

CURRICULUM VITAE

DANIEL LEE RABOSKY

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EDUCATION

Ph.D. Cornell University, Ecology & Evolutionary Biology, 2009
M.S. Pennsylvania State University, Biology, 2003
B.S. Ohio University, Biological Sciences, 1999

APPOINTMENTS

2012- Assistant Professor, Dept of Ecology and Evolutionary Biology,
University of Michigan
2012- Assistant Curator of Herpetology, Museum of Zoology, University of Michigan
2009-2012 Miller Research Fellow, University of California, Berkeley

FELLOWSHIPS, AWARDS, GRANTS

FELLOWSHIPS

2009-2012 Miller Postdoctoral Fellowship, University of California, Berkeley
2004 NSF East Asia and Pacific Summer Institutes Fellowship, Australia
2003-2004 Presidential Life Sciences Fellowship, Cornell Genomics Initiative, Cornell Univ.

AWARDS

2012 Theodosius Dobzhansky Prize, Society for the Study of Evolution
2010 Young Investigator Prize, American Society of Naturalists
2009 Ernst Mayr Award for best presented paper, Society of Systematic Biologists
2009 Cole Award for best paper published by graduate student in EEB at Cornell Univ.

RESEARCH GRANTS

2008-2011 NSF, Phylogeography (senior personnel): *Ecological Drivers and Phylogenetic Components of Diversification in a Major Continental Vertebrate Radiation* [\$398,592]
2006-2008 NSF, Doctoral Dissertation Enhancement Grant: *Adaptive and Non-Adaptive Radiation in Australian Desert Lizards* [\$18,998]

SMALLER RESEARCH GRANTS

2008 Cornell Sigma Xi Travel Grant
2005 Society of Systematic Biologists Graduate Research Award
2005 American Society of Ichthyologists and Herpetologists Gage Award
2005 Orenstein Award, Department of Ecology & Evolutionary Biology, Cornell University
2004-2008 Cornell Graduate School Travel Grant (4x)
2004-2008 Andrew W. Mellon Foundation Research Grant (4x)
2004-2007 Cornell Sigma Xi Research Grant (2x)
2004-2006 Mario Einaudi Center for International Studies Travel Grant, Cornell University (2x)

PUBLICATIONS

- Rabosky, D. L., G. J. Slater, and M. E. Alfaro. 2012. Clade age and species richness are decoupled across the Eukaryotic tree of Life. *PLoS Biology* 10: e1001381.
- Rabosky, D. L. 2012. Positive correlation between diversification rates and phenotypic evolvability can mimic punctuated equilibrium on molecular phylogenies. *Evolution* 66: 2622-2627.
- Springer, M. S., R. W. Meredith, J. Gatesy, C. A. Emerling, J. Park, D. L. Rabosky, T. Stadler, C. Steiner, O. A. Ryder, J. E. Janecka, C. A. Fisher, and W. J. Murphy. 2012. Macroevolutionary dynamics and historical biogeography of primate diversification inferred from a species supermatrix. *PLoS ONE* 7:e49521.
- Rabosky, D. L., and D. C. Adams. 2012. Rates of morphological evolution are correlated with species richness in salamanders. *Evolution* 66:1807-1818.
- Reddy, S. L., A. Driskell, D. L. Rabosky, S. J. Hackett, and T. S. Schulten. 2012. Diversification and the adaptive radiation of the vangas of Madagascar. *Proceedings of the Royal Society of London, B Biological Sciences*. doi:10.1098/rspb.2011.2380.
- Rabosky, D. L. 2012. Testing the time-for-speciation effect in the assembly of regional biotas. *Methods in Ecology and Evolution*. 3:224-233.
- Rabosky, D. L., M. A. Cowan, A. L. Talaba, and I. J. Lovette. 2011. Species interactions mediate phylogenetic community structure in a hyperdiverse lizard assemblage from arid Australia. *American Naturalist* 178:579-595.
- Meredith, R. W., J.E. Janecka, J. Gatesy, O. A. Ryder, C. A. Fisher, E. C. Teeling, A. Goodbla, E. Eizirik, T. L. L. Simao, T. Stadler, D. L. Rabosky, R. L. Honeycutt, J. J. Flynn, C. M. Ingram, C. Steiner, T. L. Williams, T. J. Robinson, A. Burk-Herrick, M. Westerman, N. A. Ayoub, M. S. Springer and W. J. Murphy. 2011. Impacts of the Cretaceous Terrestrial Revolution and KPg Extinction on mammal diversification. *Science* 334:521-524.
- Rabosky, D. L., and R. E. Glor. 2010. Equilibrium speciation dynamics in a model adaptive radiation of island lizards. *Proc. Natl. Acad. Sci. U.S.A.* 51:22178-22183. [cover article]
- Rabosky, D. L. 2010. Primary controls on species richness in higher taxa. *Systematic Biology* 59:634-645.
- Rabosky, D. L., and M. E. Alfaro. 2010. Evolutionary bangs and whimpers: methodological advances and conceptual frameworks for studying exceptional diversification. *Systematic Biology* 59:615-618.
- Rabosky, D. L. 2010. Extinction rates should not be estimated from molecular phylogenies. *Evolution* 6:1816-1824.
- Rabosky, D. L., and A. R. McCune. 2010. Reinventing species selection with molecular phylogenies. *Trends in Ecology and Evolution* 25:68-74.
- Rabosky, D. L., and U. Sorhannus. 2009. Diversity dynamics of marine planktonic diatoms across the

- Cenozoic. *Nature* 457:183-186.
- Rabosky, D. L. 2009. Ecological limits and diversification rate: alternative paradigms to explain the variation in species richness among clades and regions. *Ecology Letters* 12: 735-743.
- Rabosky, D. L. 2009. Heritability of extinction rates links diversification patterns in molecular phylogenies and the fossil record. *Systematic Biology* 58:629-640.
- Rabosky, D. L., A. L. Talaba, S. C. Donnellan, and I. J. Lovette. 2009. Molecular evidence for hybridization between two Australian desert skinks, *Ctenotus leonhardii* and *Ctenotus quattuordecimlineatus* (Scincidae : Squamata). *Mol. Phyl. Evol.* 53:368-377.
- Rabosky, D. L. 2009. Ecological limits on clade diversification in higher taxa. *American Naturalist* 173:662-674.
- Agrawal, A.A., M. Fishbein, R. Halitschke, A. P. Hastings, D. L. Rabosky, and S. Rasman. 2009. Tempo of trait evolution in the milkweeds: evidence for adaptive radiation. *Proc. Natl. Acad. Sci. U.S.A.* 106: 18067-18072.
- Alfaro, M. E., F. Santini, C. D. Brock, H. Alamillo, A. Dornburg, D. L. Rabosky, G. Carnevale, and L. J. Harmon. 2009. Nine exceptional radiations plus high turnover explain species diversity in jawed vertebrates. *Proc. Natl. Acad. Sci. U.S.A.* 106:13410-13414.
- Steeman, M. E., M. B. Hebsgaard, R. E. Fordyce, S. W. Y. Ho, D. L. Rabosky, R. Nielsen, C. Rahbek, H. Glenner, M. V. Sørensen, and E. Willerslev. 2009. Evolution and radiation of extant whales. *Systematic Biology*. 58:573-585.
- Rabosky, D. L. and I. J. Lovette. 2009. Problems detecting density-dependent diversification on phylogenies: reply to Bokma. *Proceedings of the Royal Society of London, B Biological Sciences* 276:995-997.
- Rabosky, D. L., and I. J. Lovette. 2008. Density dependent diversification in North American wood-warblers. *Proceedings of the Royal Society of London, B Biological Sciences* 275:2363-2371.
- Rabosky, D. L., and I. J. Lovette. 2008. Explosive evolutionary radiations: decreasing speciation or increasing extinction through time? *Evolution* 62:1866-1875.
- Rawlings, L. H., D. L. Rabosky, S. C. Donnellan, and M. N. Hutchinson. 2008. Python phylogenetics: inferences from morphology and mitochondrial DNA. *Biological Journal of the Linnean Society* 93:603-619.
- Rabosky, D. L., S. C. Donnellan, A. L. Talaba, and I. J. Lovette. 2007. Exceptional among-lineage variation in diversification rates during the radiation of Australia's largest vertebrate clade. *Proceedings of the Royal Society of London, B Biological Sciences* 274:2915-2923.
- Rabosky, D. L., J. Reid, M. A. Cowan, and J. Foulkes. 2007. Community-wide overdispersion of body size in Australian desert lizard communities. *Oecologia* 154:561-570.
- Rabosky, D. L. 2006. LASER: a maximum likelihood toolkit for detecting temporal shifts in

diversification rates from molecular phylogenies. *Evolutionary Bioinformatics Online* 2:257-260.

Rabosky, D. L. 2006. Likelihood methods for inferring temporal shifts in diversification rates. *Evolution* 60:1152-1164.

Rabosky, D. L., K. P. Aplin, S. C. Donnellan, and S. B. Hedges. 2004. Molecular phylogeny of blindsnakes (Ramphotyphlops) from Western Australia and resurrection of *Ramphotyphlops bicolor* (Peters, 1857). *Australian Journal of Zoology* 52:531-548.

Johnson, K. S., and D. Rabosky. 2000. Phylogenetic distribution of digestive proteinases in beetles: evidence for an evolutionary shift to an alkaline digestive strategy in Cerambycidae. *Comparative Biochemistry and Physiology B* 126:609-619.

BOOK REVIEWS

Rabosky, D. L. 2009. Speciation in birds and more: review of *Speciation in Birds* by Trevor Price. *Conservation Biology* 23:506-508.

Rabosky, D. L. 2008. Review of *How and Why Species Multiply* by Grant and Grant. *Auk* 125:994-5.

Rabosky, D. L. 2005. Review of Coyne and Orr's *Speciation*. *Auk* 122: 371-373.

POPULAR ARTICLES

Rabosky, D. L. 2005. The most diverse lizard community on earth. *Birdscope* 19:6-7.

TEACHING EXPERIENCE

INSTRUCTOR

2012 EEB 401: Computer Programming for Ecology and Evolution (Univ of Michigan, 3 credits)
 2012 EEB 801: Graduate seminar in macroevolution (Univ of Michigan, 1 credit)
 2012 Tropical Field Ecology, Mpala Research Station, Kenya (January 2012)
 2007 Graduate course in R Programming/quantitative methods in ecology and evolution, Cornell University. Responsible for 100% of course, including lectures, computer labs, and development of course materials.

TEACHING ASSISTANT

2007 Herpetology Laboratory, Cornell University (taught 2 full semester labs)
 2005-06 Introductory Biology Laboratory, Cornell University (4 full semester labs)
 2001-2003 Vertebrate Physiology Laboratory (10 full semester labs), Penn State

GRADUATE SEMINARS/DISCUSSIONS

2008-2009 Co-organized weekly "quantitative biology" lunch seminar, to help graduate students with data analysis problems (with D. Winkler)
 2008 Co-organized weekly Comparative Methods seminar (with A. Agrawal)
 2005 Co-organized weekly Phylogenies in Ecology seminar (with A. Agrawal)
 2004 Co-organized weekly Diversification Rates seminar (with I. Lovette)

COMPUTATIONAL RESOURCES/SOFTWARE DEVELOPMENT

- 2006- Developer of LASER package for R programming environment (Likelihood Analysis of Speciation and Extinction Rates);
<http://cran.r-project.org/web/packages/laser/index.html>
- 2007 Participant in the Comparative Methods R Hackathon, a working group to develop and implement comparative methods in R. NESCent, Durham, NC

PRESENTATIONS
INVITED

- 2012 Italian Evolutionary Biology Society, Ferrara, Italy (Keynote Lecture)
- 2012 American Museum of Natural History, Richard Gilder Graduate School, NY
- 2012 Dobzhansky Prize Lecture, Society for the Study of Evolution, Ottawa, Canada
- 2012 Evolutionary Biology Unit, University of Adelaide
- 2012 Division of Ecology, Evolution, and Genetics, Australian National University
- 2012 California Academy of Sciences
- 2012 Dept of Integrative Biology, Univ. California, Berkeley
- 2011 Dept of Biology, University of Florida (graduate student invited speaker)
- 2011 Department of Ecology & Evolutionary Biology, UC Santa Cruz
- 2011 Department of Ecology and Evolution, University of Chicago
- 2010 Dept of Environmental Sciences, Policy, and Management, UC Berkeley
- 2010 Committee on Evolutionary Biology, University of Chicago
- 2010 Center for Population Biology, University of California, Davis
- 2010 Department of Ecology & Evolutionary Biology, University of Michigan
- 2010 Frontiers in Biodiversity Symposium, University of Barcelona
- 2010 Young Investigator Symposium, American Society of Naturalists meeting, Portland
- 2010 Systematische Botanik, Munich, Germany
- 2010 Institute for Systematic Botany, University of Zurich, Switzerland
- 2010 Department of Ecology and Evolution, University of Lausanne, Switzerland
- 2010 Museum of Vertebrate Zoology, University of California, Berkeley
- 2010 Department of Biology, Duke University
- 2009 Department of Biology, San Francisco State University
- 2009 Dept. of Ecology and Evolutionary Biology, University of Tennessee
- 2009 Department of Ecology and Evolution, University of California, Los Angeles
- 2009 Department of Biology, University of California, Riverside
- 2009 Department of Ecology and Evolutionary Biology, Cornell University
- 2008 Museum of Vertebrate Zoology, University of California, Berkeley
- 2008 Center for the Environment, Harvard University
- 2008 Department of Ecology and Evolutionary Biology, University of Connecticut
- 2008 Biology Department, Ithaca College
- 2007 Australia-Melanesia Connections working group, CSIRO, Canberra, Australia
- 2006 Evolutionary Biology Unit, University of Adelaide, Australia
- 2004 Evolutionary Biology Unit, University of Adelaide, Australia

CONFERENCE PRESENTATIONS

- 2011 Society for the Study of Evolution, Norman, Oklahoma

- 2009 Society for Systematic Biologists, University of Idaho
- 2008 American Society of Ichthyologists and Herpetologists, Montreal
- 2008 Society for the Study of Evolution, University of Minnesota, Minneapolis
- 2008 Ecology and Evolution Graduate Symposium, Cornell University
- 2008 Tree Thinking at Cornell Phylogenetics Symposium, Cornell University
- 2007 Ecology and Evolution Graduate Symposium, Cornell University
- 2006 Society for the Study of Evolution, Stony Brook University, Stony Brook
- 2005 Society for the Study of Evolution, University of Alaska, Fairbanks
- 1999 Society for the Study of Evolution, University of Wisconsin, Madison
- 1999 Society for Integrative and Comparative Biology, Denver
- 1998 Ohio Academy of Sciences, Columbus

SYMPOSIA ORGANIZED

- 2009 “Methodological advances and conceptual frameworks for studying exceptional diversification”, Society of Systematic Biologists symposium (University of Idaho)

INVITED WORKSHOPS

- 2010 “Island Biodiversity Dynamics”, UC Berkeley
- 2010 “Diversification of Australia’s Biota and Conservation Implications”, University of Adelaide, Adelaide, Australia
- 2008 “Outstanding Questions in Speciation”, Centre for Population Biology, Imperial College, London
- 2007 “Australia-Melanesia Connections”, CSIRO, Canberra, Australia
- 2007 “Comparative Methods in R Hackathon”, NESCent, Durham

PROFESSIONAL SERVICE

EDITORIAL SERVICE

- Associate Editor, Proceedings of the Royal Society B (2011-2014)
- Associate Editor, Systematic Biology (2010 Special Issue)

REFEREE SERVICE (JOURNALS AND BOOKS)

American Naturalist; Bioinformatics; Biological Journal of the Linnean Society; Biological Reviews; Biology Letters; BMC Evolutionary Biology; Cambridge University Press; Cornell University Press; Ecological Monographs; Ecology; Ecology Letters; Ecoscience; Evolution; Evolutionary Bioinformatics; Evolutionary Biology; Global Ecology and Biogeography; Journal of Animal Ecology; Journal of Biogeography; Journal of Experimental Zoology; Journal of Evolutionary Biology; Methods in Ecology and Evolution; Molecular Biology and Evolution; Molecular Ecology Notes; Molecular Phylogenetics and Evolution; Nature; PLoS Biology; PLoS ONE; Proc. Natl. Acad. Sci. U.S.A.; Proceedings of the Royal Society B Biological Sciences; Science; Systematic Biology; Trends in Ecology and Evolution; University of California Press

REFEREE SERVICE (GRANTS)

Cornell College of Agriculture and Life Sciences Mellon grants; Leverhulme Trust; Neotropical Grasslands Conservancy; NSF (ad hoc reviewer + panel service); Sigma Xi

SYNERGISTIC ACTIVITIES

EDUCATIONAL OUTREACH

- 2011-2012 Led weekly 3 hour clinic on “Scientific Programming with R” at UC Berkeley
- 2011 Co-instructor, *Comparative Methods in R* one-week course, NCEAS, Santa Barbara.
- 2009 Conducted workshop on “What Scientists Do” for grades K-8 at Willow Creek Learning Center (Boardman, Ohio).
- 2006-2008 Conducted workshops on evolution, phylogenetics, and Australian biodiversity for Advanced Placement Biology students at Ithaca (NY) High School
- 2006 Evolution advocacy: lectured on the Intelligent Design movement to Ithaca High School science staff
- 2005 Public lecture on Australian natural history & ecology to Cayuga Bird Club (Ithaca)
- 2005 Presentation on Australian biodiversity & ecology to Cornell Herpetological Society
- 2005 Lecture on ecology of arid Australia, Western Australian Museum, Perth
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SOCIETY MEMBERSHIPS

American Society of Ichthyologists and Herpetologists
American Society of Naturalists
Society for the Study of Evolution
Society of Systematic Biologists

POSTDOCTORAL SPONSORS, GRADUATE ADVISORS AND SPECIAL COMMITTEE

John Huelsenbeck, Miller Postdoctoral Sponsor and Advisor, UC Berkeley
Craig Moritz, Postdoctoral Advisor, UC Berkeley
Amy R. McCune, PhD Advisor, Cornell University
Irby J. Lovette, PhD Advisor, Cornell University
Anurag Agrawal, Special Committee Member, Cornell University
Harry W. Greene, Special Committee Member, Cornell University