

Carl Boettiger

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Education University of California, Davis

Davis, CA 95616
12/14/2012

Ph.D Population Biology,
Mentor: Alan Hastings

Princeton University

Princeton, NJ 08544
6/2007

A.B in Physics with Honors
Certificate in Biophysics, Certificate in Applied and Computational Mathematics
Mentor: Stephen Pacala

Publications Boettiger, C., Hastings, A. (2013) "Tipping points: From patterns to predictions." *Nature*. 493, 157-158. doi:10.1038/493157a

Boettiger, C., Hastings, A. (2012) "Early Warning Signals and the Prosecutor's Fallacy." *Proceedings of the Royal Society B*. 279(1748) 4734-4739. doi: 10.1098/rspb.2012.2085

Boettiger, C., Temple-Lang, D., Wainwright, P.C. (2012) "rfishbase: exploring, manipulating and visualizing FishBase data from R" *Journal of Fish Biology*. 81(6) 2030-2039. doi: 10.1111/j.1095-8649.2012.03464.x

Boettiger, C., Temple-Lang, D. (2012) "Programmatic access to TreeBASE phylogenies in R." *Methods in Ecology and Evolution* doi: 10.1111/j.2041-210X.2012.00247.x

Boettiger, C. Hastings, A (2012) "Quantifying limits to detection of early warning for critical transitions." *Journal of The Royal Society Interface*, 9(75), 2527-2539. doi: 10.1098/rsif.2012.0125.

Beaulieu, J.M., Jhwueng, D., Boettiger, C., O'Meara, B. (2012) "Modeling Stabilizing Selection: Expanding the Ornstein-Uhlenbeck Model of Adaptive Evolution," *Evolution*. 66(8) 2369-2383. doi: 10.1111/j.1558-5646.2012.01619.x)

Boettiger, C., Coop, G., Ralph, P. (2012) "Is your phylogeny informative? Measuring the power of comparative methods." *Evolution*. 66(7) 2240-51. doi: 10.1111/j.1558-5646.2012.01574.x

Boettiger, C., Dushoff, J., Weitz, J. S. (2010) "Variation in the phenotypic dynamics of evolving populations," *Theoretical Population Biology* 77, 6-13. doi: 10.1016/j.tpb.2009.10.003

Wray, J., Bahcall, N., Bode, P., Boettiger, C., Hopkins, P. (2006) "The Shape, Multiplicity, and Evolution of Superclusters in Λ CDM Cosmology." *Astrophysical Journal* 652, 907. doi: 10.1086/508600

Submitted Samantha A. Price, Lars Schmitz, Philip S. L. Anderson, Carl Boettiger, Peter C. Wainwright. Comparing disparity between traits using the Ornstein-Uhlenbeck model: a test of functional constraint on the eyes of labrid fishes.

Presentations

2012 ESA Portland, Oregon.
Evolution; Ottawa, CAN. SSB Symposium **invited speaker**.
iEvoBio; Ottawa, CAN.
Computational Science; Washington DC.

2011 *Ecological Society of America*; Austin, TX.
Evolution; Norman, OK.
iEvoBio; Norman, OK.

Science Online; Durham, NC.
Society for Integrative and Comparative Biology. Salt Lake City, UT.

2010/2009	<i>iEvoBio</i> ; Portland, OR. 2010 <i>Evolution</i> ; Portland OR. 2010 <i>University of Tennessee</i> , Knoxville, TN. 2009 <i>IIASA</i> , Vienna; Austria. 2009	
Grants	<i>Short-term visitor grant to NIMBioS</i> For research in optimal control	2012
	<i>PI on DoE Grant No. DE-AC02-05CH11231</i> 50,000 hr supercomputing on NERSC machines	2011,2012
	<i>IIASA YSSP fellowship</i> National Academy of Sciences, NSF Grant No. OISE-0738129, \$8,000	2009
	<i>Computational Science Graduate Fellowship</i> Department of Energy, Grant No: DE-FG02-97ER25308, 4 yrs × \$36,000/yr	2008-2012
Honors & Awards	<i>Mendeley & PLoS software award</i> , \$1,000	2011
	<i>Volterra Award</i> (Best student talk, ESA Theory)	2011
	Elected to Membership in the Society of <i>Sigma Xi</i>	2007
	<i>Allen G. Shenstone Prize in Physics</i> , Princeton	2007
	<i>The Class of 1870 Old English Prize</i> , Princeton	2007
	<i>Kusaka Memorial Prize in Physics</i> , Princeton	2006
	<i>Plasma Physics Fellow</i> , PPPL	2006
Authored Software (selected)	wrightscape: Infer adaptive landscapes from phylogenetic trees (2012) knitcitations: Dynamic citation manager for R. (2012) pmc: Phylogenetic Monte Carlo tools to quantify uncertainty in comparative methods. (2011) treeBASE: An R interface to the TreeBASE API (2011) rfishbase: An R interface to the fishbase database (2011) BranchingTime: Individual based simulations for adaptive dynamics. (2011) populationdynamics: Gillespie algorithms for exact simulation of common ecological models (2011) More software at http://github.com/cboettig	
Service	Reviewer for: <i>Theoretical Ecology</i> , <i>Journal of Mathematical Biology</i> , <i>Ecological Modelling</i> , <i>Evolution</i> , <i>Methods in Ecology and Evolution</i> , <i>Ecosphere</i> , <i>Proceedings of the Royal Society B</i> , <i>Journal of Theoretical Biology</i> , <i>PLoS ONE</i> , <i>Ecology</i> , <i>Conservation Letters</i> , <i>Ecology Letters</i>	
Teaching Experience	ESA Workshop Instructor	Aug 2012
	Mentor for Google Summer of Code, R-Project	Summer 2012
	Instructor, Bodega Phylogenetics Workshop	Winter 2011
	Student Mentor, CLIMB program	Spring, Summer 2008
	Teaching Assistant: Introductory Zoology	Winter 2008
References	Alan Hastings, Dept of Env Sci & Policy, UC Davis amhastings@ucdavis.edu Sebastian Schreiber, Dept of Evolution & Ecology, UC Davis sschreiber@ucdavis.edu Peter Wainwright, Dept of Evolution & Ecology, UC Davis pcwainwright@ucdavis.edu Simon Levin, Dept of Ecology & Evolution, Princeton slevin@princeton.edu	