

Curriculum Vitae
Julia Allison Clarke

Appointments:

- (Feb. 1, 2004-) **Assistant Professor**, Dept. of Marine, Earth, and Atmospheric Sciences, North Carolina State University
- (Feb. 1, 2004-) **Research Curator**, Dept. of Paleontology, North Carolina State Museum of Natural Sciences
- (April 1, 2004-) **Research Associate**, Div. of Paleontology, American Museum of Natural History
- (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)
- 1998 M.Phil. Yale University (Department of Geology and Geophysics)
- 1995 B.A. Brown University (dual degree in Geology-Biology & Comparative Literature)
•*magna cum laude*

Honors:

- G.G. Simpson Award, Yale University, best paper among alumni or current graduate students concerning evolution and the fossil record (2006)
- Argentine Fulbright Commission, distinguished alumna, statement requested for 50th anniversary commemorative volume (2006).
- Research results selected for Research Highlights by NSF OPP (2005) and OISE (2007) Directorates.
- Orville Prize, Yale University, for best dissertation in the Earth Sciences (2001)
- G.G. Simpson Award, Yale University, best paper concerning evolution and the fossil record (2001)
- Hutchinson Prize Fellowship, Yale Institute for Biospheric Studies, (2000)
- Estwing Hammer Prize, Yale University, for outstanding research in Geology (2000)
- Henry Gardiner Ferguson Fellowship in Geology (1999)
- National Science Foundation, Graduate Student Fellowship (1997-2000)
- Yale University Fellowship for Graduate Study (1996-2001)
- Arnold Prize Fellowship, Brown University, for achievement and an original research project (\$15,000; declined to accept Fulbright Grant; 1995).
- Phi Beta Kappa*, Brown University (1994)
- Sigma Xi*, Brown University (1995), Full Associate Member (2004)

Research Grants and Fellowships:

- 2007-2010 NSF Earth Sciences, Paleobiology (EAR) Collaborative Research: Integrated study of an exceptional avifauna from the Eocene Green River Formation: new data on avian evolution and taphonomy (PI: \$150,000).
- 2007-2009 NSF Office of Polar Programs (OPP) New approaches and rapid assessment of key avian fossils from the Cretaceous of Antarctica (SGER; PI, \$34,800)
- 2007- 2008 Expeditions Council, National Geographic Society, 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).

- 2005-2006 National Geographic Exploration Fund (Co-investigator, Zhou, Clarke, Zhang): National Geographic Society, N, Jan. 2004- Jan 2006: \$30,000 (10,000 cost sharing CNSF, \$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: China (PI, \$4,990)
- 2002-2008 ATOL: Collaborative Research: Archosaur Phylogeny - A Total Evidence Approach at Fine Taxonomic Levels: Senior Personnel (PI Norell: \$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 Fund
- 1999 Geological Society of America
- 1999 Explorers Club, Exploration Fund
- 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
- 1994 Brown University, Undergraduate Teaching/ Research Assistantship (UTRA)
- 1993 Brown University, UTRA Grant
- 1993-1995 Brown University, "CAP" Fellowships for research in-aid of curricular development. (x2)

Technical Publications and Manuscripts in Press:

- Smith, N. A., Olson, S., and **J.A. Clarke**. In press. First Atlantic Record of the Puffin *Cerorhinca* (Aves, Alcidae) from the Pliocene of North Carolina. *Journal of Vertebrate Paleontology*.
- Clarke, J.A.**, D.T., Ksepka, M. Stucchi, M. Urbina, N. Giannini, S. Bertelli, Y. Narváez. and C. Boyd. 2007. Eocene penguins challenge the proposed relationship between penguin biogeography, diversity, and Cenozoic climate change. *Proceedings of the National Academy of Sciences, USA*.
- Clarke J.A.**, and K.M Middleton. *Bird Evolution*. 2006. *Current Biology* 16:350-354.
- Clarke, J.A.**, Zhou, Z. 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.
- 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). *Am. Mus. Novitates*. 3494: 1-17.
- 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.
- 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.
- Clarke, J.A.** 2004. Morphology, Phylogenetic Taxonomy, and Systematics of *Ichthyornis* and *Apatornis* (Avialae: Ornithurae). *Bulletin Am. Mus. Nat. Hist.* 286: 1-179.
- 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. *Am. Mus. Novitates* 3447:1-12.
- 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. *Am. Mus. Novitates* 3423: 1-18.
- Mayr, G. & **Clarke, J.A.** 2003. The deep divergences of neornithine birds: a phylogenetic analysis of morphological characters. *Cladistics* 19: 527-553.

- Clarke, J.A.** and M.A. Norell. 2002. The morphology and phylogenetic position of *Apsaravis ukhaana* from the Late Cretaceous of Mongolia. *Am. Mus. Novitates*. 3387:1-46.
- Zhou, Z., **Clarke, J.A.** and F. Zhang. 2002. *Archaeoraptor's* better half. *Nature*. 420: 285.
- 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.** and L.M. Chiappe. 2001. A new carinate bird from the Late Cretaceous of Patagonia (Argentina). *Am. Mus. Novitates*. 3323:1- 22.
- Clarke J.A.** and M.A. Norell. 2001. Palaeoecology (communications arising): fossils and avian evolution. *Nature*. 414: 508.
- 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* (New Haven: Feb. 12–14, 1999). Peabody Mus. Nat. Hist., Yale Univ., 143-156.
- Norell, M.A. and **J.A. Clarke**. 2001. Fossil that fills a critical gap in avian evolution. *Nature*. 409: 181-184.
- 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). *Am. Mus. Novitates*. 3290: 1-11.
- 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.** 2003. Review of Chiappe and Witmer: Mesozoic Birds: Above the heads of Dinosaurs. *Journal of Paleontology*. 77: 822-823
- Clarke, J.A.** 1998. Evolution's flight of fancy: the feathered dinosaurs of Liaoning. *Yale China Review* 6(2):3-6.

Selected Abstracts:

- Ksepka, D., Bertelli, S. Giannini, N. and J. A. Clarke. 2006. The Evolution Of The Sphenisciformes (Penguins). *Journal of Vertebrate Paleontology* 26: 88A.
- Clarke J.A. and C. D. Bell. 2006. Creating faux fossils and sequence fragments: the impact of the structure of missing data in morphological and molecular datasets on phylogenetic accuracy Botany Society Meetings. **(Invited)**.
- Clarke, J.A., Cantino P., Dayrat, B., and K. de Queiroz. 2006. "Species in a system of phylogenetic nomenclature: a new solution--Part II. Second Meeting of the International Society for Phylogenetic Nomenclature, Yale University, New Haven **(Invited)**.
- Dayrat B., Cantino, P., Clarke J.A., and K. de Queiroz. 2006. Species in a system of phylogenetic nomenclature: a new solution--Part I. Second Meeting of the International Society for Phylogenetic Nomenclature, Yale University, New Haven **(Invited)**.
- Tambussi, C., Clarke, J., Noriega, J., Erickson, G. Ketcham, R. 2005. Nueva Evidencia Cretácica Aporta Datos Acerca Del Timing Y Patrón De Diversificación De Las Aves **(Invited)** Symposium Honoring R. Pascual, La Plata, Argentina.
- Clarke, J. A., C., Tambussi J., Noriega G., Erickson and R. Ketcham. New evidence for the timing and pattern of extant avian diversification. *Evolution Meetings, 2005*. (jointly sponsored conference of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists).

- Clarke, J. A., C., Tambussi J., Noriega G., Erickson and R. Ketcham. 2005. New Cretaceous fossil evidence for the timing and pattern of crown clade avian diversification. Meetings of the Society of Vertebrate Paleontology. Journal of Vertebrate Paleontology 25:46A.
- Green, J. L., Schneider, V., Schweitzer, M., J., Clarke. 2005. First Evidence for Non-Placerias Dicynodonts in the Late Triassic (Carnian-Norian) of North America. Journal of Vertebrate Paleontology 25: 65A-66A.
- Clarke, J.A., M.A. Norell and D. Dashzeveg. 2004. New avialan remains from the Cretaceous and Eocene of Mongolia: implications for the timing and pattern of avian diversification. Society of Avian Paleontology and Evolution.
- Clarke, J.A. 2004. Definitions of species names under a system of phylogenetic nomenclature: conclusions from a paleontological case study. First International Symposium on Phylogenetic Nomenclature.
- Clarke, J.A., J.A. Gauthier, K. de Queiroz, W.G. Joyce, J. F. Parham & T. Rowe. 2004. A Phylogenetic Nomenclature for the Major Clades of Amniota Haeckel 1866, with Emphasis on Aves Linnaeus 1758J. First International Symposium on Phylogenetic Nomenclature.
- Clarke, J.A. 2003. The morphology, taxonomy and systematic position of *Ichthyornis*: a case study in alpha-taxonomic practice in a phylogenetic frame. Journal of Vertebrate Paleontology 23 (3): 45A
- Clarke J.A. Z. Zhou and F. Zhang. 2002. An ornithurine from the Early Cretaceous of China. Journal of Vertebrate Paleontology 22 (3): 45A.
- Clarke J.A., J.A. Gauthier, M.A. Norell, and Q. Ji. 2001. The origin and significance of a propatagium in flying dinosaurs. Journal of Vertebrate Paleontology 21 (3): 41A.
- Clarke, J.A. 2000. Homoplasy, missing data, and analyses of avialan diversification. Journal of Vertebrate Paleontology 20 (3): 36A.
- Clarke, J.A., and M.A. Norell. 2000. A new avialan from the Late Cretaceous of Mongolia. Journal of Vertebrate Paleontology 20 (3): 36A.
- Clarke, J.A. 2000. *Ichthyornis* and *Apatornis* reappraised. Vertebrata PalAsiatica, suppl. to Vol. 38: 9.
- Clarke, J.A. 2000. Setting limits on phylogenetic inference from isolated elements. Vertebrata PalAsiatica, suppl. to Vol. 38: 9-10.
- Clarke, J.A. 1999. New information on the type material of *Ichthyornis*: of characters, chimeras and current limits on phylogenetic inference. Journal of Vertebrate Paleontology 19 (3): 38A.
- Bertelli, S., L.M. Chiappe, and J.A. Clarke, 1999. Early Miocene Tinamidae (Aves: Paleognathiformes) from southern Argentina. In, Proceedings of the Congreso Internacional: Evolución Neotropical del Cenozoico, La Paz, Bolivia 19 al 22 de mayo, 1999.
- Clarke, J., L. Dingus, and L.M. Chiappe. 1998. Review of the Upper Cretaceous deposits at Neuquén, Argentina (Bajo de la Carpa Member, Rio Colorado Formation) Journal of Vertebrate Paleontology 18 (3) 34A.

Leadership/ Professional Service:

- 2005- Receiving Editor in Paleontology, Journal of Anatomy
- 2005- National Center for Evolutionary Synthesis, an NCSU faculty affiliate.
- 2004-2006 Chair, Predoctoral Fellowship Committee, Society of Vertebrate Paleontology
- 2004 Sigma Xi Grants in Aid of Research Committee
- 2004-2006 Member at large, Governing Council of the International Society of Phylogenetic Nomenclature
- 2004-2007 2004-2006 Council on Phylogenetic Nomenclature, an advisory body, International Society of Phylogenetic Nomenclature
- 2003-2004 Predoctoral Fellowship Committee of the Society of Vertebrate Paleontology
- 2001, 2005 Session moderator, Meetings of the Society of Vertebrate Paleontology

- 2000 Co-convener, “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, Proceedings of the National Academy of Science, USA, Proceedings of the Royal Society, London, Trends in Ecology and Evolutionary Biology; Systematic Biology, Journal of Vertebrate Paleontology, Journal of Paleontology, Paleontological Research, Naturwissenschaften, Evolution and Development, American Museum of Natural History Novitates, Canadian Journal of Earth Sciences, Journal of Systematics and Evolutionary Research, Geophysical Research Letters, Journal of Biomedical Informatics.
- NSF Referee: Paleobiology (EAR) and Polar Programs (OPP).
- NERC Referee, UK: Fellows Program.

Exhibits, Public Programs and Mentorship:

- 2007 Durham Museum of Life and Science, Dinosaur Exhibit, Scientific Advisor
- 2007 Tennessee Aquarium and Discovery Center, Program for Girls Inc.
- 2002-2007 Science advisor and featured scientist in NSF funded IMAX Movie “Dinosaurs Alive”
- 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 Expanding Your Horizons program for 7th grade girls, workshop leader, career panelist.
- 2005 Schliele Museum (Smithsonian affiliate, Gastonia NC) Fossil Fair, Invited/featured speaker
- 2003 North Carolina Fossil Fair, Invited/featured speaker
- 2003 Hudson River Audubon Society, lecture: The dinosaur-bird connection
- 2005-2006 Faculty Mentor, Undergraduate Research Experience, MEAS, NCSU.
- 2002-2005 Scientific Advisory Committee, Internationally touring dinosaur exhibit (AMNH and partners),
- 2000 BBC-TV: Walking with Beasts, consultant- anatomy, ecology of phorusrhacid birds
- 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
• participated in an array of public outreach programs (e.g., consultant on exhibit copy, “meet the scientist”, taught programs for fifth and sixth graders)
- 1992-1995 One of twelve founding mentors in a pioneer pre-college enrichment program for inner-city high-school students
• co-wrote curricula for weekly programs, held every Saturday for three academic years
• created program: “Art and Observation in Our Museums and Laboratories”

Graduate Students:

Primary Advisor:

Clint Boyd (PhD Sept. 2005-)

Adam Smith (PhD Sept. 2005-)

Drew Eddy (MS Sept. 2006-)

Committee Member:

Nina Triche, University of Texas, Austin (PhD)

Nathan Smith, University of Chicago (PhD)

Matt Bertone, Entomology, NCSU (PhD)

Jeremy Green, MEAS, NCSU (PhD)

Courses:

Dinosaurs: large enrollment GER course used for recruitment of majors. co-taught with M. Schweitzer
Paleontological Methods and Theory (upper division undergraduates and graduate students) co-taught with M. Schweitzer.

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

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

Macroevolution, Systematics, and Diversity: (upper division undergraduates and graduate students)

Professional Societies:

Society of Vertebrate Paleontology

Society of Systematic Biologists

6-18-07