Carl Boettiger

Work: 110 Shaffer Rd
Santa Cruz, CA 95050, USA
cboettig@soe.ucsc.edu
http://carlboettiger.info

Home: 2534 Bombadil Lane,
Davis CA 95616, USA
cboettig@gmail.com

Employment		
Employment	**University of California, Santa Cruz**	Santa Cruz, CA 95064
		10/15/2012 - Present

CSTAR Postdoctoral Researcher,
Mentors: Marc Mangel & Stephen Munch

Education	**University of California, Davis**	Davis, CA 95616
		Ph.D. 09/18/2012

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

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

8. 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

7. 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

6. 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

5. 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.

4. 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)

3. 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

2. 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

1. 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

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.	

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 | *iEvoBio*; Portland, OR. 2010
Evolution; Portland OR. 2010
University of Tennessee, Knoxville, TN. 2009
IIASA, Vienna; Austria. 2009

Grants

NSF Mathematical Biology Postdoctoral Scholar — 2013-15
Management for an uncertain world: robust decision theory in face of regime shifts ($138,000)

Short-term visitor grant to NIMBioS — 2012
For research in optimal control

PI on DoE Grant No. DE-AC02-05CH11231 — 2011, renewed 2012
50,000 hr supercomputing on NERSC machines

IIASA YSSP fellowship — 2009
National Academy of Sciences, NSF Grant No. OISE-0738129, ($8,000)

Computational Science Graduate Fellowship — 2008-2012
Department of Energy, Grant No: DE-FG02-97ER25308, ($144,000)

Honors & Awards

Mendeley & PLoS software award, $1,000 — 2011
Volterra Award (Best student talk, ESA Theory) — 2011
Elected to Membership in the Society of *Sigma Xi* — 2007
Allen G. Shenstone Prize in Physics, Princeton — 2007
The Class of 1870 Old English Prize, Princeton — 2007
Kusaka Memorial Prize in Physics, Princeton — 2006
Plasma Physics Fellow, 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:

2013 | *Theoretical Ecology, Francis & Taylor, Ideas in Ecology and Evolution,*

2012 | *Theoretical Ecology, Evolution, Methods in Ecology and Evolution, Proceedings of the Royal Society B, PLoS ONE, Ecology, Conservation Letters, Ecology Letters*

2011 | *Theoretical Ecology, Ecological Modelling, Evolution, Methods in Ecology and Evolution, Ecosphere,*

2010 & prior | *Theoretical Ecology, Journal of Mathematical Biology, Ecological Modelling, Ecology*

Other Service:

Student member for the CBS Dean search.	2011
Co-chaired the student group on Open Science	2010-12
Co-chaired the Graduate Teaching Community	2009-10
Student member for the CPB program review.	2010

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	