

Graham J. Slater

Curriculum Vitae

Department of Paleobiology
National Museum of Natural History
The Smithsonian Institution [NHB, MRC 121]
P.O. Box 37012
Washington DC 20013-7012

Phone: (202) 633-1316
Cell : (310) 404-6381
Email: SlaterG@si.edu
Homepage: www.eeb.ucla.edu/gslater

Professional Experience

2012-pres **Peter Buck Post-doctoral Fellow** The Smithsonian Institution
2009-2012 **Post-doctoral researcher** Department of Ecology and Evolutionary Biology, UCLA

Education

2004-2009 **Ph.D** Ecology and Evolutionary Biology, University of California, Los Angeles
2002-2003 **M.Sc.** Advanced Methods in Taxonomy and Biodiversity, Imperial College, London
1998-2001 **B.Sc.** Zoology, University College, London

Publications

- 2013 **Slater, G. J.** and Pennell, M. W. (in press). Robust regression and posterior predictive simulation increase power to detect early bursts of trait evolution. *Systematic Biology*
- Slater, G. J.** (2013). Phylogenetic evidence for a shift in the mode of mammalian body size evolution at the Cretaceous-Palaeogene boundary. *Methods in Ecology and Evolution*, 4(8):734–744
- Slater, G. J.** and Harmon, L. J. (2013). Unifying fossils and phylogenies for comparative analyses of diversification and trait evolution. *Methods in Ecology and Evolution*, 4(8):699–702
- Fabre, A.-C., Cornette, R., **Slater, G. J.**, Argot, C., Peigné, S., Goswami, A., and Pouydebat, E. (2013). Getting a grip on the evolution of grasping in musteloid carnivorans: a three-dimensional analysis of forelimb shape. *Journal of Evolutionary Biology*, 26(7):1521–1535
- Frédérich, B., Sorenson, L., Santini, F., **Slater, G. J.**, and Alfaro, M. E. (2013). Iterative ecological radiation and convergence during the evolutionary history of damselfishes (Pomacentridae). *The American Naturalist*, 181(1):94–113

- 2012 **Slater, G. J.**, Harmon, L. J., and Alfaro, M. E. (2012a). Integrating fossils with molecular phylogenies improves inference of trait evolution. *Evolution*, 66(12):3931–3944
- Rabosky, D. L., **Slater, G. J.**, and Alfaro, M. E. (2012). Clade age and species richness are decoupled across the eukaryotic tree of life. *PLoS Biology*, 10(8):e1001381
- Meloro, C. and **Slater, G. J.** (2012). Covariation in the skull modules of cats: the challenge of growing saber-like canines. *Journal of Vertebrate Paleontology*, 32(3):677–685
- Slater, G. J.**, Harmon, L. J., Wegmann, D., Joyce, P., Revell, L. J., and Alfaro, M. E. (2012b). Fitting models of continuous trait evolution to incompletely sampled comparative data using approximate bayesian computation. *Evolution*, 66(3):752–762
- 2011 Jaffe, A. L., **Slater, G. J.**, and Alfaro, M. E. (2011). The evolution of island gigantism and body size variation in tortoises and turtles. *Biology Letters*, 7(4):558–561
- * Alexander Jaffe was a high school senior at the time of publication
- Van Valkenburgh, B., Curtis, A., Samuels, J. X., Bird, D., Fulkerson, B., Meachen-Samuels, J., and **Slater, G. J.** (2011). Aquatic adaptations in the nose of carnivorans: evidence from the turbinates. *Journal of Anatomy*, 218(3):298–310
- 2010 **Slater, G. J.**, Figueirido, B., Louis, L., Yang, P., and Van Valkenburgh, B. (2010a). Biomechanical consequences of rapid evolution in the polar bear lineage. *PLoS ONE*, 5(11):e13870
- Figueirido, B., Serrano-Alarcon N, F. J., and **Slater, G. J.** and Palmqvist P. (2010). Shape at the cross-roads: homoplasy and history in the evolution of the carnivoran skull towards herbivory. *Journal of Evolutionary Biology*, 23(12):2579–2594
- Slater, G. J.**, Price, S. A., Santini, F., and Alfaro, M. E. (2010b). Diversity versus disparity and the radiation of modern cetaceans. *Proceedings of the Royal Society B-Biological Sciences*, 277(1697):3097–3104
- 2009 **Slater, G. J.**, Thalmann, O., Leonard, J. A., Schweizer, R. M., Koepfli, K.-P., Pollinger, J. P., Rawlence, N. J., Austin, J. J., Cooper, A., and Wayne, R. K. (2009b). Evolutionary history of the Falklands wolf. *Current Biology*, 19(20):R937 – R938
- Slater, G. J.** and Van Valkenburgh, B. (2009). Allometry and performance: the evolution of skull form and function in felids. *Journal of Evolutionary Biology*, 22(11):2278–2287

- Slater, G. J.**, Dumont, E. R., and Van Valkenburgh, B. (2009a). Implications of predatory specialization for cranial form and function in canids. *Journal of Zoology*, 278(3):181–188
- Dumont, E., Grosse, I., and **Slater, G. J.** (2009). Requirements for comparing the performance of finite element models of biological structures. *Journal of Theoretical Biology*, 256(1):96 – 103
- 2008 Koepfli, K.-P., Deere, K., **Slater, G. J.**, Begg, C., Begg, K., Grassman, L., Lucherini, M., Veron, G., and Wayne, R. (2008). Multigene phylogeny of the Mustelidae: Resolving relationships, tempo and biogeographic history of a mammalian adaptive radiation. *BMC Biology*, 6(1):10
- Slater, G. J.** and Van Valkenburgh, B. (2008). Long in the tooth: evolution of sabertooth cat cranial shape. *Paleobiology*, 34(3):403–419

In Review

- Martin-Scheel, D., **Slater, G. J.***, Kolokotronis, S.-O., Potter, C. W., Rotstein, D. S., Tsangaras, K., Greenwood, A. D., and Helgen, K. M. (in review). Ancient DNA and morphology characterize a new genus for New World monk seals. *ZooKeys*, * denotes joint first authors
- Tseng, Z. J., Wang, X., **Slater, G. J.**, Takeuchi, G. T., Li, Q., Liu, J., and Xie, G. (in review). Himalayan fossil of oldest known pantherine establish ancient origin of big cats. *Proceedings of the Royal Society B-Biological Sciences*

Grants

The Ecology of a Continental Adaptive Radiation: A Critical Evaluation using Integrative Approaches and a Novel Social Taxon National Science Foundation, (pending) (Post-Doctoral Collaborator; Scott Powell George Washington Univ. PI)

Integrating Approaches to Macroevolution: Combining Fossils and Phylogenies NESCent Catalysis Grant. Samantha Price, Lars Schmitz, and Graham Slater Co-PIs. Dollar amount unspecified. (2013)

Peter Buck Post-doctoral Fellowship Smithsonian Institution, \$135,000, plus \$8,000 research funds (2012-2015)

UCLA Graduate Division Dissertation Year Fellowship, \$18,000 (2008-9)

UCLA Dissertation Completion Fellowship, \$6,000 (2008)

National Science Foundation Doctoral Dissertation Improvement Grant, \$9,325 (2007)

UCLA Departmental Research Grant, \$3,500 (2006)

UCLA Dissertation Completion Fellowship, \$6,000 (2006)

Sigma Xi Grant in Aid of Research, \$300 (2005)

The Natural History Museum London, Systematics and Evolution Grant in Aid of Research, £150 (2001)

Teaching Experience

Summer 2009: **Lecturer**, Introduction to Human Anatomy (non-Majors), Evolution (upper division)

2004 – 2009: **Teaching Assistant**: Conservation Biology, Human Dissection, Life Sciences 1: Ecology and Evolution, Molecular Evolution, Topics in Life Sciences for non-majors, Vertebrate Morphology.

Activities

- 2014: **Symposium Co-Organizer:** *Reuniting fossil and extant approaches to macroevolution* Society for the Study of Evolution meeting, June 2014, Raleigh, North Carolina.
- 2013: **NESCent Catalysis Meeting Co-convenor** (with S. A. Price and L. Schmitz): *Integrating Approaches to Macroevolution: combining fossils and phylogenies.*
- 2013: **Methods in Ecology and Evolution Special Volume Editor** *Unifying Fossils and Phylogenies for Comparative Analyses of Diversification and Trait Evolution*
- 2012: **Symposium Co-Organizer:** *Phylogenetic and Comparative Paleobiology: New Quantitative Approaches to the Study of Vertebrate Macroevolution* Society of Vertebrate Paleontology annual meeting. October 17-20, Raleigh, North Carolina.
- 2010-12: **Instructor** *Comparative Methods in R workshop* NCEAS, Santa Barbara (Organizers M. Alfaro and L. Harmon)
- 2009-11: **Instructor, R for Dummies Workshop** Society of Integrative and Comparative Biology annual meeting.
- 2009-Present: **Invited Speaker** University of California, Riverside (2009); Providence Tarzana Medical Center (2010), Cabrillo Marine Aquarium (2010); San Diego State University (2010); Museum Nationale d'Histoire Naturelle, Paris (2012); University of Michigan, Early Career Scientists Symposium (2012); University of Chicago (Jan. 2013)

Awards & Honors

- 2010: Robert E. Lasiewski award for outstanding research accomplishments by a graduate student in organismal biology
- 2009: Certificate of Distinction in Teaching, Life Sciences core curriculum, UCLA
- 2008: Special Faculty Award in Recognition of Outstanding Service to the Department of Ecology and Evolutionary Biology, UCLA
- 2005: Certificate of Distinction in Teaching, Life Sciences core curriculum, UCLA

Service

Post-doctoral Representative, Division of Phylogenetic and Comparative Biology, Society of Integrative and Comparative Biology, 2011-present

Chair, Nominating Committee, Division of Systematics and Evolutionary Biology, Society of Integrative and Comparative Biology, 2009-10

Graduate Student-Faculty Liaison, Department of Ecology and Evolutionary Biology, UCLA 2008-9

Ecology and Evolutionary Biology Faculty Search Committee Graduate Student Representative 2008

Graduate Student Recruitment Weekend Organizational Committee 2007

Reviewer: The American Naturalist, Biological Journal of the Linnaean Society, BMC Evolutionary Biology, Current Biology, Ecology Letters, Evolution, Functional Ecology, Genetics, Journal of Animal Ecology, Journal of Biogeography, Journal of Evolutionary Biology, Journal of Mammalogy, Journal of Morphology, Journal of Vertebrate Paleontology, Methods in Ecology and Evolution, Naturwissenschaften, Paleobiology, Proceedings of the Royal Society London B, PLoS ONE, Systematic Biology, Systematic Palaeontology, Zoological Journal of the Linnaean Society, National Science Foundation, Cambridge University Press.

Students Advised

2011: **Alexander Jaffe** (Harvard Westlake High School, now undergraduate at Harvard University); **Annie McNutt** (Marlborough School, now undergraduate Emory University); **Rachel Bone**, **Jeff Modlin**, **Vincent Wu** (undergraduate UCLA)

2010: **Jerry Tavornwattana**, **Layla Hiramasa** (undergraduates, UCLA)

2009: **Aisling Galligan**(undergraduate, Dartmouth College)

2008: **Leeann Louis** (undergraduate Cornell, now PhD program UC Davis); **William Ary** (undergraduate UCLA, now Master's program San Diego State); **Asif Razee**, **Paul Yang** (undergraduates UCLA)

References

Dr. Blaire Van Valkenburgh
Univeristy of California, Los Angeles
Email: bvanval@ucla.edu
Phone: (310) 794-9398

Dr. Gene Hunt
Smithsonian Institution
Email: HuntE@si.edu
Phone: (202) 633-1331

Dr. Michael Alfaro
University of California, Los Angeles
Email: michael.alfaro@ucla.edu
Phone:

Dr. Luke Harmon
University of Idaho
Email: lukeh@uidaho.edu
Phone: (208) 885-0346

Last updated: October 3, 2013