

Curriculum Vitae
Julia Allison Clarke

Current Appointments:

(2021-) Associate Chair, Dept. of Geological Sciences
(2018-) Howard Hughes Medical Institute (HHMI) Professor
(2018-) John A. Wilson Professor in Vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin.
(2016-) Professor, Jackson School of Geosciences, The University of Texas at Austin.
(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:

Jan 2009-2016 Associate Professor and John A. Wilson Centennial Fellow in Vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin.
2004-2008 Assistant Professor, Dept. of Marine, Earth, and Atmospheric Sciences, North Carolina State University
(2004- 2008) 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) • <i>magna cum laude</i>

Honors:

The Anatomical Society, Honorary Fellow (Hon. FAS, 2020)
"This high award is distinct from the Fellowship. It is given to mark your long association with the Society and confers on you the privileges of membership of the Society... and entry into a select group of former Presidents and esteemed colleagues."
American Ornithological Society, Fellow (2019)
Outstanding Educator Award, Jackson School of Geoscience (2019)
Royal Society of Biology, Fellow, (FRSB) (2018)
American Ornithological Society, Elective Member (2017).
Outstanding Service Award, Jackson School of Geoscience (2017)
Shared with 7 others for our work on the status of women.
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, 50th 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:

2020 Senior Fellow, Institute for Advanced Study, Berlin (Wissenschaftskolleg zu Berlin). *Deferred*.

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. Riede, F. Goller, and C. Tabin, subawards).

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 0408308 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.

Manuscripts in Review: ^ postdoctoral advisees, * student advisees

*Davis, S. and J.A. Clarke. In revision. Estimating the distribution of carotenoid coloration in skin and integumentary structures of birds and extinct dinosaurs. *Evolution*

Demarchi B., Stiller J. 2, Grealy A., Mackie M.5, Deng, Y, Gilbert T, Clarke J.A., ^Legendre, L.J, Boano, R., Magee J., Zhang G., Bunce M., Collins M.J., Miller G. In review. Ancient proteins resolve controversy over the identity of *Genyornis* eggshell. *Proceedings of the National Academy of Sciences, USA*.

*Peteya, J. d'Alba,, L Clarke, J.A., M. Shawkey. In revision. Diversification of melanosome shape in vertebrate taxa. *PLoS one*.

Technical Publications and Manuscripts in Press:

119 since 2000; 14 Nature or Science (9 as first or corresponding author), 7 Proceedings of the Royal Society/Bioletters, 4 PNAS/Nature Communications/Science Advances; 4, 100+ page monographs. H index: 40; total citations: 5835; 14 papers with 100+ cites each, 6 of these as first author. Source: Google Citations.

119. *N. A. Smith, K.L. Koeller, **J.A. Clarke**, D. T. Ksepka, J.S. Mitchell, A. Nabavizadeh, RC. Ridgely, LM. Witmer.. In press. Convergent evolution in dippers (Aves, Cinclidae): The only wing-propelled diving songbirds. *Anatomical Record*.

118. *Torres, C. M. Norell, **J.A. Clarke**. 2021. A uniquely avian reorganization of the skull and brain left other dinosaurs behind. *Science Advances*. 7 (31), eabg7099

NPR Science Friday. other.

117. ^Legendre, L. and **J.A. Clarke**. 2021. Shifts in eggshell thickness related to changes in locomotor ecology in dinosaurs. *Evolution*. <https://doi.org/10.1111/evo.14245>

116. *Bilger, H.T., *Hood, S., Clarke, J.A. 2020. Guidelines for removal, preservation, and CT imaging of the syrinx, the avian vocal organ. *Wilson Journal of Ornithology*. 132 (3), 628-638
Undergraduate co-author.

115. Hedrick, B. P., Heberling, J. M., Meineke, E., Turner, K. G., Grassa, C. J., Park, D.S. Kennedy, **J.A., Clarke, J.**, Cook, D. Blackburn, J., Edwards, S. V., Davis, C. 2020. Digitization and the future of natural history collections. *Bioscience*. <https://doi.org/10.1093/biosci/biz163>

114. ^Legendre, L. Rubilar, D. Otero, R., *Davis, S. * Musser, G. Vargas, A., and **J. A. Clarke**. 2020. A giant soft shelled egg from the late Cretaceous of Antarctica. *Nature*. 583 (7816), 411-414. [discusses the evolution of amniote egg structure as well as the largest soft shell egg known]. *Corresponding author.*

New York Times. NPR Science Friday. BBC.Others.

113. ^Eliaison, C. and **J.A. Clarke**. 2020. Cassowary gloss and a novel form of structural color in birds. *Science Advances*, 6 (20), eaba018.

NPR Science Friday. other.

112. Ksepka D.T., A.M. Balanoff, *N. A. Smith, G.S. Bever, B.S. Bhullar, E. Bourdon, E. L. Braun, J. G. Burleigh, **J. A. Clarke**, M. W. Colbert, J. R. Corfield, F. J. Degrange, V.L. De Pietri, C.M. Early, D.J. Field, P.M. Gignac, M. E. Leone Gold, R. T. Kimball, S. Kawabe, L. Lefebvre, J. Marugán-Lobón, C.S. Mongle, A. Morhardt, M. A. Norell, R. C. Ridgely, R. S. Rothman, R. P.Scofield, C.P. Tambussi, *C. R. Torres, M. van Tuinen, S. A. Walsh, A. Watanabe, L. M. Witmer, A.K. Wright, L. E. Zanno, E. D. Jarvis, J. B. Smaers, 2020. Tempo and Pattern of Avian Brain Size Evolution, *Current Biology*, <https://doi.org/10.1016/j.cub.2020.03.060>.

111. *Musser G. and **J.A. Clarke**. 2020. An exceptionally preserved specimen from the Green River Formation elucidates complex phenotypic evolution in Gruiformes and Charadriiformes. *Frontiers in Ecology and Evolution*.8: 326.

110. *Davis, S. *C. R. Torres, *G. M. Musser, *J. V. Proffitt, ^N. Crouch, E. L. Lundelius, M. Lamanna, **J. A. Clarke**. 2020. New mammalian and avian records from the Late Eocene La Meseta Formation of Seymour Island, Antarctica. *PeerJ*. 8, e8268.
109. **Clarke, J.A.** and *C.R. Torres, 2020. The origin of birds. In *The Encyclopedia of Geology*. Second Edition. Eds. D. Alderton and S. Elias. *Elsevier References in Earth Systems and Environmental Science*. vol.[5], pp. 247-255. *United Kingdom*.
108. *Musser, G., *Li, Z. and **J.A. Clarke**. 2020. The first remains of Eogruidae (Aves, Gruiformes) from the late Miocene Liushu Formation of the Linxia Basin, Gansu, China. *Auk*. 137 (1), ukz067
107. Bakker, F.T.A., Antonelli, **J.A. Clarke**, J. A. Cook, S.V. Edwards, PGP Ericson, S. Faurby, N. Ferrand, M. Gelang, R. G. Gillespie, M. Irestedt, K. Lundin, E. Larsson, P. Matos-Maraví, J. Müller, T. von Proschwitz, G. K. Roderick, A. Schliep, N. Wahlberg, J. Wiedenhoft, M. Källersjö 2020. The Global Museum: natural history collections and the future of evolutionary biology and public education. *PeerJ*. <https://peerj.com/articles/8225/>
106. ^Crouch, N. and **J.A. Clarke**, 2020. A re-evaluation of the chemical composition of avian urinary excreta. *Journal of Ornithology*, 1-8. 161 (1), 17-24
105. **Clarke, J.A.** 2019. News and Views: Genomic mechanisms for the evolution of flightlessness in steamer ducks: *Nature*. 572 (7768), 182-184. *Invited*.
104. ^Wang, X, *Tang, A. and **Clarke J.A.** 2019. Flight, symmetry and barb angle evolution in the feathers of birds and other dinosaurs. *Biology Letters*. 15 (12), 20190622. *A. Tang was an undergraduate visiting summer scholar in my lab now a graduate student at Yale*.
103. ^Eliaison, C.M., S. Edwards, **J. A. Clarke**. 2019. Pipelines and methods for visualization and analysis of phenomic data. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.13217>
102. George, S. *Davis, S. Leppe, M., Hernandez R., Martinez, L. Horton, B. and **J. A. Clarke**. 2019. Chronology of deposition and unconformity development across the Cretaceous-Paleogene boundary, Magallanes-Austral Basin, Patagonian Andes. *Journal of South American Earth Sciences*. 97, 102237
101. Acosta Hospitaleche, C., Jadwiszczak, **J.A. Clarke** and P., Cenizo, M. 2019. The fossil record of birds from the James Ross Basin, West Antarctica. *Advances in Polar Science*. Special volume. 30 (3), 250-272.
100. West, A. R., *Torres, C.R., Case J., **Clarke, J. A.** O'Connor, P., and M. Lamanna. 2019. An avian femur from the Late Cretaceous of Vega Island, Antarctic Peninsula: removing the record of cursorial landbirds from the Mesozoic of Antarctica. *PeerJ* 7, e7231
99. Degrange, F.J. *Eddy D., Puerta P., **J.A. Clarke**. 2019. New skull remains of *Phorusrhacos longissimus* (Aves, Cariamiformes) from the Miocene of Argentina: implications for the morphology of Phorusrhacidae. *Journal of Paleontology* 93 (6), 1221-1233
98. *Hood, S. *Torres, C, Norell, M. **JA. Clarke**. 2019. New fossil birds from the earliest Eocene of Mongolia. *American Museum Novitates*. 3934, 1-24 Undergraduate lead author. (Corresponding Author).

97. Lamanna M.C., J. A. Case, P. M. O'Connor, R.C. Ely, V. M. Arbour, E. M. Roberts, **J. A. Clarke**, D. E. Malinzak, A.R. West, and S. W. Salisbury. 2019. Late Cretaceous non-avian dinosaurs from the James Ross Basin, Antarctica: description of new material, updated synthesis, Biostratigraphy, And Paleobiogeography. *Advances in Polar Science*. Special volume.
96. ^Crouch, N. and **J.A. Clarke**, 2019. Body size evolution in palaeognath birds is consistent with Neogene cooling-linked gigantism. *Palaeogeography, Palaeoclimatology, Palaeoecology*. <https://doi.org/10.1016/j.palaeo.2019.05.046> (Corresponding Author).
95. Lamichhaney, S., Card, D, Grayson P., Tonini J., Bravo G., Nöpflin K., Termignoni-Garcia, F., Torres, C. **Clarke J.A.** Sackton, T. and S. V. Edwards. 2019. Natural history phenomic data and comparative genomics as tools to study evolutionary convergence. *Philosophical Transactions of the Royal Society B 374 (1777)*, 20180248 Special volume.
94. *Torres C.R., M.A. Norell and **J.A. Clarke**. 2019. Estimating flight style of Early Eocene stem palaeognath bird *Calciavis grandei* (Lithornithidae) *The Anatomical Record* 305 (4), 1035-1042.. <https://doi.org/10.1002/ar.24207>
93. Tobin, T. S. E.M. Roberts, S. P. Slotznick, **J. A. Clarke**, P. M. O'Conner, S. M. Skinner, A. R. West, M.C. Lamanna, 2020. Refined age constraints for strata exposed on Cape Marsh, Robertson Island, Antarctica indicate a late Campanian age. *Cretaceous Research*. 108, 104515
92. Sackton T.B., P. Grayson, A. Cloutier, Z. Hu, J. Liu, N. Wheeler , P. Gardner, **J.A. Clarke**, A. Baker, M. Clamp, S. V. Edwards. 2019. Convergent regulatory evolution and the origin of flightlessness in palaeognathous birds. *Science*. 364: 74-78. DOI: 10.1126/science.aat7244
91. Hieronymus, T, D. Waugh, **J. A Clarke**. 2019. A new zygodactylid species indicates the persistence of stem passerines into the Early Oligocene in North America. *BMC Evolutionary Biology* 19:5 <https://doi.org/10.1186/s12862-018-1519-6>
90. ^Eliason, C and **J. A. Clarke**. 2019. Metabolic physiology explains macroevolutionary trends in the melanic color system across amniotes. *Proceedings of the Royal Society, Series B. Proc. R. Soc. B* 285: 1895 20182014. <http://dx.doi.org/10.1098/rspb.2018.2014>
89. **J. A. Clarke**, J. A. Gauthier, K. de Queiroz, and M. A. Norell. In press. *Aves* C. Linnaeus 1758. In: *Phylogonyms and the Code of Phylogenetic Nomenclature* Gauthier and deQuieroz eds. University of California Press, Berkeley CA.
88. Li. Q, **Clarke. J.A.** Gao K., J. Peteya*, and M. Shawkey. 2018. Elaborate plumage patterning in a Cretaceous bird. *Peer J* 6, e5831
87. *Li, Z. F.Yan, R. A. Ketcham, M. W. Colbert, and **J. A. Clarke**. 2018. Mass-transfer based modeling to explain iodine staining of vertebrate tissues. *Paleoworld*, Special volume. <https://doi.org/10.1016/j.palwor.2018.10.004>
86. Kingsley E. P., ^C. M. Eliason, T. Riede, *Z. Li, T. W. Hiscock, M Farnsworth S. L. Thomson, F. Goller, C.J. Tabin, and **J. A. Clarke**. 2018. Identity and novelty in the avian syrinx. *Proceedings of the National Academy of Sciences, USA (PNAS)* 15 (41), 10209-10217. Corresponding author.

85. *Torres, C. R. and **J.A. Clarke**. 2018. The sensory ecology of elephant birds inferred from digital brain reconstruction: evidence that reduced vision and nocturnality in birds is limited to flightless island taxa. *Proceedings of the Royal Society, Series B*. <https://doi.org/10.1098/rspb.2018.1540>
84. *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.
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. Keratin nanofiber distribution and feather microstructure 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. *Scientific Reports*. (2018) 8:8099 | DOI:10.1058/s41598-018-26178-x
80. ^Wang, X. Y. Hu, J. Liu, J. Huang, and **J. A. Clarke**. 2018. The earliest evidence for a supraorbital salt gland in dinosaurs in new Early Cretaceous ornithurines. *Scientific Reports*. (2018) 8:5969 | DOI:10.1058/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*. 9: 217. *Co-corresponding author with Hu and Xu*. <http://rdcu.be/EKSI>

Featured, New York Times and other media outlets.

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>. *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. 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.

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

72. *^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. ^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, ^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. ^Eliason, 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 neotoranatomical 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. ^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, ^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. 2014. 68(10), pp.2847-2860. DOI: 10.1111/evo.12486. *Corresponding author*.
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 *Acrocantbosaurus 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 β -keratin nanofibres in blue penguin (*Eudyptula minor*) feathers. Biology Letters. Online First Feb. 9. doi 10.1098/rsbl.2010.1163.

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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.

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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*).
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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.

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*)
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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 and Book Contributions:

- McWilliams T. S., **JA Clarke**, E MacDougall-Shackleton, F. Bonier, C Elliason. 2021. What Is a Bird?: An Exploration of Anatomy, Physiology, Behavior, and Ecology. Princeton University Press. *Two chapter contributions*.
- Clarke J.A.** 2019. Review of the Dinosaurs Rediscovered. *The Times Literary Supplement*. Sept. 25 edition. Invited.
- Clarke J.A.** 2019. What is the last question? *The 2018 Annual Edge Question*. John Brockman Ed. Harper Perennial.
- 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/jfo.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.

Science Education:

Current Scientific Advisor, OpenSciEd Program. The program is funded by the Carnegie Corporation of New York, Bill and Melinda Gates Foundation, Shusterman Family Foundation, and Hewlett Foundation with support from 10 states across the country. Collaborated on content for a science unit to be taught to middle school students across the country. The unit will focus on natural selection and common ancestry.

Current: Two peer-reviewed extended abstracts on my Curiosity to Question (CtQ) inquiry course model published in the 2018 and 2020 Proceedings of the International Society of the Learning Sciences (ISLS): Learning Scientist A. Papendieck, Lead.

Papendieck, A., Cheah, Y. H., Eliason, C., & Clarke, J. (2018). Mapping Research and Writing Mentorship Assemblages in a Mixed Cohort Course-based Research Experience. In J. Kay & R. Luckin (Eds.), *Proceedings of the International Conference of the Learning Sciences (ICLS) 2018* (Vol. 3, pp. 1361–1363). International Society of the Learning Sciences. <https://doi.org/10.22318/cscl2018.1361>

Papendieck, A., Ellins, K. K., & Clarke, J. (2020). Developing a Disciplinarily Diverse Course-based Research Experience: Outcomes and Design Considerations. *Proceedings of the International Conference of the Learning Sciences (ICLS) 2020*. International Conference of the Learning Sciences (ICLS) 2020, Nashville, TN. <https://doi.org/10.22318/icls2020.1777>

- Invited to present the model and co-lead a new workshop called **Creating research-based design principles for interdisciplinary learning** proposed for ISLS 2021.
- Invited submission to a proposed Special Issue of the *Journal of the Learning Sciences 2021: Beyond disciplinary engagement: Researching the ecologies of interdisciplinary learning*
- Selected to lead a workshop on CtQ at Earth Educator's Rendezvous for EER 2021: **Curiosity to Question: A new model for disciplinarily diverse and inclusive course-based research experiences.**
- HHMI program GeoscienceAmbassadors (GeoscienceAmbassadors.net) workshop also selected for EER: **Storytelling for Change.** with Geoscience Education specialist K.Ellins and A. Papendieck,
- Selected to present the CtQ model in the 2020 ISLS workshop called **Researching the ecologies of interdisciplinary learning.**

AGU symposium 2021 co-convener. ED014. Diverse Voices: Embedding Science Storytelling in Pedagogical Practice. A. Papendieck from our team.

Please see public programs and outreach for previous activities.

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

- 2020 UTEMLP Executive Management and Leadership Program
(Nominated by JSG dean; Provost Funded; Semester-long intensive course)
- 2019 NSF Reintegrating Biology Jumpstart. 4-6 December 2019.

- 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:

- 2021 Distinctive Voices Lecture, National Academy of Sciences, USA
“Distinctive Voices highlights innovations, discoveries, and emerging issues in an exciting and engaging public forum....learn from some of the best minds in the world –including members of the National Academy of Sciences, the National Academy of Engineering, and the National Academy of Medicine—in presentations geared to the general public.”
- 2021 The University of Chicago, Dept. of Geological Sciences
- 2021 Harvard University, Organismic and Evolutionary Biology
- 2021 Stony Brook University, Ecology and Evolutionary Biology. Public.
- 2020 Endowed Thomas Condon and George Moore Lectures, Geosciences, Oregon State University.
- 2020 Yale University, Peabody Museum, Ostrom Lecture. Public.
- 2020 The University of Utah/Utah Museum of Natural History: Keynote speaker “Dinofest”. Public.
- 2019 American Geophysical Union, invited talk in symposium “250 years of Alexander von Humboldt: Humboldtian Systems Science in the 21st century”.
- 2019 Society of Vertebrate Paleontology, invited talk in symposium: “From molecules to macroevolution: paleobiological applications of vertebrate soft tissue preservation” Brisbane, Aus.
- 2019 Humboldt Research Foundation, invited keynote in symposium: *Cosmos* at 250 years. Bonn, Germany - Humboldt and Evolutionary Biology.
- 2019 University of Southern Denmark, Biology Faculty.
- 2019 University of Turin, Biology Faculty.
- 2019 Advances in CT Technologies for Life Science and Natural History Collections. Invited keynote YXLON-Museum fur Naturkunde Symposium on Imaging Technology, Berlin
- 2019 Brain-Behavior Institute, Symposium, The University of Texas at Austin (talk and co-organizer)
- 2019 National Museum of Natural History, Smithsonian Institution, Deep Time Institute, Symposium on Evolutionary Innovation. Public.
- 2019 PLATES 30 Symposium, UTIG, “Outstanding question concerning plate tectonics and life”
- 2019 Carnegie Institution for Science, Embryology Section
- 2019 University of Oregon, Museum of Natural and Cultural History. Public.
- 2018 University Javeriana, Dept. of Biology, Bogota, Colombia
- 2018 Field Museum of Natural History
- 2018 University of Kansas, Biosciences
- 2018 Southern Methodist University, Department of Geological Sciences
- 2018 Carnegie Lectures in Science, Carnegie Institution, Washington DC. Public.

2018 Baylor University, Geological Sciences
 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
 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. Public.
 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:

Current:

University Level:

Independent Inquiry (FLAGs) Committee

Gender Equity Committee

Provost Graduate Mentorship Taskforce

Previous

2017-2021 Independent Inquiry (FLAGs) Committee,

2017-2018 Provost's Taskforce on experiential learning

2017-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 Service:

Current:

Endowed Positions Committee

Diversity and Inclusion Committee.

Faculty advisor: Geoscience Leadership Organization of Women.

Previous:

Plates 4D Integrative Postdoc. Search Committee 2020.

Endowment Committee (through May 2019)

2016-2017 Associate Dean of Research, Search Committee; Carbon Climate, Geobiology Group, Executive Committee.

Department of Geological Sciences:

Associate Chair of Surface/Subsurface Processes and Life, Department of Geological Sciences.

Chair, Endowed Positions Committee 2019-2020.
Search Committee, Stratigraphy and Sedimentology. 2019-2020
Post-Tenure Review Committee. 2019.

Previous:

Undergraduate Curriculum Committee,
Strategic Planning Committee;
Faculty Evaluation Committee;
Space committee;
Vertebrate Paleontology Lab, Executive Committee.
Lundelius and Lowe Prize Committees

Other activities: Transfer student orientation speaker 2013, 2014; Geoscience Leadership Organization of Women Faculty Sponsor 2014-2019; 2014 JSG Advisory Council Spring Meeting, Lecture 2014 Environmental Science Institute, UT Fundraising Dinner, Lecture 2014; JSG Alumni Friends Lecture 2014 Provost's Campus Conversations Faculty Symposium on undergraduate research and teaching, 2014 Assistance to the Admissions and Support Committee 2015. Provost's Faculty Campus Conversations, facilitator 2015. 2015, 2016, 2019 Undergraduate Geology Society Speaker. Glow Banquet keynote speaker.

2012-2015- 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:

2009-2021 Texas Memorial Museum: collection building: ~ 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

2020-- Editorial Board, Journal of Anatomy
2018-2021 Associate Editor, Evolution
2017-- Associate Editor, Science Advances
2017-2019 Associate Editor, Proceeding of the Royal Society, Series B., Biological Sciences
2013-2019 Associate Editor, Paleobiology
2012-2020 Editor-in-Chief, Journal of Anatomy
2005-2012 Associate Editor Journal of Anatomy
2013-- Editorial Board, Zoologischer Anzeiger
2011-2013 Associate Editor, Zoologischer Anzeiger

Other Professional Service:

- 2021-2024 *Executive Committee*, HHMI Society of Professors (elected)
- 2019-2020 *Chair, Nominations Committee*, Paleontological Society
- 2009-2020 *Romer Prize Committee*, Society of Vertebrate Paleontology
- 2019 *Organizing committee*, HHMI Professors Annual Meeting
- 2019 *Co-organizer*, Sound and sound makers: Brain/ Behavior Institute symposium, UT
- 2017--2020 *Nominations Committee*, Paleontological Society
- 2016 *Co-convenor* of an ICVM (International Congress of Vertebrate Morphology) Symposium on enhanced contrast CT methods.
- 2015 *Co-convenor* of NSF sponsored international workshop on enhanced contrast CT methods held at UT.
- 2015-2019 *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-- *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). External Referee: Smithsonian Institution Personnel Review, French Polar Programs Grant

Review; CONICET, Argentine Research Council. NERC, UK: Fellows Program; EU Marie Curie Program; National Geographic Society, Exploration Fund.

Exhibits, Public Programs and Other Education and Outreach: (selected).

- 2022 UT Environmental Science Institute Hot Science, Cool Talks Anniversary Lecture for the Austin community (postponed)
- 2021 Eugene Natural History Society, Public Lecture.
- 2021 Travis Audubon Society, Public Lecture
- 2020 Moderator of Public Lecture, 50 Years of Women at Yale, Yale Peabody Museum
- 2019 Strawberry Plains Audubon Center, Hummingbird festival anniversary celebration Mississippi, Public programs
- 2019 BBC, CBC, NPR national radio science programs; Washington Post podcast for kids.
- 2018-2019 PBS/NOVA production on the evolution of birds – “When Whales Walked” (featured scientist)
- 2018 Keynote, National Conference for the Advancement of Science Teaching (CAST)
- 2017 BBC Documentary Program on T Rex. (consultant and featured scientist) “T.rex rediscovered.
- 2017 High Desert Museum, Public Program, Bend, Oregon
- 2017 Science on Screen event at the Bullock Museum with Austin Film Society Sponsored by the Alfred P. Sloan Society.
- 2016 HHMI Sponsored workshop on teaching evolution (Secondary and University Level) at the combined Society for the Study of Evolution/Society of Systematic Biologists meeting (SSE/SSB)
- 2016 NSF sponsored Undergraduate Futures Keynote speaker SSB/SSE Diversity Awards.
- 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 “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.” <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 video 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-- 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:

Carlos Rodriguez (Oct.2019-) PhD Emory University.

Lucas Legendre (Sept. 2018-) PhD. Inst. of Earth Sciences, Pierre and Marie Curie University, Paris

Nicholas Crouch (Sept. 2017-2019) PhD University of Illinois at Chicago.

Now: Postdoctoral Researcher, The University of Chicago.

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

Now: Researcher, Field Museum of Natural History.

Zhiheng Li (Sept 2015- Sept 2016)

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: Curator, Campbell Geology Museum, Clemson University.

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

Now: Associate 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:

Janna Muhammed (MS 2020-) Diversity Recruiting Fellowship.

Hans Bilger (PhD 2018-) (EEB, co-advised with Mike Ryan) NSF Graduate Research Fellowship, DAAD fellowship

Grace Musser (PhD 2017-) NSF Graduate Research Fellowship, Smithsonian Research Fellowship

Sarah Davis (PhD 2016-) NSF Graduate Research Fellowship, AOU research grant.

Jasmine Nelson (MS 2019-2021) NSF Graduate Research Fellowship, West Texas Recruiting Fellowship, UT Austin.

Now: PhD. Student Colorado State University, Conservation Bioacoustics.

Chris Torres (PhD 2014-2020) (EEB, co-advised). Competitive EEB Research Startup, DDIG, and Continuing Fellowship Grants

Now NSF Postdoctoral Researcher. The Ohio University.

Lauren English (PhD 2018) JSG Fellowship recipient.

Now: Museum Scientist, University of California, Riverside

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

Previous: Instructor and Postdoctoral Researcher, University of Missouri.

Now: Assistant Professor of Anatomy, College of Medicine, The University of Arizona.

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) Working in Austin.

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

Now: Employed as a biochemist.

A.J. DeBee (MS 2012) NCSU competitive recruitment fellowship.

Now: Washington State, Department of Labor and Industries.

Clint Boyd (PhD UT 2012)

“Taxonomic revision of latest Cretaceous North American basal neornithiscian taxa and a phylogenetic analysis of basal ornithiscian relationships”

Now: State Paleontologist, 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, Campbell Geology Museum, Clemson University,

Adjunct Faculty School of Forestry and the Environment.

Previous: Field Museum of Natural History, Postdoctoral Fellow; NESCent postdoctoral fellow.
Drew Eddy (MS NCSU, 2008)

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

Committee Member:

Will Reyes JSG (PhD. 2020- Adv. Chris Bell)

Sinjini Singh, UT JSG (PhD. 2019—Adv. Rowan Martindale)

Samantha Smith UT EEB (PhD 2018—Adv: Steven Phelps)

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)

Kwun Yip Fung, UT JSG 2019

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 Student Projects Supervised: Through 2019 (see also cohort based mentorship-Summer REU experiences funded by HHMI).

Grace Bartunek

Kristina Montez: RTX summer REU student.

Carmen Urban: 2019-2021 Plan II Honors Project.

Michael Chiappone: 2019- JSG Jackson Scholar Thesis, Geosciences.

Sarah Hood (2016-2018) Plan II honors, polymathic scholar thesis

Now: PhD program at San Diego State University. NSF GRFP

Hector Garza: (2014-2016) UT Multiple projects, *Geoforce* student.

Presentation at GSA 2016, coauthor two abstracts and a paper

Now: JSG PhD student.

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: hummingbird 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:

CtQ Research Design, Quantitative Analysis and Data Visualization: “From Curiosity to Question”. A 13-27 person project- based course with tiered mentorship, with graduate and undergraduate students. Funded by the Provost’s office and now HHMI. 2016, 2017, 2018, 2019, 2020, 2021.

Life through Time: An introduction to the linked evolution of life and earth for majors and non-majors. (~80 students). Fall 2011, 2012, 2013, 2014, 2016, 2017, 2018, 2019, 2021.
New in 2021: Restructured following the CtQ model. Project/discovery driven course. Students define the focal questions of the course. Interdisciplinary collaboration emphasized. Training in accessing the primary literature.

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 freshman 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. See Curiosity to Question above.

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.

Field work:

- 2018, 2019- China (PRC), Yunnan, Gansu
2017, 2018- Chile, Magallanes Province
2011, 2016- Antarctica, James Ross Archipelago, Cretaceous-NSF funded.
2006–2015- 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); Wyoming, Green River Formation, Paleogene; NSF funded PRC, Cretaceous, National Geographic Society funded; Kansas, USA; 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 14 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.

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,
Paleontological Society,
Society of Systematic Biologists,
American Geophysical Union,
Royal Society of Biology.
AAAS