

JOHN J. FLYNN
FRICK CURATOR AND PROFESSOR, DIVISION OF PALEONTOLOGY
DEAN, RICHARD GILDER GRADUATE SCHOOL

HIGHEST DEGREE EARNED

Ph.D.

AREA OF SPECIALIZATION

Evolution of mammals and Mesozoic vertebrates, molecular and morphological phylogenetics of Carnivora and other mammal groups, geological dating, plate tectonics, and biogeography

EDUCATIONAL EXPERIENCE

Ph.D. in Geological Sciences, Columbia University, 1983

M. Phil. in Geological Sciences, Columbia University, 1980

M.A. in Geological Sciences, Columbia University, 1979

B.S. in Geology and Geophysics, Yale University, 1977, cum laude

PREVIOUS EXPERIENCE IN DOCTORAL EDUCATION

FACULTY APPOINTMENTS

Adjunct Professor, Department of Biology, City University of New York, 2005-present

Adjunct Professor, Department of Earth and Environmental Sciences, Columbia University, 2005-present

Resource Faculty, New York Consortium in Evolutionary Primatology, 2005-present

Visiting Professor, Universidad de Chile, July 2001-July 2002

Adjunct Professor, Department of Biological Studies (Ecology and Evolution program), 1995-2005

Assistant Professor, Department of Geological Sciences, Rutgers University, September 1982-December 1987

Lecturer, Department of Geology and Geophysics, Yale University, January-May 1982

COURSES TAUGHT (2005-PRESENT)

Grantsmanship, Ethics, and Communication (core course), Richard Gilder Graduate School (AMNH), Fall 2008-present. Instructors: J. Flynn and M. Norell.

Vertebrate Paleobiology, Richard Gilder Graduate School (AMNH), Fall 2011, Fall 2015, Spring 2019 (planned). Instructors: J. Meng et al. (including J. Flynn).

Independent Study Course, undergraduate (Ecology, Evolutionary & Environmental Biology EEEB 3998), *Phylogeny and biomechanics of leptarctine musteloid Carnivora*, Columbia University, Spring 2016.

Independent Study Course, undergraduate (Ecology, Evolutionary & Environmental Biology EEEB 3997), *Phylogenetic Methods and Analyses of Leptarctus*, Fall 2016.

Major Events in Evolution: The Paleozoic-Mesozoic Transition, Richard Gilder Graduate School, Spring 2011. Instructors: C. Kammerer and J. Flynn

Vertebrate Paleontology-Evolution Seminar (Earth & Environmental Sciences G9668), “*Topics in Vertebrate Evolution: Methods and Case Studies*”, Columbia University, Autumn 2005.

Seminar in vertebrate paleontology (Sect 1; Earth & Environmental Sciences G9668y),
“*The Origins of Major Vertebrate Clades*”, Columbia University, Spring 2006.
Seminar in vertebrate paleontology (Sect 2; Earth & Environmental Sciences G9668y),
“*A Total Evidence Approach to Lizard Phylogeny*”, Columbia University, Spring
2006. Instructors: M. Norell and J. Flynn.
Directed Readings Course (for M. Spaulding, Earth and Environmental Sciences
G9001), “*Placental Mammal Intensive Reading Course*” (Analysis of synthesis
volume edited by Rose and Archibald), Columbia University, Spring 2006.

GRADUATE ADVISEES (2000-PRESENT)

Ph.D. Students:

Julia Tejada-Lara, Columbia University, 2015-present
Anna Ragni, Richard Gilder Graduate School-AMNH, 2015-present
Zachary Calamari, Richard Gilder Graduate School-AMNH, 2013-2017
Rebecca Pian, Columbia University, 2013-2017 (M.Phil.)
Abagael West, Columbia University, 2011-2016
Kaori Tsukui, Columbia University, 2008-2015
Shaena Montanari, Richard Gilder Graduate School-AMNH, 2009-2012 (co-advisor)
Michelle Spaulding, Columbia University, 2005-2011
Andrés Giallombardo, Columbia University, 2004-2009
Lovasoa Ranivoharimanana, University of Antananarivo, Madagascar, 1998-2007
Anjali Goswami, University of Chicago, 2001-2005
John Finarelli, University of Chicago, 2002-2005
Jon Marcot, University of Chicago, 1999-2003
Karen Sears, University of Chicago, 1999-2003
Gina Wesley, University of Chicago, 1998-2003
Darin Croft, University of Chicago, 1996-2000
Doreen Covey, University of Illinois-Chicago, 1993-2000

GRADUATE COMMITTEES (2000-PRESENT)

Ph.D. Students:

R. Benjamin Sulser, Richard Gilder Graduate School-AMNH, 2017-present
Jianye Chen, Columbia University, 2011-2016
Rodolfo Salas-Gismondi, Université Montpellier 2, France, 2015
Hong-yu Yi, Columbia University, 2010-2014
Rui Pei, Columbia University, 2010-2015
Stephen Brusatte, Columbia University, 2009-2012
Amy Balanoff, Columbia University, 2006-2011
Sterling Nesbitt, Columbia University, 2006-2009
Alan Turner, Columbia University, 2004-2008
Sunny Hwang, Columbia University, 2005-2007
Aaron Hogue, Northwestern University, 2002-2004
Mahesh Gurung, University of Illinois- Chicago, 1998-2004

RESEARCH & EDUCATIONAL GRANT SUPPORT (2013-2018)

National Geographic Society, 2017-2019. “The Path Towards Hyperdiversity in Proto-Amazonia: The Crocodile Community during the Early Stages of the Pebas Mega-Wetlands System” (Salas-Gismondi, Flynn, et al.; CP-035R-17).
National Science Foundation, IGERT program, 2010-2017. “IGERT—Interdisciplinary Evolutionary Primatology: Conservation and Human Evolution Join Behavior, Bones and Genes.” (Flynn co-PI with E. Delson, C. McCann, M. Cords, & T. Harrison;

DGE-0966166).

National Science Foundation, 2016-2017. “Dissertation Research: Assessing Homology of Hoofed Mammal Cranial Appendages with 3D Morphometrics and Next-Generation Transcriptomics.” (For Z. Calamari dissertation research; DEB-1601299)

National Science Foundation, 2013-2017. “An Integrated Approach to Understanding Evolutionary Transformations in Craniodental and Locomotor Specializations” (DEB-1257572).

National Science Foundation, Graduate Research Fellowship Program, 2009-present (administrative PI for GRFP for 11 RGGGS students, NSF DGE 0952089 and DGE 1447167).

RECENT ARTICLES IN REFEREED JOURNALS (2013-2018)

- A.N. Prybyla, Z.J. Tseng, and J.J. Flynn. In Press (2018). Biomechanical simulations of *Leptarctus primus* (Leptarctinae, Carnivora), and new evidence for a badger-like feeding capability. *Journal of Vertebrate Paleontology*.
- J.G. Mosolf, P.B. Gans, A.R. Wyss, J. Cottle, and J.J. Flynn. 2018. Late Cretaceous to Miocene volcanism, sedimentation, and upper crustal faulting and folding in the Principal Cordillera, central Chile: Field and geochronological evidence for protracted arc volcanism and transpressive deformation. *Geological Society of America Bulletin* 10.1130/B31998.1 (22 pp.).
- J.V. Tejada-Lara, B.J. MacFadden, L. Bermudez, G. Rojas, R. Salas-Gismondi, and J.J. Flynn. 2018. Body mass predicts isotope fractionation in herbivorous mammals. *Proceedings B (Proceedings of the Royal Society B)*, v. 285:20181020 (10 pp.).
- A.R. Wyss, J.J. Flynn, and D.A. Croft. 2018. New Paleogene notoungulates and leontiniids (Toxodontia; Notoungulata; Mammalia) from the Early Oligocene Tinguiririca Fauna of the Andean Main Range, Central Chile. *Novitates*, no. 3903, p. 1-42.
- Z.J. Tseng and J.J. Flynn. 2018. Structure-function covariation with nonfeeding ecological variables influences evolution of feeding specialization in Carnivora. *Science Advances* 4: eaao5441 (13 pp.).
- C. Grohé, B. Lee, and J.J. Flynn. 2018. Recent inner ear specialization for high-speed hunting in cheetahs. *Scientific Reports* 8:2301 (8 pp.).
- R.A. Racicot, W. Gearty, N. Kohno, and J.J. Flynn. 2016. Comparative anatomy of the bony labyrinth of extant and extinct porpoises (Mammalia: Cetacea: Phocoenidae). *Biological Journal of the Linnean Society* 119 (4):831-846.
- R. Salas-Gismondi, J.J. Flynn, P. Baby, J.V. Tejada-Lara, J. Claude, and P.-O. Antoine. 2016. A new 13 million year old gavialoid crocodylian from proto-Amazonian mega-wetlands reveals parallel evolutionary trends in skull shape linked to longirostry. *PLoS ONE* 11(4): e0152453. (29 pp.).
- Z.J. Tseng, C. Grohé, and J.J. Flynn. 2016. A dual-feeding model for the unique predatory behaviour of the extinct marine mammal *Kolponomos*: Convergence on sabretooths and sea otters. *Proceedings of the Royal Society B* 283: 20160044 (8 pp.).
- S. Nesbitt, J.J. Flynn, A.C. Pritchard, J.M. Parrish, L. Ranivoharimanana, and A.R. Wyss. 2015. Postcranial osteology of *Azendohsaurus madagaskarensis* (?Middle to Upper Triassic, Isalo Group, Madagascar) and its systematic position among stem archosaur reptiles. *Bulletin of the American Museum of Natural History*, no. 398, 126 pp.
- C. Grohé, Z.J. Tseng, R. Lebrun, R. Boistel, and J.J. Flynn. 2015. Bony labyrinth shape variation in extant Carnivora: A case study of Musteloidea. *Journal of Anatomy*, v. 228, p. 366-383.
- J. Bradham, J.J. Flynn, D.A. Croft, and A.R. Wyss. 2015. New notoungulates

- (Notostylopidae and basal toxodontians) from the Early Oligocene Tinguiririca Fauna of the Andean Main Range, central Chile. *American Museum Novitates*, no. 3841, p. 1-24.
- R. Charrier, J.J. Flynn, A.R. Wyss, and D.A. Croft. 2015. Marco geológico–tectónico, contenido fosilífero y cronología de los yacimientos Cenozoicos pre–pleistocénicos de mamíferos terrestres fósiles de Chile. In: D. Rubilar-Rogers and M. Sallaberry (eds.), *Vertebrados Fósiles de Chile*. Publicación Ocasional del Museo Nacional de Historia Natural, Chile, no. 63, p. 293-338.
- Z.J. Tseng and J.J. Flynn. 2015. An integrative method for testing form-function linkages and reconstructed evolutionary pathways of masticatory specialization. *Journal of the Royal Society Interface* 12: 20150184 (10 pp.).
- Z.J. Tseng and J.J. Flynn. 2015. Are cranial biomechanical simulation data linked to known diets in extant taxa? A method for applying morpho-functional linkage models to infer feeding capability of extinct species. *PLoS ONE* 10(4): e0124020 (25 pp.).
- R. Salas-Gismondi, J.J. Flynn, P. Baby, J. Tejada-Lara, F.P. Wesselingh, and P.-O. Antoine. 2015. Unique crocodylian diversity hotspot in Miocene proto-Amazonian mega-wetlands. *Proceedings of the Royal Society B* 282: 20142490 (10 pp.).
- Z.J. Tseng and J.J. Flynn. 2014. Convergence analysis of a finite element skull model of *Herpestes javanicus* (Carnivora, Mammalia): Implications for robust comparative inferences of biomechanical function. *Journal of Theoretical Biology*, v. 365, p. 112–148.
- R. Salas-Gismondi, J. Flynn, P. Baby, J. Tejada-Lara, and P.-O. Antoine. 2014. Sobre el origen de la biodiversidad Amazónica. In: “Iquitos” R. Varón G. and C. Maza (editors), pp. 85-91; Telefónica del Perú. S.A.A, Lima, Peru.
- V. Perrichot, P.-O. Antoine, R. Salas-Gismondi, J.J. Flynn, and M.S. Engel. 2014. The genus *Macroteleia* Westwood in Middle Miocene amber from Peru (Hymenoptera, Platygastriidae s.l., Scelioninae). *ZooKeys* 426:119–127.
- J.J. Flynn. 2013. Cenozoic Andean mammal faunas: Shedding new light on evolution, chronology, paleoenvironments and tectonics. *Bollettino di Geofisica: teorica ed applicata*, An International Journal of Earth Sciences, v. 54, suppl. 2, p. 24-26.
- G.V.R. Prasad, O. Verma, J.J. Flynn, and A. Goswami. 2013. A new Late Cretaceous vertebrate fauna from the Cauvery Basin, South India: Implications for Gondwanan paleobiogeography. *Journal of Vertebrate Paleontology*, v. 33, no. 6, p. 1260-1268.
- T.E. Macrini, J.J. Flynn, X. Ni, D.A. Croft, and A.R. Wyss. 2013. Comparative study of notoungulate (Placentalia, Mammalia) bony labyrinths and new phylogenetically informative inner ear characters. *Journal of Anatomy*, v. 223, p. 442-461.
- M.A. O’Leary, J.I. Bloch, J.J. Flynn, T.J. Gaudin, A. Giallombardo, N.P. Giannini, S.L. Goldberg, B.P. Kraatz, Z.-X. Luo, J. Meng, X. Ni, M.J. Novacek, F.A. Perini, Z. Randall, G.W. Rougier, E.J. Sargis, M.T. Silcox, N.B. Simmons, M. Spaulding, P.M. Velasco, M. Weksler, J.R. Wible, and A.L. Cirranello. 2013. Response to comment on “The placental mammal ancestor and the Post–K-Pg radiation of placentals.” *Science*, v. 341, no. 6146, 613 (2 pp.).
- X. Ni, D.L. Gebo, M. Dagosto, J. Meng, P. Tafforeau, J.J. Flynn, K.C. Beard. 2013. The oldest known primate skeleton and early haplorhine evolution. *Nature*, v. 498, issue 7452, p. 60-64.
- A. Goswami, G.V.R. Prasad, O. Verma, J.J. Flynn, and R.B.J. Benson. 2013. A troodontid dinosaur from the latest Cretaceous of India. *Nature Communications* 4:1703, p. 1-5.
- J.J. Flynn. Carnivora. In: Kingdon, J.S. & Hoffmann, M. (Eds). *The Mammals of Africa Vol 5. Carnivora, Pholidota, Perissodactyla*. In Series: Kingdon, J., Butynski, T. and

Happold, D. (Eds). The Mammals of Africa Vols 1-6. Academic Press, Amsterdam. pp. 23-26.

M.A. O'Leary, J.I. Bloch, J.J. Flynn, T.J. Gaudin, A. Giallombardo, N.P. Giannini, S.L. Goldberg, B.P. Kraatz, Z.-X. Luo, J. Meng, X. Ni, M.J. Novacek, F.A. Perini, Z. Randall, G.W. Rougier, E.J. Sargis, M.T. Silcox, N.B. Simmons, M. Spaulding, P.M. Velazco, M. Weksler, J.R. Wible, and A.L. Cirranello. Phylogenetic reconstruction of the post K-Pg placental ancestor and a transformation of the scale of phylogenomics. 2013. *Science*, v. 339, p. 662-667.

SPECIAL RECOGNITION/AWARDS

Webby Awards 2014, Honorable Mention in Online Film & Video: Technology category, for American Museum of Natural History video "*Researchers Reconstruct Common Ancestor of Placental Mammals*", reporting on results of NSF AToL (Assembling The Tree of Life) – Mammalia Morphology team grant project.

16th Annual Communicator Awards (2010), Awards of Excellence for Extreme Mammals exhibit. *Isolation* Video: (with team: S. Galloway, K. Santiago) and *Locomotion* Interactive (with team: C. Benitez, E. McCarthy, K. Santiago, I. Urbina, B. Wilson).

Clara Jones Langston Lecturer in Vertebrate Paleontology, University of Texas at Austin, April 2010.

Fellow, American Association for the Advancement of Science (AAAS); elected a Fellow, in the Geology & Geography Section, by the AAAS Council, 2009.

Joseph T. Gregory Award, Society of Vertebrate Paleontology, honoring outstanding service to the welfare of the Society of Vertebrate Paleontology, 2007.

Appointed to named curatorship (Frick Curator of Fossil Mammals), AMNH, 2004.

Premio "Roberto Araya" (Roberto Araya Prize), Sociedad Geológica de Chile, awarded 8 April 2002; for the best presentation of the year, "*Vertebrados fósiles en Chile*", 16 October 2001.

Fellow, John Simon Guggenheim Memorial Foundation, New York, awarded 2001. "*The interplay of evolution and geologic change in South America*"; fellowship to support sabbatical year (July 2001-2002) of research, writing, and exploration in Chile.

Elected President, Society of Vertebrate Paleontology (October 1998-2000; Past-President, 2000-2002; Vice-President/President-Elect 1996-1998; Secretary, 1993-1996; Board/Executive Committee, 1993-2002)

Golden Muse Award, First Place for *Dino Documentary* (Field Museum Public Relations and RPM Advertising produced 30 second public service announcement of 1997 summer exhibit *Dino Families*; featured scientist), 8th Annual Muse Awards (1998; American Association of Museums); also awarded Bronze Telly (national award for advertising excellence).

First Place, Science Category, 6th Annual Muse Awards (1996; American Association of Museums), for "*Life Over Time News/The Evolutionary Broadcasting Network*" series (scientific content specialist on Development team).

"Best Museum Curator", 25th Anniversary Edition ("The Best of Chicago"), Chicago Magazine, December 1995.

Appointed to named curatorship (John D. and Catherine A. MacArthur Curator), Field Museum, 1995.

Alfred Sherwood Romer Prize (4th Annual), Society of Vertebrate Paleontology, 1982.

For "Original and important research in Vertebrate Paleontology, and a presentation of highest quality at the Annual Meeting."

Fellow of the Faculty, Columbia University, 1977-1979 and 1980-1982.

Fellow of the Graduate Alumni Faculties, Columbia University, 1979-1980.

William R. Belknap Prize (Excellence in Geology), Yale University, 1977.
Special Distinction in the Major (Geology and Geophysics), Yale University, 1977.
Henry Moses Scholarship, Yale University, 1973-1977.