. Clarke**. 2012. Endocranial anatomy of the Charadriiformes: sensory system variation and the evolution of wing propelled diving. PLoS ONE 7(11): e49584. doi:10.1371/journal.pone.0049584

45. Li., Q Gao, KQ Q. Meng. **Clarke J.A.** MD Shawkey, L D'Alba, M Ellison, R. Pei, M.A. Norell, and J. Vinther. 2012. A new reconstruction of *Microaptor* and the evolution of iridescent plumage color. Science. 335: 1215-1219. DOI: 10.1126/science.1213780 Corresponding author.

**Highlighted in New York Times, International Touring Exhibit- Beijing Museum of Natural History and other media outlets.**

44. Ksepka, D.T. and **J.A. Clarke**. 2012. A new stem parrot from the Green River Formation and the complex evolution of the grasping foot in Pan-Psittaciformes. Journal of Vertebrate Paleontology. 32: 395-406.

43. \*Smith N.A. and **J. A. Clarke**. 2011. Alpha-taxonomic revision of fossil and extant Razorbills (Aves, Alcidae): a combined morphometric and phylogenetic approach. Ornithological Monographs, 72:1-61. DOI: 10.1525/om.2011.72.1.1 (cover)

42. \*Lawver, D. \*Aj deBee, **J.A. Clarke** and G. Rougier. 2011. A new enantiornithine bird from the Upper Cretaceous La Colonia Formation of Patagonia, Argentina. Annals of the Carnegie Museum 80: 35-42. *Corresponding author* (undergraduate student lead).

41. ^Nesbitt, S. D. Ksepka and **J.A. Clarke**. 2011. Podargiform affinities of the enigmatic *Fluvioviridavis platyrhamphus* and the early diversification of Strisores ("Caprimulgiformes" + Apodiformes). PLoS ONE 6(11): e26350. doi:10.1371/journal.pone.0026350

40. Ksepka, D. T., **J.A. Clarke** and L. Grande. 2011. Stem parrots (Aves, Halcyornithidae) from the Green River Formation and a combined phylogeny of Pan-Psittaciformes. Journal of Paleontology, 85:835-852 (cover).

39. \*Eddy D. and **J. A. Clarke**. 2011. New Information on the cranial anatomy of *Acrocanthosaurus atokensis* and implications for the phylogeny of Allosauroidea (Dinosauria: Theropoda). PLoS One, 6(3): e17932. doi:10.1371/journal.pone.0017932. 55 printed pages.

38. L.D'Alba, V. Saranathan, **J.A. Clarke**, J. A. Vinther, R.O. Prum and M.D. Shawkey. 2011. Colour-producing  $\beta$ -keratin nanofibres in blue penguin (*Eudyptula minor*) feathers. Biology Letters. Online First Feb. 9. doi 10.1098/rsbl.2010.1163.

37. ^Nesbitt S., **J.A. Clarke**, A. Turner, M. Norell. 2011. A small, enigmatic alvarezsaurid from the eastern Gobi Desert offers insight into evolutionary patterns in the Alvarezsauroidea. *Journal of Vertebrate Paleontology* **31** (1): 144-153.

36. Mayr, G., H. Alvarenga and **J.A. Clarke**. 2011. An *Elaphrocnemus*-like landbird and other avian remains from the late Paleocene of Brazil. *Acta Palaeontologica Polonica*. 56: 679-684.

35. **Clarke J.A.**, D.T. Ksepka, R. Salas-Gismondi, A.J. Altamirano, M.D. Shawkey, L.D'Alba, J. Vinther, Thomas J. DeVries, P. Baby. 2010. Fossil evidence for evolution of the shape and color of penguin feathers. *Science* **330**: 954-957. (*Cover*).

#### **Cover Article**

**Highlighted in e.g., New York Times, NPR Science Friday, BBC, CNN, Guardian, Times UK, Washington Post. LA Times, National Geographic Magazine, Nature News, NSF; Top new species discoveries and science of 2010 lists: Time Magazine, Discover Magazine Featured in a permanent exhibit in Peru's oldest national park (Reserva Nacional de Paracas) and on 2014 Peruvian postage stamps.**

34. ^Ksepka, D.T. and **J.A. Clarke**. 2010. New Fossil Mousebird (Aves: Coliiformes) with feather preservation provides key insight into the ecological diversity of an Eocene North American avifauna. *Zoological Journal of the Linnaean Society* **160**, 685–706.

33. \*Boyd, C.A., T.P. Cleland, N. L. Marrero, **J. A. Clarke**. 2010. A Standardized Method for Assessing the Stratigraphic Congruence of Polytomous Phylogenies. *Cladistics* **27**: 52-60.

32. ^Ksepka, D.T. and **J.A. Clarke**. 2010. The basal penguin (Aves: Sphenisciformes) *Perudyptes devriesi* and a phylogenetic evaluation of the penguin fossil record. *Bulletin of the American Museum of Natural History*. **337**: 1-77.

31. Li Q, KQ Gao, J. Vinther, M Shawkey, **J.A. Clarke**, L. d'Alba, Meng, D. Briggs, R. Prum. 2010. Plumage colour patterns in an extinct dinosaur. *Science*. Online Science Express: Feb. 6. Print: Vol. **327**: 1369-1372.

**Highlighted in New York Times, NPR Science Friday, BBC, CNN, Guardian, Times UK, Washington Post. LA Times, National Geographic Magazine, Nature News, and National Geographic Television. Top science of 2010 lists: Discover Magazine**

30. ^Ksepka, D.T. and **J.A. Clarke**. 2010. *Primobucco mcgrewi* (Aves: Coracii) from the Eocene Green River Formation: new anatomical data and the earliest definitive record of stem rollers. *Journal of Vertebrate Paleontology* **30**: 215-225.

29. Vinther J., D.E.G. Briggs, **J. A. Clarke**, G. Mayr, R.O. Prum. 2010. Structural coloration in a fossil feather. *Biology Letters*. **6**: 128-131.

28. **Clarke, J.A.**, D.T., Ksepka, A. Smith\* and M. Norell. 2009. Combined phylogenetic analysis of a new North American fossil species confirms widespread Eocene distribution for stem rollers (Aves, Coracii). *Zoological Journal of the Linnaean Society* **157**: 586–611.



27. ^Ksepka D.T. and **Clarke J.A.** 2009. The affinities of *Palaeospiza bella* and a phylogeny of mousebirds (Aves, Coliiformes). *The Auk* 126: 245-259 (**Cover**).
26. \*Boyd, C.A., Brown, C. Sheetz, and **Clarke, J.A.** 2009. Taxonomic revision of the basal neornithischian taxa *Thecelosaurus* and *Bugenasaura*. *Journal of Vertebrate Paleontology* 29: 758-770.
25. Dingus L., A. Garrido G. Scott L. Chiappe, **J. A. Clarke**, J.G. Schmitt. 2009. The litho-, bio- and magnetostratigraphy of titanosaurian nesting sites in the Anacleto Formation at Auca Mahuevo (Campanian, Neuquen Province, Argentina). In, *Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne* (ed. L.B. Albright III). Flagstaff: Museum of Northern Arizona. 237-258 pp.
24. **Clarke, J. A.** and K. Middleton. 2008. Mosaicism, modules, and the evolution of birds: results from a Bayesian approach to the study of morphological evolution using discrete character data. *Systematic Biology*, 57: 185-201.
23. Zhou, Z. **Clarke J.A.** and F. Zhang. 2008. Insight into diversity, body size, and morphological evolution from an exceptionally preserved Early Cretaceous enantiornithine bird. *Journal of Anatomy*, 212: 565–577 (**Cover**).
22. ^Ksepka, D.T., **Clarke J.A.**, DeVries, T., and M. Urbina. 2008. Osteology of *Icadyptes salasi*, a giant penguin from the Eocene of Peru. *Journal of Anatomy* 213: 131–147.
21. Dayrat, B., Cantino P., **Clarke, J. A.** and K. deQuieroz. 2008. Species names in the PhyloCode: The Approach Adopted by the International Society for Phylogenetic Nomenclature, *Systematic Biology*, 57: 507 -514. (Author order alphabetical after first author.)
20. **Clarke, J.A.**, D.T., Ksepka, M. Stucchi, M. Urbina, N. Giannini, S. Bertelli, Y.Narváez. and C. Boyd\*. 2007. Paleogene equatorial penguins challenge the proposed relationship between biogeography, diversity, and Cenozoic climate change. *Proceedings of the National Academy of Sciences, USA* 104:11545-11550.
- Featured: in NPR Science Friday, CBC, VOA, BBC 4 programs including World Service, CNN, Guardian, Times UK, Washington Post. LA Times, National Geographic Magazine, Nature News, and other outlets.**
19. Turner, A, D. Pol, **J.A. Clarke**, G. Erickson, and M.A. Norell. 2007. A basal dromaeosaurid and size evolution preceding avian flight. *Science*. 317:1378-1381.
- Highlighted in CNN, Guardian, Times UK, Washington Post. LA Times, and other outlets.**
18. \*Smith, N. A., Olson, S., and **J.A. Clarke**. 2007. First Atlantic Record of the Puffin *Cerorhinca* (Aves, Alcidae) from the Pliocene of North Carolina. *Journal of Vertebrate Paleontology* 27:1039-1042.
17. **Clarke J.A.**, and K.M Middleton. 2006. Primer: Bird Evolution. *Current Biology* 16:350-354. (*Invited*)

16. **Clarke, J.A.**, Z. Zhou, and F. Zhang. 2006. Insight into the evolution of avian flight from a new clade of Early Cretaceous ornithurines from China and the morphology of *Yixianornis grabaui*. *Journal of Anatomy* 208: 287-308. *(Cover)*

15. **Clarke, J.A.**, M.A. Norell and D. Dashzeveg. 2005. New avian remains from the Eocene of Mongolia and the phylogenetic position of the Eogruidae (Aves, Gruoidea). *American Museum Novitates*. 3494: 1-17.

14. **Clarke, J. A.**, C., Tambussi, J., Noriega, G., Erickson, and R. Ketcham. 2005. First definitive fossil evidence for the extant avian radiation in the Cretaceous. *Nature* 433: 305-308.

**Highlighted in Scientific America, BBC, CNN, SF Chronicle, Guardian, Times UK, Washington Post. LA Times, National Geographic Magazine, Nature News, and other outlets.**

13. Zhou, Z, **J.A. Clarke**, F. Zhang and O Wings. 2004. Gastroliths in *Yanornis*: an indication of the earliest radical diet-switching and gizzard plasticity in the lineage leading to living birds? *Naturwissenschaften* 91:571-574.

12. **Clarke, J.A.** 2004. Morphology, Phylogenetic Taxonomy, and Systematics of *Ichthyornis* and *Apatornis* (Avialae: Ornithurae). *Bulletin of the American Museum of Natural History* 286: 1–179.

11. **Clarke, J.A.** and M.A. Norell. 2004. New avialan remains from the Late Cretaceous of Mongolia and a review of the known avifauna of the Nemegt Formation. *American Museum Novitates*. 3447:1-12.

10. **Clarke J.A.**, E. Olivero, and P. Puerta. 2003. Description of the earliest fossil penguin from South America and first Paleogene vertebrate locality reported from Tierra del Fuego. *American Museum Novitates* 3423: 1-18.

9. Mayr, G. & **Clarke, J.A.** 2003. The deep divergences of neornithine birds: a phylogenetic analysis of morphological characters. *Cladistics* 19: 527-553.

8. **Clarke, J.A.** and M.A. Norell. 2002. The morphology and phylogenetic position of *Apsaravis ukhaana* from the Late Cretaceous of Mongolia. *American Museum Novitates*. 3387:1-46.

7. Zhou, Z., **Clarke, J.A.** and F. Zhang. 2002. *Archaeoraptor's* better half. *Nature*. 420: 285.

6. **Clarke J.A.** and L.M. Chiappe. 2001. A new carinate bird from the Late Cretaceous of Patagonia (Argentina). *American Museum Novitates*. 3323: 1- 22.

5. **Clarke J.A.** and M.A. Norell. 2001. Palaeoecology (communications arising): fossils and avian evolution. *Nature*. 414: 508.

4. Cracraft, J. and **J.A. Clarke**. 2001. The basal clades of modern birds. *In*, *New perspectives on the origin and early evolution of birds: proceedings of the international symposium in honor of John H. Ostrom*. Peabody Mus. Nat. Hist., Yale Univ., 143-156.

3. Norell, M.A. and **J.A. Clarke\***. 2001. Fossil that fills a critical gap in avian evolution. *Nature*. 409: 181-184. (\**corresponding author*)

2. Dingus, L., **Clarke, J.A.**, Scott, G.R., Swisher, C., Chiappe, L.M., and R. Coria. 2000. Stratigraphy and magnetostratigraphic/faunal constraints for the age of sauropod embryo-bearing rocks in the Neuquén Group (Late Cretaceous, Neuquén Province, Argentina). *American Museum Novitates*. 3290: 1-11.

1. Chiappe, L., Dingus, L., Jackson, F., Grellet-Tinner, G., Coria, R., **Clarke, J.A.**, Garrido, A., and D. Loope. 2000. Sauropod eggs and embryos from the Late Cretaceous of Patagonia: First International Symposium on Dinosaur Eggs and Babies [Isona: Sept.21- 24, 1999]: Extended Abstracts, 23-29.

#### **Other Publications:**

**Clarke J.A.** 2018. What is the last question? The 2018 Annual Edge Question. John Brockman Ed.. Online first.

**Clarke J.A.** 2017. Review of *Birds of Stone: Chinese Avian Fossils from the Age of Dinosaurs* Luis M. Chiappe and Meng Qingjin, 2016. Johns Hopkins University Press, Baltimore, *J. Field Ornithol.*, 88: 208–209. doi:10.1111/jof.12202

**Clarke J.A.** 2015. “Machine thought will never have more than a metaphorical relationship with human thought” in “What to thinking about Machines that Think. The 2015 Annual Edge Question. John Brockman. Harper Perennial. 576pp.

**Clarke J.A.** 2014. “Urvogel” in “What scientific idea is ready for retirement”. The 2014 Annual Edge Question. Published in the *This Idea Must Die*. Ed., John Brockman. New York, Harper Perennial.592pp. (*Invited*). *My contribution to this volume was highlighted in New Scientist 3/2015*.

**Clarke J.A.** 2010. Review of G. Mayr’s *Paleogene Birds*. *Wilson Journal of Ornithology*.

**Clarke J.A.** 2003. Review of Chiappe and Witmer: *Mesozoic birds: above the heads of dinosaurs*. *Journal of Paleontology*. 77: 822-823

**Clarke J.A.** 2002. The Morphology and Taxonomy of *Ichthyornis* Marsh and the Phylogenetic Relationships of Basal Ornithurae (535pp.). Doctoral Diss., Yale University.

**Clarke, J.A.** 1998. Evolution’s flight of fancy: the feathered dinosaurs of Liaoning. *Yale China Review* 6(2): 3-6.

#### **Invited Workshop Participation: (see Professional Service for those I organized)**

2017 Harvard University, MCZ, NSF BCOn. Next Generation Natural History Collections (Nov.)

2017 Gothenburg Centre for Advanced Studies in Science and Technology: The role of museums in modern evolutionary biology: symposium and working group, Gothenburg, Sweden

2014 Celebrating (NESCent): 10 years of the National Center for Evolutionary Synthesis. Invited as former Operations Committee member.

2014 National Center for Evolutionary Synthesis (NESCent) Catalysis Working Group- Developing Best Practices for Teaching Evolution

2014 NESCent Catalysis Working Group- A Deeper Look into the Avian Brain: Using Modern Imaging to Unlock Ancient Endocasts

2013 NESCent Catalysis Working Group – Methods for the Study of Macroevolution: Combining Fossils and Phylogenies

2006 Fossil and Molecular Estimates of Divergence (FAMED) NESCent Working Group (Oakley, PI) invited participant and liaison from NESCent funded CLOCKWORK working group on which I was PI.

2005 National Center for Evolutionary Synthesis (NESCent). Metadata Modeling Workshop.

### **Invited Technical Lectures:**

- 2019 Carnegie Institution for Science, Embryology Department (March)
- 2019 National Museum of Natural History, Smithsonian Institution, Deep Time Institute, Symposium on Evolutionary Innovation (March)
- 2018 Yunnan University, Paleobiology Group, Kunming, PRC
- 2018 Chinese Academy of Sciences, Institute of Earth Environment, Xi'an, PRC
- 2018 Northwestern University, Xi'an, PRC
- 2018 Southern Methodist University, Department of Geological Sciences
- 2018 University of Kansas, Biosciences
- 2018 Carnegie Lectures in Science, Washington DC
- 2018 Baylor University, Geological Sciences
- 2017 Harvard University, MCZ + NSF BCoN. Next Generation Natural History Collections
- 2017 University of California at Berkeley, Integrative Biology
- 2017 Gothenburg Centre for Advanced Studies in Science and Technology: The role of museums in modern evolutionary biology symposium and working group, Gothenburg, Sweden
- 2017 Freie Universität, Berlin Institute of Biology, Animal Behavior Group. Berlin.
- 2017 University of Texas at Austin; Engineering, Acoustics Seminar
- 2017 AAA/Experimental Biology Annual Meeting, invited symposium keynote.
- 2017 Louisiana State University, Biology Department.
- 2016 National Association of Science Writers, Science Keynote.
- 2016 Paleontological Museum of Liaoning & Shenyang Normal University
- 2015 Brown University, Department of Earth, Environmental and Planetary Sciences
- 2015 University of Texas, Astrophysics, Symposium Honoring Frank Bash, Closing night speaker.
- 2015 Museum für Naturkunde, Berlin
- 2015 British Antarctic Survey, Cambridge
- 2015 Nanjing University, School of Earth Sciences and Engineering
- 2015 NSF sponsored symposium: Critical Transitions in the History of Life US-China Workshop, Field Museum of Natural History and the University of Chicago
- 2015 University of Texas at Austin, Geological Sciences, Deford Technical Sessions
- 2014 Brown University, Geological Sciences, Research Symposium Honoring Peter Schultz
- 2014 Society of Vertebrate Paleontology, invited talk in symposium "Putting Fossils on Trees" on tip and molecular divergence dating.
- 2014 Keynote, International Ornithological Congress, Symposium-Evolution and behavior of waterbird aerial and aquatic flight.
- 2014 Hokkaido University. Lecture for "Outstanding questions in the evolution of wing propelled diving" Workshop
- 2014 Northeast Ohio Medical University, Department of Anatomy and Neurobiology.
- 2014 University of Texas, Department of Ecology and Evolutionary Biology (Appointment Talk for Graduate Faculty)
- 2013 Denver Museum of Natural History
- 2013 Opening Plenary Lecture, American Ornithologists' Union Meetings
- 2013 Smithsonian Institution, National Museum of Natural History,
- 2012 University of Texas, Center for Brain, Behavior, and Evolution
- 2012 Society of Vertebrate Paleontology, invited symposium participation "Phylogenetic and Comparative Paleobiology: New Quantitative Approaches to the Study of Vertebrate Macroevolution"
- 2012 Peking University, Department of Geosciences
- 2012 University of Chicago, Committee on Evolutionary Biology
- 2012 American Museum of Natural History, Richard Gilder Graduate School

2012 St. Edwards University, Department of Biology  
 2011 Cornell University, Laboratory of Ornithology  
 2010 Keynote, "Paleontological evidence for the radiation of extant birds" Symposium, International Ornithological Congress, Brazil.  
 2010 Yale University, Department of Geology and Geophysics, Global Change Seminar.  
 2009 Yale University, Department of Geology and Geophysics "Future Challenges in the Earth Sciences" Symposium.  
 2008 Harvard University, Earth and Planetary Sciences  
 2008 University of Texas, Austin, Jackson School of Geosciences  
 2008 National Center for Evolutionary Synthesis, Durham, NC  
 2008 NSF Sponsored Philosophy of Biology Workshop: "Edges and Boundaries," University of Utah  
 2007 Field Museum of Natural History  
 2007 George Washington University, Biological Sciences  
 2007 University of North Carolina, Chapel Hill, Department of Geosciences  
 2007 North Carolina State University, College of Veterinary Medicine  
 2006 "Species Names in Phylogenetic Nomenclature" at ISPN II, June 29 - July 2, 2006, Yale University.  
 2005 Duke University, Biological Sciences  
 2004 University of Texas, Austin, Department of Geology  
 2004 University of Iowa, Department of Geology  
 2004 Duke University, Biological Anthropology and Anatomy  
 2003 Brown University, Biological Sciences  
 2003 University of Kansas, Museum of Natural History  
 2003 North Carolina State University  
 2002 University of Berlin & Humboldt Museum; funded by German Science Foundation (DFG)  
 2002 Paleontological Institute of the RAS, Moscow, Russia  
 2002 Institute of Vertebrate Paleontology and Paleoanthropology, Beijing, China  
 2000 Field Museum of Natural History

### University Service:

*2013-2018* Committee Service:

*University Level:* 2017-2018 Provost's working group on experiential learning. Gender equity committee  
 2016-2017 Provost's Teaching Fellow, Steering Committee, First Year Representative. 2014-2015 Task Force to develop a UT Faculty Innovation Center, Committee co-Chair.

*Jackson School of Geoscience:* Associate Dean of Research, Search Committee; Carbon Climate, Geobiology Group, Executive Committee. Diversity and Inclusion Committee.

*Department of Geological Sciences:* Undergraduate Curriculum Committee, Strategic Planning Committee; Faculty Evaluation Committee; Space committee; Vertebrate Paleontology Lab, Executive Committee.

*Other activities:* Transfer student orientation speaker 2013, 2014; Geoscience Leadership Organization of Women Faculty Sponsor 2014-2016; 2014 JSG Advisory Council Spring Meeting, Lecture 2014 Environmental Science Institute, UT Fundraising Dinner, Lecture; 2014 Provost's Campus Conversations Faculty Symposium on undergraduate research and teaching. 2014 UGS speaker. 2015 Assistance to the Admissions and Support Committee. Provost's Faculty Campus Conversations, facilitator. 2016 UGS Speaker. Glow Banquet keynote speaker.

*2012-2013-* JSG Committee Service: Paleontology Discipline Leader; Search Committee Chair, Invertebrate Paleontology Hire.

*2009-2012* Committee Service, Ad hoc JSG Associate Dean of Academic Affairs Search Committee; Information Technology Committee; Seminar Committee; Lundelius and Lowe Prize Committees; Climate; Ad hoc PhD Candidacy Committee.

2004-2008 *Departmental Committees, NCSU*: Search Committee, Climate Dynamics, 2007-2008; Committee on Service Assignments, 2006-2008; IT Committee, 2004-2008; Geology Curriculum Committee, 2004-2006; Ad-hoc Department Head Evaluation Survey Committee, 2006; Graduate Program Review Committee, 2005-2006; Search Committee, Meteorology, 2004-2005; Cavaroc Scholarship Committee, 2004.

### **Museum Service:**

2009-2014 *Texas Memorial Museum: collection building*: ~400 extant avian specimens through salvage and international exchange (New Zealand, Brazil), casts of Peruvian and Antarctic fossil specimens, Green River Formation fish and bat specimens. Student assistantship providing graduate training in collection management and extant specimen preparation.

2004-2008 *North Carolina Museum of Natural Sciences, Service*: Permanent collection building: instrumental in museum accessioning first major dinosaur specimens since 2000; Collaborative work/student training to improve extant avian skeletal collection.

### **Editorial Service**

2018- Associate Editor, *Evolution*  
2017- Associate Editor, *Science Advances*  
2017- Associate Editor, *Proceeding of the Royal Society, Series B., Biological Sciences*  
2013- Associate Editor, *Paleobiology*  
2012- Editor-in-Chief, *Journal of Anatomy*  
2011-2013 Associate Editor, *Zoologischer Anzeiger*  
2005-2012 Associate Editor *Journal of Anatomy*

### **Other Professional Service:**

2017- *Nominations Committee*, Paleontological Society  
2016 *Co-convener* of an ICVM (International Congress of Vertebrate Morphology) Symposium on enhanced contrast CT methods.  
2015 *Co-convener* of NSF sponsored international workshop on enhanced contrast CT methods held at UT.  
2015-2017 Cohen Prize Committee, Society of Vertebrate Paleontology  
2014 National Academies of Science (NAS) "Town hall" on priorities and challenges on the future of the US Antarctic Program  
2014 *Symposium Convener*, International Ornithological Congress, with Yutaka Watanuki "Evolution and behavior of aerial and aquatic flight"  
2013 *Invited Symposium Convener*, American Ornithologists' Union: "Assembly of the North American Avifauna"  
2011-2014 *Media Response Team*, Society of Vertebrate Paleontology  
2010 *Invited Symposium Co-Convener*, "Paleontological evidence for the radiation of extant birds" International Ornithological Congress, Brazil.  
2010--2011 *President*, International Society of Phylogenetic Nomenclature, Past President 2012-2013 ex office member of the Executive Committee.  
2009--2017 *Romer Prize Committee*, Society of Vertebrate Paleontology  
2008-2011 *Executive Committee, Member-At-Large*, Society of Vertebrate Paleontology  
2007-2008 *Operations Committee, Member-At-Large*, National Center for Evolutionary Synthesis (NESCent.org)  
2003--2008 *Predoctoral Fellowship Committee*, Society of Vertebrate Paleontology  
2004--2006 *Chair*, Predoctoral Fellowship Committee, Society of Vertebrate Paleontology  
2004 Sigma Xi Grants in Aid of Research, Committee

- 2004-2006 *Governing Council, Member-At-Large, International Society of Phylogenetic Nomenclature (ISPN)*
- 2000 *Co-convenor, "Missing Data- Practical Problems and Theoretical Issues" Symposium of the Society of Vertebrate Paleontology*
- 1999 *Organizing committee member and moderator, "New Perspectives on the Origin and Early Evolution of Birds: an International Symposium in Honor of John H. Ostrom," Yale Peabody Museum and Yale University Department of Geology and Geophysics*
- Reviews for: Nature, Science, Proceedings of the National Academy of Science, USA, Proceedings of the Royal Society, London, Trends in Ecology and Evolutionary Biology, Systematic Biology, Current Biology, Evolution, Evolution and Development, Geophysical Research Letters, Journal of Biomedical Informatics, Oxford University Press, University of California Press and Cambridge University Press, Cladistics, Journal of Vertebrate Paleontology, Journal of Paleontology, Paleontological Research, Naturwissenschaften, American Museum of Natural History Novitates, Canadian Journal of Earth Sciences, Paläontologische Zeitschrift, Journal of Systematics and Evolutionary Research.*

NSF Panelist: (BIO) NSF Referee: Systematics (BIO), Paleobiology (EAR), and Polar Programs (OPP). Smithsonian Institution Personnel Review, External Referee. French Polar Programs Grant Review; CONICET, Argentine Research Council, Grant Review. NERC Referee, UK: Fellows Program. National Geographic Society, Exploration Fund Referee.

**Exhibits, Media, Public Programs and Other Service:**

- 2018 PBS/NOVA production on the evolution of birds (featured scientist)
- 2017 BBC Documentary Program on T Rex. (consultant and featured scientist)
- 2017 High Desert Museum, Public Program, Bend, Oregon (Nov.)
- 2017 Science on Screen event at the Bullock Museum with Austin Film Society Sponsored by the Alfred P. Sloan Society.
- 2016 NSF sponsored Undergraduate Futures Keynote speaker SSB/SSE Diversity Awards.
- 2016 HHMI Teacher Workshop and Lecture at the combined Society for the Study of Evolution/Society of Systematic Biologists meeting (SSE/SSB)
- 2016 Evolution Film Fest. Great Transitions Featured Film Q and A at the combined Society for the Study of Evolution/Society of Systematic Biologists meeting (SSE/SSB)
- 2016 ALLELE (Alabama's Lectures on Life's Evolution) series at the University of Alabama (April). "Now in its eighth year, the ALLELE (Alabama Lectures on Life's Evolution) seminar series is a specialized group of talks on all things evolution ... The series brings to campus influential scientists, scholars, and authors from universities, museums, and research labs throughout North America." (April) <http://www.as.ua.edu/home/exploring-evolution/>
- 2016 100th UT Environmental Science Institute Hot Science, Cool Talks Anniversary Lecture for 1000+ people from the Austin community
- 2016 Local public lecture for ~300 people on dinosaur color as part of "Nerd Night ATX"
- 2015 Astronomy on Tap, ATX, public lecture on the K/Pg boundary (Austin)
- 2015 Evolution Outreach Program for the Nature Science Gallery (Austin)
- 2015 AMSCUE (American Association for Microbiology) Q&A Program associated with HHMI film on the origin of birds.
- 2015 National Science Teachers Association Meeting, presentation and workshop for teachers associated with screening of the new HHMI movie.
- 2014 Howard Hughes Medical Institute Biointeractive: Great Transitions program. Featured Scientist/Host and Consultant. Educational Film on the Evolution of Birds distributed to 5,000+ classrooms.

- 2014 Sky HD/3D: Conquest of the skies; 3D IMAX David Attenborough Program, consulting on dinosaur reconstructions.
- 2014 Museum at Prairiefire, a new natural history museum in Overland Park, KS partnered with the AMNH, featured scientist in permanent exhibit, exhibit consulting.
- 2013 Dallas Paleontological Society, public lecture
- 2013 Witte Museum, San Antonio, public lecture
- 2012 Denver Museum of Natural History
- 2012-- Cornell Lab of Ornithology consulting on "Great Mural of Avian Evolution"
- 2012 Travis County Audubon Society, Austin: public lecture
- 2011-- UT Undergraduate Geoscience Leadership Organization of Women, faculty sponsor
- 2011 UT Environmental Science Institute: Hot Science, Cool Talks lecture for ~1000 attendees-- curricular materials distributed to Texas math and science teachers.
- 2011 Paleontological Society, Austin: public lecture
- 2010 Texas Memorial Museum Darwin Day: public lecture.
- 2010 Witte Museum in San Antonio, advisor on dinosaur exhibition.
- 2010 IMAX 3D dinosaur movie, consulting.
- 2009-2010 National Geographic Television program, "Dinomorphosis" Featured Scientist
- 2008 Field Museum of Natural History, outreach about NSF work on Eocene birds for public "In the Field" magazine and for "Evolving Earth" a new permanent exhibit.
- 2008 WISE (Women in Science and Engineering) North Carolina State University, invited lecture
- 2007-2009 Science Advisor, Durham Museum of Life and Science, permanent dinosaur exhibit
- 2002-2008 Scientific Advisory Committee, for the internationally touring dinosaur, "Dinosaurs, ancient fossils new discoveries." (AMNH and partners). Public program development and lectures associated with the exhibit at the North Carolina Museum of Natural Sciences.
- 2002-2007 IMAX Movie "Dinosaurs Alive" Science Advisory Committee and featured scientist
- 2007 NOVA program "Four Wing Dinosaur". Science Advisor and featured scientist,
- 2007 Tennessee Aquarium and Discovery Center, Program for "Girls Inc."
- 2006 Science Advisor and featured scientist, BBC/Discovery program
- 2006 Catawba Science Center, Hickory NC, "Dinosaur Days", Featured Lecture
- 2006 Piedmont Bird Club, Public Lecture
- 2006 WISE (Women in Science and Engineering) Faculty Panelist, College of Physical and Mathematical Sciences, North Carolina State University
- 2005 Career Explorations in Science & Engineering Program, NCSU Science House, Seminar for rising 12th grade North Carolina students to spend two weeks discovering scientific research and engineering.
- 2005 Women of the Society of Vertebrate Paleontology (WSVP), Panelist, 2005.
- 2005 Schliele Museum (Smithsonian affiliate, Gastonia, NC) Fossil Fair, Invited/featured speaker
- 2005 Expanding Your Horizons program for 7th grade girls, workshop leader.
- 2005 Durham Technical Community College The Science Faculty 2004-2005 Seminar Series, April 2005 "Birds Among Dinosaurs".
- 2004 UNC-TV(PBS) Documentary: "North Carolina's Natural Treasures"
- 2003 North Carolina Fossil Fair, Invited/featured speaker
- 2003 Hudson River Audubon Society, lecture: The dinosaur-bird connection
- 1999 "Chinese Feathered Dinosaurs" exhibit, Yale Peabody Museum of Natural History  
*consulted on exhibit copy and design*
- 1997-2002 Yale Peabody Museum of Natural History, Public Education Fellow
- 1992-1995 One of twelve founding mentor/teachers in a pioneer pre-college enrichment program for inner-city high-school students



## Research Mentorship Boldface: current

### Postdoctoral Researchers:

**Lucas Legendre (Sept.-2018)** PhD Pierre and Marie Curie University

**Nicholas Crouch (Sept. 2017-)** PhD University of Illinois at Chicago.

Chad Eliason (Sept 2014- Dec 2016) PhD University of Akron

Now: Interdisciplinary postdoctoral researcher, Field Museum of Natural History.

Zhiheng Li (Sept 2015- Sept 2016) University Continuing Fellowship in 2014. Smithsonian Graduate Research Fellowship in 2012.

Now. Associate Professor, Chinese Academy of Sciences, Key Laboratory Institute for Vertebrate Paleontology and Paleoanthropology, Beijing

Xia Wang (July 2013- March 2016) PhD, University of Dublin, IR

Now: Research Assistant Professor, Jinan University

N. Adam Smith (May 2011-Aug. 2011) PhD, University of Texas.

Now: Assistant Curator of the Campbell Geology Museum, Clemson University

Sterling Nesbitt (Sept. 2009- Sept. 2010) PhD Columbia University

Now: Assistant Professor, Virginia Tech University

Daniel Ksepka (Sept. 2007-Dec. 2008) PhD Columbia University

Now: Head Curator of Science, Bruce Museum, Greenwich CT.

### Graduate Students:

#### *Primary Advisor:*

**Hans Bilger (PhD 2018-)** EEB (co-advised) NSF Graduate Research Fellowship, DAAD Fellowship

**Grace Musser (PhD 2017-)** NSF Graduate Research Fellowship

**Sarah Davis (PhD 2016-)** NSF Graduate Research Fellowship

**Chris Torres (PhD 2014-)** EEB (co-advised). Competitive EEB Research Startup Grant.

Lauren English (PhD 2018) JSG Fellowship recipient.

James Proffitt (PhD 2018 NSF Graduate Research Fellowship, Paleontological Society Grant, UT, Whitney Endowed Presidential Scholarship.

Now: Aug. 2017: Postdoctoral Fellow/Anatomy Lecturer, University of Missouri

Zhiheng Li (PhD, 2015) University Continuing Fellowship in 2014. Smithsonian Graduate Research Fellowship in 2012.

Now. Associate Professor, Chinese Academy of Sciences, Institute for Vertebrate Paleontology and Paleoanthropology.

Katherine Browne (MS 2014)

Felicia Kulp (MS 2014) JSG Fellowship recipient. JSG student poster competition winner (MS level)

Now: Employed as a biochemist.

A.J. DeBee (MS UT 2012) NC State competitive recruitment fellowship.

Now: Washington State, Department of Labor and Industries.

Clint Boyd (PhD UT 2012)

*"Taxonomic revision of latest Cretaceous North American basal neornithischian taxa and a phylogenetic analysis of basal ornithischian relationships"*

Now: State Paleontologist of North Dakota

N. Adam Smith (PhD UT 2011)

*"Systematics and evolution of extinct and extant Pan-Alcidae (Aves Charadriiformes): Combined phylogenetic analyses, divergence estimation and paleoclimatic interactions"*

Now: Curator of the Campbell Geology Museum, Clemson University,  
Adjunct Faculty School of Forestry and the Environment.

Previous: Field Museum of Natural History, Postdoctoral Fellow and NESCent postdoctoral fellow.

Drew Eddy (MS NCSU, 2008)

**Now:** Graduate Geophysicist at BHP Billiton; UT Exploration Geophysics, PhD 2014.

*Committee Member:*

Will Gelnaw UT Paleontology (PhD, 2018)  
Adam Marsh UT Paleontology (MS 2013, PhD, 2018)  
Jennifer Peterya, University of Akron (PhD, 2018)  
Kelsey Stinson UT Paleontology (MS 2015)  
Rachel Simon UT Paleontology (MS 2013)  
Bill Parker UT Paleontology (PhD 2014)  
Ashley Latimer UT Paleontology (MS 2014)  
Robert Burroughs UT Paleontology (MS 2013)  
Natasha Vitek UT Paleontology (MS 2013)  
Michelle Stocker UT Paleontology (PhD, 2013)  
Nathan Smith, University of Chicago (PhD, 2011)  
Jeremy Green, MEAS, NCSU (PhD, 2009)  
Matt Bertone, Entomology, NCSU (PhD, 2008)  
Daniel Ksepka, Columbia University (PhD, 2007)  
Nina Triche, University of Texas, Austin (PhD, 2007)

*Examining Committee Member:* (PhD)

Zhiguang Xue, UT JSG 2015  
Brian Keith Lohman UT Biology 2013  
Bud Davis UT JSG Geology 2013  
Nicolas Huerta, UT JSG 2011  
April Wright UT Biology 2010  
Patrick Stinson UT Biology 2010  
Ying Sun, UT JSG 2009

**Undergraduate Students:**

Hector Garza: (2014-2016) UT Multiple projects *Geoforce* student.  
Presentation at GSA 2016, coauthor two abstracts and a paper  
Jessica Valdes, McNair Scholars Program Fall 2014- 2016. *Geoforce* & <http://mcnairscholars.com/>  
Thesis research on melanin based coloration in extant birds. presentations SACNAS and National McNair Scholars meeting., NSF REU Ethiopia,  
Leslie Jordan: *Geoforce* student, (2015-2016) UT SEM imaging of bird feathers  
Adele Anderson: (2016) Brown University  
Undergraduate Visiting Summer Scholar, project:humming bird vocalization  
Ho Kwan Tang, (2015) Mount Holyoke College,  
Undergraduate Visiting Summer Scholar, Feather anatomy  
**Now:** PhD Student, Paleontology, Yale University  
Jenny Le (2016-) Avian vocalization  
Emily Roberts, (2014-2015) UT Elephant bird and ostrich fossil records. Student in Anthropology  
Victor Gonzalez, (2014) Turtle vocalization  
Felicia Moran (2014), limb lengths in waterbirds  
**Now:** Geologist, Luxe Energy, Austin  
Mitchell Reigler  
**Now.** M.S. program, Paleontology, Virginia Tech University

Leah Hudson 2014-2016. UT  
 Research project. "Exceptional Preservation through time". Paper and 2 abstracts.  
**Now:** MD Anderson Cancer Center, research data coordinator, Stem Cell Transplant Department

Taylor Watts 2013-2016 UT  
 Research project. "Exceptional Preservation through time"  
 coauthor manuscript and 2 abstracts.  
**Now:** Geologist- Luxe Energy, Austin

Rachel Egan 2013-2014, UT  
 Research project. Paleocene Penguins from New Zealand.

Jennifer Millard Spring-Summer 2014. Waterbird hind limb proportions.

Abigail Black Spring 2014. Research project for course credit on basal bird evolution.  
**Now:** Geologist, Conoco Phillips

Nicole Kurka UT Spring 2012- 2014. Honors thesis supervision. Finished in 2014. Presentation at SICB meeting. Austin Geological Society Award. Endowed presidential scholarship  
**Now:** Geologist, Schlumberger Oil and gas industry

Josh Swisher UT Fall 2012, Spring and Summer 2013  
**Now:** Geologist, Oil and Gas industry

Julie Fryman UT Fall 2011- 2013.  
**Now:** Pasadena Humane Society, previous: Peace Corp

Grace Self UT Spring-Summer 2012 **Now:** research with C. Bell, U.T Austin

Krystal Heibel UT Spring-Summer 2012  
**Now:** Geoscience PhD student, Oklahoma State University

Sara Cabral UT Spring-Summer 2012  
 Geoscience major as part of the McNair Scholars program (was Radio Television Film major before my class).

Regina Manion UT Spring 2012  
**Now:** Teacher, Uplift Education

Geoffrey Britt UT Spring 2012

Katie Browne: UT Fall 2009, Spring- Summer 2010, Fall 2010, Spring 2011  
 Became: Geoscience MS Student UT Austin,

Mary Martha Kidd: UT Spring-Summer 2010, Fall 2010, Spring 2011  
**Now:** UT Law student

Rania Eldam: UT Spring- Summer 2010, Fall 2010. Honors student with J. Barnes and now PhD student, Colorado School of Mines

Alma Colmenero UT, Spring 2010

Chris Torres, Spring- Summer 2007, 2008, NCSU Undergraduate Research Fellow;  
 2 months work at UT in Fall 2009 sponsored by an NSF REU supplement to Clarke.  
 MS Student, UNCW, **Now:** PhD student UT Biology.

Daniel Lavwer, Spring- Summer 2007, 2008, NCSU Undergraduate Research Fellow;  
 2 months work in Fall 2009 sponsored by an NSF REU supplement to Clarke.  
**Now:** PhD 2016 from Montana State University

Adrian LeCesne Summer 2007, Fall 2008  
 Yale University minority student funded on NSF Supplement for research in China  
**Now:** Natural Resources Law, Brownstein, Hyatt, Farber Schreck

Zack Boles Spring 2007. NCSU  
**Now:** PhD 216 Student, Paleontology Drexel University

Brandon Smith, Spring-Summer 2007, NCSU Undergraduate Research Fellow

Phoebe Wang, Fall 2007 NCSU Honors contract project in art and paleontology  
**Now:** Graphic designer, Toom Boom Animation

Lindsay Wittington, Spring 2006, NCSU  
Kelly Best, Spring 2005- Fall 2006, NCSU Undergraduate Research Fellow  
Kaitlin Strickland 2005- Fall 2006. NCSU  
Now: VP, Communications iMedicare

### **Course Development and Teaching:**

*Research Methods, Data analysis and visualization: 2017* "From Curiosity to Question". A 27 person blended framework for independent inquiry with graduate and undergraduate students. Funded by the Provost's office.

*Life through Time: An introduction to paleontology and historical geology for majors.* (~80 students). Fall 2011, 2012, 2013, 2014, 2016

*Systematic Fundamentals, Paleontological Questions.* A graduate seminar on morphology-based systematics, philosophical issues of the character and methods for the study of morphological evolution using discrete characters (~10 students). Spring 2010, 2012, Fall 2013

*Avian Anatomy,* Hands on specimen based course focused on project based learning. (5-10 undergraduate and graduate students). Fall, 2013, 2014.

*The Age of Dinosaurs.* A large enrollment (150-200 students) non-majors course co-taught with T. Rowe. Fall 2009, 2010

*Expedition Methods: from Grantsmanship to Logistics.* A graduate seminar (8 Students) Fall 2009. A grant writing and logistics course focused on international collaboration.

Other teaching/course development:

*Harvard University,* Guest lecture in S. Edwards seminar on dinosaurs. 2015.

*School of Architecture UT "Living Color: Architecture, Culture, Art, Light, And Science"* Undergraduate Signature Course. Guest lectures: 2010, 2012, 2014

*UTeach program.* Co-taught intensive summer course (paleontology module) for Texas math and science teachers (MA program). 2009, 2010.

*Undergraduate research mentorship:* In Spring 2015, I supervised 8 undergraduates, and 6 meet with me as a group on a bi-weekly basis for two-hours/course format. This work informed development of a new experiential learning/writing flag course focused on project-based learning. All of the students are writing papers, conducting peer review, and most will continue their projects this summer or fall. These research hours are for a grade. The flags for these courses were approved in January/February 2016.

*North Carolina State University: 2004-2009*

*Dinosaurs,* large enrollment course used for recruitment of majors. co-taught with M. Schweitzer

*Morphological Evolution and Systematics* (upper division undergraduates and graduate students)

*Anatomy and Physiology of Dinosaurs (including birds)* (Upper division undergraduates and graduate students) co-taught with M. Schweitzer

*Deep Time, Diversity, and Systematics* (upper division undergraduates and graduate students).

*Vertebrate Paleontology: Methods and Theory* (undergraduates and graduate students) co-taught with M. Schweitzer.

### **Fieldwork:**

2017- 2018	Chile, Magallanes Province, Yunnan and Gansu, PRC.
2011, 2016	Antarctica, James Ross Archipelago, Cretaceous-NSF funded.
2006—present	Peru, Paleogene, Pisco Basin, Ica Province. National Geographic Society and NSF funded.
2009, 2011	New Zealand, Chatham Islands, Cretaceous-Paleogene; NSF funded.
2000-2010	Mongolia, Cretaceous & Paleogene AMNH/MAS (8 seasons); PI: Wyoming, Green River Formation, Paleogene; PI: NSF funded PRC, Cretaceous National Geographic Society funded; Kansas, USA; PI: Niobrara Formation Cretaceous-O.C. Marsh localities.
1994-1999	Argentina, Cretaceous, Auca Mahuevo sauropod nesting locality, Boca del Sapo & Las Quijadas localities and Buenos Aires Province (Planetary Geology); Spain, Cretaceous, Las Hoyas locality.

### **Other recognition:**

More than 10 high impact publications covered and commentary provided for international news periodicals and agencies including New York Times, LA Times, CNN, Washington Post, Reuters, AFP, AP, MSNBC, UK Times, Guardian, Telegraph. Research coverage in National Geographic Magazine. Radio interviews include those for NPR Science Friday, BBC, CBC, National Geographic Weekend, EarthSky and VOM. Featured scientist: IMAX, Discovery, BBC, NOVA, National Geographic Television programs. For example, Clarke et al. (2010) was recognized by Time Magazine [http://www.time.com/time/specials/packages/article/0,28804,2035319\\_2034045\\_2034043,00.html](http://www.time.com/time/specials/packages/article/0,28804,2035319_2034045_2034043,00.html) and featured in the New York Time <http://www.nytimes.com/2010/10/01/science/01penguin.html>.

2016-2018: One of 12/177 applicants named a 2017 HHMI Professor. “The HHMI Professors Program identifies highly accomplished research scientists who have compelling ideas to advance science education, and provides them with flexible support to try out these ideas. The program empowers and raises the visibility of scientists with high research credibility as exemplars of and advocates for excellence in science education.” from <http://www.hhmi.org>. One of 8 HHMI affiliated scientists featured- <http://www.hhmi.org/insidelook>; One of five “Innovation Faculty” highlighted by the University of Texas at Austin in their feature “On the Edge of What’s Next” at <http://innovate.utexas.edu/>. “From nanoscale to deep space, the work of the researchers featured here may stop you in your tracks to marvel that so many great minds are collaborating to create new knowledge.” Work on the evolution of bird song (Clarke et al. 2016; Riede et al. 2016) was covered in the New York Times, Washington Post, NPR, BBC, CBC, and others. Named as one of the top 100 science stories of 2016 by Discover Magazine (Dec. issue.).

### **Society Membership**

Society for the Study of Evolution.  
American Ornithologists’ Union  
Society of Vertebrate Paleontology  
Society of Systematic Biologists  
Paleontological Society  
Royal Society of Biology