

CURRICULUM VITAE

MAUREEN A. O'LEARY

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POSITIONS

CURRENT POSITIONS

Professor, Stony Brook University, Stony Brook, New York, 2014-present
Member, Interdepartmental Doctoral Program in Anthropological Sciences, Stony Brook University, 1998-present
Joint Faculty Member, Department of Geosciences, Stony Brook University, 2000-present
Research Associate, Department of Vertebrate Paleontology, American Museum of Natural History, New York, 1997-present

PRIOR POSITIONS

Associate Professor, Stony Brook University, Stony Brook, New York, 2007-2014
Assistant Professor, Stony Brook University, Stony Brook, New York, 1999-2007
Postdoctoral Associate, Stony Brook University, Stony Brook, New York, 1997-1999
Postdoctoral Associate, Dept. of Cell Biology, New York University Medical Center, 1996-1997

EDUCATION

Ph.D. (Anatomy: Vertebrate Paleontology), Johns Hopkins University, School of Medicine, 1990-1996
B.S. (Biology), Yale University, 1983-1987, cum Laude

RESEARCH SUPPORT

CURRENT RESEARCH SUPPORT - FEDERAL

National Science Foundation (PI – **O'Leary** with subaward to Phoenix Bioinformatics)
“Supplement to ABI Sustaining Award”. **\$85,556**, 2019-2020.
National Science Foundation (PI – **O'Leary**, co-PIs, D. Ferguson, N. Simmons)
“Innovative tools for incorporating continuous data from fossils in phylogenetic tree building: leveraging the MorphoBank platform” **\$189,898**, 2016-2019.
National Science Foundation (PI – **O'Leary**, co-PIs D. Ferguson, N. Simmons)
“ABI Sustaining – MorphoBank: the web tool and database for phylogenetic tree-building with phenotypes and and the interpretation of trait evolution.” **\$462,551**. 2015-2019
National Science Foundation (PI –Ramakrishnan, C. R., co-PIs, D. S. Warren, Y. Liu, S. A. Smolka, I.V. Ramakrishnan, and M. A. O'Leary) “BIGDATA: F:DKM:DKA: Big Data Modeling and Analysis with Depth and Scale.” \$982,467 (O'Leary budget **\$113,746**), 2014-2019.

PRIOR RESEARCH SUPPORT

- National Science Foundation (PI - **O'Leary**) "Supplement for Special Creativity for Collaborative Research: AVAToL – Next Generation Phenomics for the Tree of Life" (O'Leary budget **\$182,443**), 2014-2016.
- National Science Foundation (PI – O'Leary) "Collaborative Research: AVAToL – Next Generation Phenomics for the Tree of Life" (O'Leary budget **\$798,802**, Stony Brook University is lead institution of 11 collaborators, total project budget \$3.4 million), 2012-2015.
- National Science Foundation (**PI-O'Leary**, co-PIs, D. Ferguson, J. Bloch, M. Silcox, E. Sargis) "ATOL: Collaborative research: resolving mammalian phylogeny with genomic and morphological approaches," **\$388,146** (O'Leary budget, \$252,213, University of Florida subaward, \$135,933), 2006-2011)
- National Science Foundation (**PI-O'Leary**, co-PI D. Ferguson) "Cloud computing the phenotype: migrating key functions of MorphoBank from a "local cloud" to a production level cloud on the MS Azure platform – support for expanded phenomics research" **\$118,165**, 2009-2010
- National Science Foundation (**PI-O'Leary**, co-PIs: C. Baru, D. Ferguson, K. Lin) "Transforming morphological systematics from desktop to web applications: Development of the online workspace MorphoBank.org 3.0" **\$610,614** (O'Leary budget \$358,614, SDSC subaward, \$252,000), 2007-2010
- National Geographic Society. (**PI-O'Leary**, co-PIs, E. Roberts, L. Tapanila, D. Goodwin, and R. Speijer) "The Trans-Saharan Seaway Project: An Examination of Cretaceous-Eocene Strata in a Section with Vertebrate Fossils in the Tropics of Continental Africa" **\$25,564**, 2007
- National Science Foundation (**PI-O'Leary**, co-PIs: D. Goodwin, E. M. Roberts, L. Tapanila) "SGER: Intensive Collection of Paleocene-Eocene Mammal Fossils and Development of a Stratigraphic Section in the Trans-Saharan Seaway (Mali)" **\$29,988**, 2007
- National Science Foundation (**PI-O'Leary**, co-PI D. Ferguson) "Geoinformatics: MorphoBank, Web-based systematics software and archive for transforming the study of fossils in contemporary geoscience research," **\$196,335**. 2006-2010
- National Science Foundation (**PI-O'Leary**, co-PIs E. Roberts, L. Tapanila, D. Goodwin) "SGER: Intensive Collection of Paleocene-Eocene Mammal Fossils and Development of a Stratigraphic Section in the Trans-Saharan Seaway (Mali)," **\$29,988**, Division of Earth Sciences, 2008-2010
- National Science Foundation, National Evolutionary Synthesis Center (**PI - O'Leary**) "Enhancing the interoperability of Morphbank and MorphoBank," **\$25,000**, 2005-2006
- National Oceanic and Atmospheric Administration, (PI - Eleanor Sterling, American Museum of Natural History; **subcontractor-O'Leary**) "Understanding aquatic environments: Education, outreach and research at the American Museum of Natural History," **\$61,400**, 2004-2005
- National Science Foundation, (**PI-O'Leary**; co-PI D. W. Krause) "Acquisition of instruments and technical support for an interdepartmental fossil preparation laboratory," **\$325,620**, Division of Earth Sciences, 2001-2005
- National Science Foundation (**PI-O'Leary**, Grant for Ph.D. candidate Robert V. Hill) "Dissertation Research: New Data from the Integument and Osteoderms for Amniote Phylogeny," Division of Environmental Biology **\$8,723**, 2002-2004

- National Science Foundation (**PI-O'Leary**), "Workshop to plan an interactive web data matrix (MorphoBank) for storage and retrieval of morphological data for phylogenetic analysis," **\$51,954**, Division of Environmental Biology and Division of Earth Sciences, 2001-2004
- National Science Foundation, (**PI-O'Leary**; collaborative with J. Gatesy) "Cetacean phylogeny: A reconciliation of fossil and neontological data and the importance of taxonomic sampling," Division of Environmental Biology (Systematics), **\$138,044**, 1999-2004
- Leakey Foundation (**PI-O'Leary**) "Continued search for Paleogene anthropoids from Mali including detailed biostratigraphy," **\$20,000**, 2000
- National Geographic Society (**PI-O'Leary**) "Preparation of fossils recovered from Mali expedition," **\$1,500**, 1999-2000
- National Geographic Society (**PI-O'Leary**) "Fossil mammals from the Cretaceous and Tertiary of Mali," **\$19,960**, 1999
- Leakey Foundation (**PI-O'Leary**), "Paleogene anthropoids from West Africa: Exploration of northeastern Mali," **\$11,807**, 1999
- Theodore Roosevelt Fund (**PI-O'Leary**), American Museum of Natural History, "Fossil mammals from the Sand Wash Basin," **\$2,000**, 1998
- National Science Foundation Doctoral Dissertation Improvement Grant (PI: Kenneth D. Rose, O'Leary's Ph.D. advisor), "Documentation of gradual evolution in the oldest true primates," **\$10,300**, 1993-1996

HONORS, AWARDS, FELLOWSHIPS

- Excellence in Senior Research Award, Renaissance School of Medicine, Stony Brook University, 2019
- Jack T. Stern Award for outstanding teaching, Department of Anatomical Sciences, Stony Brook University, 2017
- Hero of the Year Award for science research mentorship of minorities at Uniondale High School, 2004
- Ales Hrdlicka Prize for graduate student research, American Association of Physical Anthropologists, 1996
- Johns Hopkins School of Medicine Graduate Student Scholarship, 1990-1995
- Fellows Prize, Saybrook College, Yale University, 1987
- Bates Fellowship for undergraduate scientific research, Yale University, 1986
- Jackson Laboratory, "Training for Research" program, Bar Harbor, Maine, 1982

LECTURES

INVITED SCIENTIFIC AND PUBLIC LECTURES

- Richard Gilder Graduate School, American Museum of Natural History, Comparative Biology Seminar Series, 2009
- Johns Hopkins University, Department of Functional Anatomy and Evolution, 2009
- Rutgers University, Department of Geosciences, 2007
- George Washington University, Department of Biology, 2007
- Duke University, Department of Biology, Tree of Life Symposium, 2006
- National Academy of Sciences, 16th Beckman Frontiers of Science conference, Beckman Center, Irvine, California, 2004
- Stony Brook University, public lecture on systematics, Stony Brook, New York, 2004
- University of Massachusetts, Department of Organismic and Evolutionary Biology, Amherst, 2004
- Cold Spring Harbor Laboratories, Dolan Center, Cold Spring Harbor, New York, 2002

American Museum of Natural History, "Tree of Life" conference, 2002
 University of California, Berkeley, Department of Integrative Biology, 2002
 University of Connecticut, Department of Ecology and Evolutionary Biology,
 2001

American Museum of Natural History, Systematics Seminar Series, 2001
 University of Chicago, Department of Organismal Biology, Evolutionary
 Morphology Seminar Series, 2000

Universität Tübingen, Spezielle Zoologie, 1999

Harvard University, Department of Organismal and Evolutionary Biology, 1998

Queens College, Department of Biology, 1998

State University of New York at Stony Brook, Dept. of Anatomical Sciences,
 Paleobiology seminar series, 1997

INVITED SCIENTIFIC WORKSHOPS AND SYMPOSIA

International Legume Morphology Symposium & Workshop, Brazil, 2015

National Science Foundation, Ideas Lab, Division of Environmental Biology, Lake Placid,
 New York, 2011

National Science Foundation, Future of Systematics Workshop, Chicago, 2009

National Science Foundation, Assembling the Tree of Life, multi-project Principal
 Investigators Meeting, New Orleans, 2008

National Science Foundation, Ppod - Phylogenetics Workshop, National
 Evolutionary Synthesis Center, Durham, North Carolina, 2007

National Science Foundation, Building a Geoinformatics Infrastructure, Denver,
 Colorado, 2007

National Evolutionary Synthesis Center, Meta-Data workshop, Wilmington,
 North Carolina, 2005

NSF-National Evolutionary Synthesis Center, Morphobank-Morphbank
 Collaboration, Durham, North Carolina, 2005

National Science Foundation "A Tree of Life", workshop on databasing
 morphology, 2004

National Center for Biotechnology Information (NCBI) - National Institutes of
 Health (NIH), workshop on DNA barcoding, 2004

University of Florida, Tallahassee, workshop to develop a consortium on
 morphological databases for systematics, 2004

University of Florida, Gainesville "An NSF workshop on establishing a
 comprehensive database for plant systematics," 2004, NSF

New York Botanical Garden, "Development of a National Systematics
 Infrastructure: A Virtual Instrument for the 21st Century," conference 2003

Cold Spring Harbor, Banbury Center, "Taxonomy and DNA," conference 2003

University of Florida, Gainesville, "Deep Time," conference, 2002

University of Texas, Austin, NSF- A Tree of Life program development
 Conference, 2000

Yale University and the National Science Foundation - A Tree of Life program
 development conference, 1999

TEACHING

GRADUATE COURSES TAUGHT

Systematics, Comparative Methods and Biogeography (co-Course Director),
2010 – present (taught bi-annually)
Gross Anatomy of the Head, Neck and Trunk/Regional Human Anatomy (dissection-based), Stony Brook University, 1997-present
Gross Anatomy, New York University School of Medicine, 1996

Participation in the following Stony Brook University Graduate courses:
Primate Evolution, Vertebrate Evolution, Human Evolution, Geosciences
Gross Anatomy (Teaching Assistant), Johns Hopkins University, School of Medicine, 1995
Research Seminar, Macroevolution, 1998-present

UNDERGRADUATE COURSES TAUGHT

Regional Human Anatomy (undergraduate, with dissection) 1998-present
Building Web Applications for Bioinformatics, 2012, 2016
Life Through Time, Stony Brook University, 2000-2006

PALEONTOLOGICAL FIELD PROJECTS

LEADER

Faculty of Sciences, Chouaib Doukkali University-American Museum of Natural History
– Stony Brook University – Expedition to Cretaceous and Tertiary rocks of northern Morocco, 2014
Stony Brook University – Cheik Anta Diop University Paleontological Expedition to Cretaceous and Tertiary rocks of Senegal, 2010
Stony Brook University – Centre National de la Recherche Scientifique et Technologique, Bamako Paleontological Expedition to Cretaceous and Tertiary rocks of northeastern Mali, 1999, 2003, 2008
Stony Brook University - American Museum of Natural History Paleontological Expedition, Early Tertiary rocks of the Sand Wash Basin, Colorado, 1998

MEMBER

American Museum of Natural History Expedition, Washakie Basin, Wyoming, 1997
Duke University Paleontological Expedition, Fayum, Egypt, 1993
Johns Hopkins-USGS Paleontological Expedition, Bighorn Basin, Wyoming, 1991-1993
Iowa State Geology Field Course, Shell, Wyoming, 1993

UNIVERSITY AND PROFESSIONAL SERVICE

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Hennig Society, 1997-present
Society of Vertebrate Paleontology, 1992-present
Society of Systematic Biologists, 1993-2005

Stony Brook University Service

Co-chair, East Campus Environmental Committee, 2008-2011
 Campus Safety Advisory Committee, Office of the President, member, 2008
 Curriculum Review Committee, Course Evaluator, 2009
 Executive Committee of Faculty Senate, School of Medicine, member 2006-08
 Medical Admissions Committee, Stony Brook University, member, 2002-05
 Representative to the Campus Environmental Committee for the Department of Anatomical Sciences, 2007
 Lecturer in "Living World Lecture Series," Stony Brook University 2004
 Scientific Seminar, Geosciences Department, Stony Brook University, 2004
 Faculty Senate, School of Medicine, Stony Brook University, 2002-2009

DEPARTMENTAL SERVICE

Graduate Program Director, Department of Anatomical Sciences, 2007-present
 Departmental website redesign (with Alan Turner), Department of Anatomical Sciences, 2008, 2019
 Department of Anatomical Sciences Laboratory Safety Coordinator, 2007-present
 Department of Anatomical Sciences gross dissection laboratory supervisor, Stony Brook University, 2002-present
 Associated Medical Schools Anatomical Materials Subcommittee, member, 2004-present
 Member, Assistant Professor Search Committee, Department of Anatomical Sciences, 2004
 Chair, Teaching Assistant Committee, Interdepartmental Doctoral Program in Anthropological Sciences, SUNY Stony Brook, 2000-2002

PROFESSIONAL SERVICE

National Science Foundation, panel member, Division of Environmental Biology, 2015
 National Science Foundation, panel member, Division of Earth Sciences, Sedimentary Geology and Paleontology, 2014
 Director of the MorphoBank project, a federally supported and publicly available scientific web application and database, 2001-present
 National Science Foundation, panel member, Geoinformatics, Division of Earth Sciences, 2009
 Associate Editor, *Cladistics*, 2009-present
 National Science Foundation, panel member, Assembling the Tree of Life, Division of Environmental Biology, 2009
 AmpibAnat, NSF-sponsored databasing effort, board member, 2007-08
 National Science Foundation, panel member, Systematics, 2007
 Council Member (elected), Society of Systematic Biologists, 2004-07
 Chair, Skinner Prize Committee, Society of Vertebrate Paleontology, 2000-04
 National Science Foundation, panel member, Division of Geosciences (Geology and Paleontology), 2003
 Associate Editor, *Journal of Vertebrate Paleontology*, 2000-02
 National Science Foundation, panel member, Division of Environmental Biology (Systematics), 2001 and 2002
 Romer-Simpson Medal Committee, Society of Vertebrate Paleontology, 2000-02
 Student Poster Prize Committee, Society of Vertebrate Paleontology, 1999-2001
 Information Management Committee, Society of Vertebrate Paleontology, 1998-2000
 Grant proposals reviewed annually for: National Science Foundation, National Geographic Society, 1999-present

PUBLICATIONS

PEER-REVIEWED RESEARCH ARTICLES AND MONOGRAPHS (55)**MONOGRAPHS (3)**

3. O'Leary, M. A., M. L. Bouaré, K. M. Claeson, K. Heilbronn, R. V. Hill, J. McCartney, J. A. Sessa, F. Sissoko, L. Tapanila, E. Wheeler, and E. M. Roberts. 2019. Stratigraphy and paleobiology of the Upper Cretaceous – lower Paleogene sediments from the Tran-Saharan Seaway in Mali. 2019. ***Bulletin of the American Museum of Natural History***. 436:1-177.
2. O'Leary, M. A. 2016. Comparative basicranial anatomy of extant terrestrial and semi-aquatic Artiodactyla. ***Bulletin of the American Museum of Natural History***. 409:1-55.
1. O'Leary, M. A. 2010. An anatomical and phylogenetic study of the osteology of the petrosal of extant and extinct Artiodactylans (Mammalia) and relatives. ***Bulletin of the American Museum of Natural History***. 335:1-206.

ARTICLES (52)

52. Gatesy, J., M. Orliac, M. Spaulding, and M. A. O'Leary. In Press. Artiodactylamorpha ***Phylocode Companion Volume***.
51. O'Leary, M. A., M. Orliac, M. Spaulding, and J. Gatesy. In Press. Artiodactyla. ***Phylocode Companion Volume***. In Press.
50. McCartney, J. A., E. M. Roberts, L. Tapanila, and M. A. O'Leary. 2018. Large palaeophiid and nigerophiid snakes from Paleogene Trans-Saharan Seaway deposits of Mali. ***Acta Palaeontologica Polonica***. 63:207-220.
49. O'Leary, M. A., K. Alphonse, M. Arce-H., D. Cavaliere, A. Cirranello, T. Dietterich, M. Julius, S. Kaufman, E. Law, M. Passarotti, A. Reft, J. Robalino, N. B. Simmons, S. Smith, D. Stevenson, E. Theriot, P. Velazco, R. Walls, M. Yu, and M. Daly. 2018. Crowds replicate performance of scientific experts scoring phylogenetic matrices of phenotypes. ***Systematic Biology***. 67:49-60.
48. Laing, A., S. Doyle, M. E. L. Gold, S. J. Nesbitt, M. A. O'Leary, A. H. Turner, E. W. Wilburg, and K. E. Poole. 2017. Giant taxon-character matrices: the future of morphological systematics. ***Cladistics***. 1-3.
47. Arce-H., M., J. G. Lundberg, and M. A. O'Leary. 2017. Phylogeny of the North American catfish family Ictaluridae (Teleostei: Siluriformes) combining morphology, genes and fossils. ***Cladistics***. 33:406-428.
46. Robalino, J., B. Wilkins, H. Bracken-Grissom, T.-Y. Chan, and M. A. O'Leary. 2016. The origin of large-bodied shrimp that dominate modern global aquaculture. ***PLoS One***. 1-24.
45. Orliac, M. and M. A. O'Leary. 2016. The inner ear of *Protungulatum* (Pan-Euungulata, Mammalia). ***Journal of Mammalian Evolution***. 1-16.
44. Hill, R. V., R. M. Roberts, L. Tapanila, M. L. Bouare, F. Sissoko, M. A. O'Leary. 2015. Multi-species scavenging in the Trans-Saharan Seaway: Evidence from Late Cretaceous dyrosaurid (Crocodyliformes) fossils from Northeastern Mali. ***Palaios***. 30:589-596.
43. Claeson, K. M., R. Sarr, R. V. Hill, E. H. Sow, R. Malou, and M. A. O'Leary. 2015. New fossil scombrid (Pelagia:Scombridae) fishes preserved as predator and prey from the Eocene of Senegal. ***Proceedings of the Academy of Natural Sciences, Philadelphia***. 164:133-147.
42. Miller, M., T. Schwartz, B. E. Pickett, S. He, E. B. Klem, R. H. Scheuermann, M. Passarotti, S. Kaufman, M. A. O'Leary. 2015. A RESTful API for access to phylogenetic tools via the CIPRES Science Gateway. ***Evolutionary Bioinformatics***. 11: 1-6.

41. Cranston, K., L. J. Harmon, M. A. O'Leary, and C. Lisle. In review. Best practices for data sharing in phylogenetic research. 2014. *PLoS Currents Tree of Life*. 1-8.
40. Orliac, M. J., and **M. A. O'Leary**. 2014. Comparative anatomy of the petrosal bone of dichobunid artiodactyls (Mammalia). *Journal of Mammalian Evolution*. 221:417-426
39. Hu, X., M. Lam, S. Todorovic, T. G. Dietterich, M. A. **O'Leary**, A. L. Cirranello, N. B. Simmons, and P. M. Velazco. 2013. Zero-shot learning and detection of teeth in images of bat skulls. *2013 IEEE International Conference on Computer Vision Workshops*. 1-7.
38. **O'Leary**, M. A., 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. 2013. Response to comment on "The placental mammal ancestor and the post-K-Pg radiation of placentals." *Science*. 341:613.
37. Burleigh, G., K. Alphonse, A. A. Alverson, H. M. Bik, C. Blank, A. L. Cirranello, H. Cui, M. Daly, T. G. Dietterich, G. Gasparich, J. Irvine, M. Julius, S. Kaufman, E. Law, J. Liu, L. Moore, M. A. **O'Leary**, M. Passarotti, S. Ranade, N. B. Simmons, D. W. Stevenson, R. W. Thacker, E. C. Theriot, S. Todorovic, P. M. Velazco, R. L. Walls, J. M. Wolfe, and M. Yu. 2013. Next Generation phenomics for the Tree of Life. *PLoS Currents: Tree of Life*. Edition 1. doi: 10.1371/currents.tol.085c713acafc8711b2ff7010a4b03733.
36. **O'Leary**, M. A., 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. 2013. The placental mammal ancestor and the post-K-Pg radiation of placentals. *Science*. 332:662-667.
35. Uhen, M. D., A. D. Barnosky, B. Bills, J. Blois, M. A. Carasco, M. T. Carrano, G. M. Erickson, M. Fortelius, R. W. Graham, E. C. Grimm, M. **O'Leary**, A. Mast, W. Piel, and P. D. Polly. 2013. From card catalogues to computers: databases in vertebrate paleontology. *Journal of Vertebrate Paleontology*. 33:13-28.
34. **O'Leary**, M. A., R. Sarr, R., Malou, E. H. Sow, R. V. Hill, and C. Lepre. 2012. A new fossil amiid from the Eocene of Senegal and the persistence of extinct marine amiids after the Cretaceous-Tertiary boundary. *Copeia*. 4:603-608.
33. Orliac, M. J., J. Benoit, and M. A. **O'Leary**. 2012. The inner ear of *Diacodexis*, oldest artiodactyl mammal. *Journal of Anatomy*. 221:417-426.
32. **O'Leary**, M. A., B. A. Patel, and M. N. Coleman. 2012. Endocranial petrosal anatomy of *Bothriogenys* (Mammalia, Artiodactyla, Anthracotheriidae), and petrosal volume and density comparisons among aquatic and terrestrial artiodactyls and outgroups. *Journal of Paleontology*. 86:44-50.
31. **O'Leary**, M. A. and A. L. Wetterer. 2011. Basicranium of *Harpagolestes uintensis* (Mammalia, Mesonychia). *Journal of Vertebrate Paleontology*. 31:913-918.
30. **O'Leary**, M. A., and S. Kaufman. 2011. MorphoBank: phylophenomics in the "cloud". *Cladistics*. 27:1-9.
29. Claeson, K. M., M. A. **O'Leary**, E. M. Roberts, F. Sissoko, M. Bouare, L. Tapanila, D. Goodwin, and M. D. Gottfried. 2010. First Mesozoic record of the stingray *Myliobatis wurnoensis* from Mali and a phylogenetic analysis of Myliobatidae incorporating dental characters. *Acta Paleontologica Polonica*. 55: 655-674.

28. Spaulding, M., M. A. **O'Leary**, J. Gatesy. 2009. Relationships of Cetacea (Mammalia, Artiodactyla) among mammals: increased taxon sampling alters positions of key fossils and interpretations of character evolution. ***PLOS One***. 4:1-14. <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0007062>
27. Hill, R. V., J. A. McCartney, E. Roberts, M. Bouare, F. Sissoko, and M. A. **O'Leary**. 2008. Dyrosaurid (Crocodyliformes: Mesoeucrocodylia) fossils from the Upper Cretaceous and Paleogene of Mali: implications for phylogeny and survivorship across the K-T boundary. ***American Museum Novitates***. 3631:1-19.
26. **O'Leary**, M. A., and J. Gatesy. 2008. Impact of increased character sampling on the phylogeny of Cetartiodactyla (Mammalia): combined analysis including fossils. ***Cladistics***. 24:397-442.
25. Tapanila, L., E. M. Roberts, M. L. Bouare, F. Sissoko, and M. A. **O'Leary**. 2008. Phosphate taphonomy of bone and coprolite conglomerates: A case study from the Eocene of Mali, NW Africa. ***Palaios***. 23:139-152. (**Cover article**).
24. Gaffney, E. S., E. Roberts, F. Sissoko, M. L. Bouare, L. Tapanila, and M. A. **O'Leary**. 2007. *Acleistochelys*, a new side-necked turtle (Pelomedusoides: Bothremydidae) from the Paleocene of Mali. ***American Museum Novitates***. 3549:1-24.
23. **O'Leary**, M. A., E. M. Roberts, M. L. Bouare, F. Sissoko, and L. Tapanila. 2006. Malian Paenungulata (Mammalia: Placentalia): new candidates for the oldest African afrotheres. ***Journal of Vertebrate Paleontology***. 26:981-988.
22. Meisner, A. D., A. V. Klaus, and M. A. **O'Leary**. 2005. Sperm head morphology of 36 species of artiodactylans, perissodactylans and cetaceans (Mammalia). ***Journal of Morphology***. 263:179-202.
21. Tapanila, L., E. M. Roberts, M. L. Bouaré, and F. Sissoko, and M. A. **O'Leary**. 2004. Bivalve borings in phosphatic coprolites and bone, Cretaceous-Paleogene of Mali. ***Palaios***. 19:565-573.
20. **O'Leary**, M. A., E. Roberts, J. J. Head, M. Bouaré, and F. Sissoko. 2004. A saltasaurid Titanosaurian (Dinosauria: Sauropoda) from the "Continental Intercalaire" of Mali. ***Journal of Vertebrate Paleontology***. 24:923-930.
19. **O'Leary**, M. A., M. Allard, M. J. Novacek, J. Meng, and J. Gatesy. 2004. Building the mammalian sector of the tree of life. Pp. 490-516. *In* (J. Cracraft and M. J. Donoghue, eds.) ***Assembling the Tree of Life***. Oxford University Press, New York.
18. **O'Leary**, M. A. 2004. A fragmentary odontocete cranium from the Lower Miocene of Venezuela. ***Special Papers in Palaeontology***. 71:99-104.
17. **O'Leary**, M. A., J. Gatesy, and M. J. Novacek. 2003. Are the dental data really at odds with the molecular data? Morphological evidence for paraxonian phylogeny (re)reexamined. ***Systematic Biology***. 52:853-864.
16. Bamford, M. K., E. M. Roberts, F. Sissoko, M. L. Bouaré, and M. A. **O'Leary**. 2002. An extensive deposit of fossil conifer wood from the Mesozoic of Mali, southern Sahara. ***Palaeogeography, Palaeoclimatology, Palaeoecology***. 186:115-126.
15. Brochu, C. A., M. L. Bouaré, F. Sissoko, E. M. Roberts, and M. A. **O'Leary**. 2002. A dyrosaurid crocodyliform braincase from Mali. ***Journal of Paleontology***. 76:1060-1071.
14. Gatesy, J. and M. A. **O'Leary**. 2001. Deciphering Whale Origins with Molecules and Fossils. ***Trends in Ecology and Evolution***. 16:562-570. (**Cover article**).

13. **O'Leary**, M. A. 2001. The phylogenetic position of cetaceans: further combined data analyses, comparisons with the stratigraphic record and a discussion of character optimization. *American Zoologist*. 41:487-506.
12. Brochu, C. A., H. N. Bryant, J. M. Theodor, M. A. **O'Leary**, J. Adrian, and C. D. Sumrall. 2001. Modern phylogenetics in paleontology: Comments on Vermeij. *Paleobiology*. 27:174-176.
11. **O'Leary**, M. A., S. G. Lucas, and T. E. Williamson. 2000. A new specimen of *Ankalagon* (Mammalia, Mesonychia) and evidence of sexual dimorphism in mesonychians. *Journal of Vertebrate Paleontology*. 20:387-393.
10. **O'Leary**, M. A. and M. D. Uhen. 1999. The time of origin of whales and the role of behavioral changes in the terrestrial-aquatic transition. *Paleobiology*. 25:534-556.
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DISSERTATION

- O'Leary, M. A. 1996. Dental evolution in the early Eocene Notharctinae (Primates, Adapiformes) from the Bighorn Basin, Wyoming: documentation of gradual evolution in the oldest true primates. Ph.D thesis, Johns Hopkins University.

SOFTWARE PACKAGES DEVELOPED AND AVAILABLE TO THE SCIENTIFIC COMMUNITY (1)

- O'Leary, M. A., and S. G. Kaufman. 2012. MorphoBank 3.0: Web application for morphological phylogenetics and taxonomy. <http://www.morphobank.org>.

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29. Arce-H., M. and M. O'Leary. 2015. Reinvestigating the Phylogeny of Ictaluridae, a Study Done Using MorphoBank. **Joint meeting of Ichthyologists and Herpetologists (JMIH)** hosted by University of Nevada, Reno. July 15-19.
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26. O'Leary, M. A. 2011. MorphoBank: collecting and storing phenomic data for phylogenetic research in the "cloud". **American Association of Physical Anthropologists**.
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21. Tapanila, L., E. M. Roberts, and M. A. O'Leary. 2004. Cretaceous-Tertiary faunas of the trans-Saharan seaway in NW Africa: Trends in preservation and Paleoeology. *Journal of Vertebrate Paleontology*. 24 (Supplement to No. 3): 120A.
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SELECTED COVERAGE OF RESEARCH IN SCIENTIFIC/POPULAR PRESS AND MUSEUM EXHIBITS

21. Maclean, R. 2019 (July 12). Sahara was home to some of largest sea creatures, study finds. **The Guardian**. <https://www.theguardian.com/science/2019/jul/12/sahara-was-home-to-some-of-largest-sea-creatures-study-finds>
20. Wilford, J. 2013 (February 7). Rat-sized ancestor said to link man and beast. **New York Times**. http://www.nytimes.com/2013/02/08/science/common-ancestor-of-mammals-plucked-from-obscurity.html?pagewanted=all&_r=0
19. Wong, K. 2013 (February 7). Meet the last common ancestor of bats, whales, sloths and humans. **Scientific American**. <http://blogs.scientificamerican.com/observations/2013/02/07/meet-the-last-common-ancestor-of-bats-whales-sloths-and-humans/>
18. Palmer, J. 2013 (February 7). Earliest placental mammal ancestor pinpointed. **BBC** <http://www.bbc.co.uk/news/science-environment-21350900>.
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16. National Academy of Sciences, **Beckman Frontiers of Science**, O'Leary seminar archived at <http://63.251.167.36/beckmanfrontiers/progressive/maureenoleary/index.htm>)
15. Vertebrate paleontology exhibit kiosk at the **American Museum of Natural History. Wallach Orientation Center**. 2003-present.
14. Pennisi, E. 2003. Modernizing the Tree of Life: A new generation of systematists seeks to transform its field with the tactics of big science. **Science**. 300:1692-1697.
13. Interview for a television special on whale evolution. 2002. **Dateline NBC**.
12. Walking with Prehistoric Beasts. 2002-present (continues to air), interview. **The Discovery Channel**.
11. Wong, K. 2002. The mammals that conquered the Seas. **Scientific American**. May. 71-79.

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9. Kim, A. L. 2001. Frogs take 2 students far. *Newsday*. April 21:A4, A29.
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2. Luo, Z. 2000. In search of the whales' sisters. *Nature*. 404:235-237.
1. Carroll, R. 1997. "The origin of whales," *Patterns and Processes of Vertebrate Evolution*. 320-331.

TRAINING FOR RESEARCH

POSTDOCTORAL FELLOWS – EACH SPONSORED WITH NSF SUPPORT TO THE O'LEARY LAB

- Dr. Mariangeles Arce Hernandez, phylogenetics of fossil fish and advances in phenomic data collection 2014-2015
- Dr. Javier Robalino, phylogenetics of shrimp and advances in phenomic data collection for tree-building, 2014-2015.
- Dr. Andrea Wetterer (comparative morphology of ungulates and cetaceans for phylogenetics), 2011-2012
- Dr. Amy Downing Meisner (sperm morphology diversity in whales and relatives examined with scanning electron microscopy), 2003-04.

PH.D. STUDENTS ADVISED (* = O'LEARY, MAJOR ADVISOR)

- ❖ advisees who currently occupy academic positions
- Steven Heritage (Ph.D. in progress), Interdepartmental Doctoral Program in Anthropological Sciences (phylogenetics of Macroscelidea)
- ❖ Matthew Borths (Ph.D. 2015), Department of Anatomical Sciences (phylogenetics of mammalian carnivorans)
- ❖ Simone Hoffman (Ph.D. 2016), Department of Anatomical Sciences (phylogenetics of Mesozoic mammals)
- *❖ Gina Sorrentino (Ph.D. 2012), Department of Anatomical Sciences (development and evolution of mammalian female reproductive anatomy)
- ❖ Michelle Spaulding (Ph.D. 2011), Department of Paleontology, American Museum of Natural History
- ❖ Doug Boyer (Ph.D. 2009), Department of Anatomical Sciences (phylogenetics of euprimates)
- ❖ Karen Samonds (Ph.D. 2006), Department of Anatomical Sciences (Bat phylogenetics)
- *❖ Robert V. Hill (Ph.D. 2004), Department of Anatomical Sciences (Amniote phylogeny with particular focus on dermal armor)

MASTERS STUDENTS ADVISED (* = O'LEARY, MAJOR ADVISOR)

- Heather Smith (MS 2001), Interdepartmental Doctoral Program in Anthropological Sciences (Hominid phylogenetics)
- *Felicia Brenoe (MS, 1999), Interdepartmental Doctoral Program in Anthropological Sciences (New World monkey phylogenetics based on osteology)

UNDERGRADUATE STUDENTS ADVISED WITH NSF SUPPORT

Alvaro Quintanilla, 2019, web applications for evolutionary biology

Ryan Webber, 2016, web applications for evolutionary biology

Fabio Flores, 2016, web applications for evolutionary biology

Jason Fontaine, 2015, web applications for evolutionary biology

Kenzley Alphonse, 2009, web applications for morphology

Andre Hamilton, 2006, informatics infrastructure for morphology

Steven Villaverde, 2005-2006, informatics infrastructure for morphology

Jessica Tupper, Stony Brook University (patterns of evolution of ear ossicles in whales and relatives), 2004-2005

Kerin Claeson, Stony Brook University (phylogenetics of the mammal genus *Dissacus*), 1999-2002

HIGH SCHOOL STUDENTS MENTORED

Simeon McMillan, Uniondale High School, New York, 2000-2004. McMillan conducted research in systematics for which he won first place and best-in-category in Zoology at the Intel International Science and Engineering Fair (2003). He was the first African American to win this prize.