

Gideon Bradburd

344 Natural Sciences Building
Department of Integrative Biology, MSU
East Lansing, MI, 48823

email: bradburd@msu.edu
website: genescape.org

EDUCATION & APPOINTMENTS

Asst. Prof	<i>Michigan State University</i> Department of Integrative Biology Ecology, Evolutionary Biology, and Behavior Group	Aug. 2016 - present
Postdoc	<i>University of California, Berkeley</i> Museum of Vertebrate Zoology Department of Env. Sci. Pol. and Mgmt Advisors: Michael Nachman, Bree Rosenblum	Sept. 2015 - Jul. 2016
PhD	<i>University of California, Davis</i> Population Biology Graduate Group Department of Ecology and Evolutionary Biology Advisors: Graham Coop, Brad Shaffer	Sept. 2009 - Aug. 2015
BS	<i>Yale University</i> Ecology and Evolutionary Biology Honors Thesis Advisor: Tom Near	Sept. 2004 - May 2008

HONORS, AWARDS, & FELLOWSHIPS

Fitch Award Finalist , Society for Molecular Biology and Evolution (\$2000)	2015
Hamilton Award Finalist , Society for the Study of Evolution (\$500)	2015
XSEDE SuperComputing Resource Allocation , XSEDE (50,000 SUs)	2014-05
Center for Population Biology Research Fellowship CPB, UC Davis (\$4,000)	2011-13
NSF Graduate Research Fellow National Science Foundation (\$90,000)	2010-12
Graduate Scholars Fellowship in Population Biology, UC Davis (\$30,000)	2009-10
Environmental Internship Award Yale University (\$6,000)	2006-7
Richter Summer Travel Fellowship Yale University (\$1,000)	2007
Mellon Forum Research Grant Yale University (\$500)	2007

FUNDING

NSF Dimensions of Biodiversity (2017-2021) Diversification of sensory systems in novel habitat: enhanced vision or compensation in other modalities? (co-PIs: J.W. Boughman, H. Hofmann, J. Keagy, D. Stenkamp)	\$1,846,134
Beacon - NSF Center for the Study of Evolution in Action (2016-present) Evolution of sensory systems in response to loss of visual information (co-PIs: J.W. Boughman, H. Hofmann, J. Keagy, D. Stenkamp)	\$127,579
NSF Doctoral Dissertation Improvement Grant (DDIG) (2014-15) The effect of intraspecific host variation on the structure of parasite populations (co-PIs: Graham Coop)	\$13,918

PUBLICATIONS

Published and Accepted Papers

- Weber, J.N., **G.S. Bradburd**, Y.E. Stuart, W.E. Stutz, D.I. Bolnick. (2016). Partitioning the effects of isolation by distance, environment, and physical barriers on genomic divergence between parapatric threespine stickleback. Evolution 71(2):342-56.
- Hoban, S.*, J. L. Kelley*, K. E. Lotterhos*, M. F. Antolin, **G.S. Bradburd**, D. B. Lowry, M. L. Poss, L. K. Reed, A. Storfer, M. C. Whitlock. (2016). Finding the genomic basis of local adaptation in non-model organisms: pitfalls, practical solutions, and future directions. American Naturalist 188(4). (*denotes equal authorship)
- Bradburd G.S.**, P.L. Ralph, G.M. Coop. (2016). A Spatial Framework for Understanding Population Structure and Admixture. PLoS Genetics 12(1): e1005703.
- Hammock, B.G., S. Lesmeister, I. Flores, **G.S. Bradburd**, F.H. Hammock, S.J. Teh. (2016). Low Food Availability Narrows the Tolerance of the Copepod *Eurytemora affinis* to Salinity, but Not to Temperature. Estuaries and Coasts. 39(1):189-200.
- Agrawal, A.A., A.P. Hastings, **G.S. Bradburd**, E.C. Woods, T. Züst, J. Harvey, T. Bukovinszky. (2015). Evolution of plant growth and defense in a continental introduction. American Naturalist 186(1): E1-E15.
- Wang, I.J.* and **G.S. Bradburd**.* (2014). Isolation by Environment. Molecular Ecology 23: 5649-5662. (*denotes equal authorship)
- Bradburd, G.S.**, P.L. Ralph, and G.M. Coop. (2013). Disentangling the effects of geographic and ecological isolation on genetic differentiation. Evolution 67: 3258-3273.
- Rejmanek, D, P. Freycon, **G.S. Bradburd**, J. Dinstell, and J. Foley. (2013). Unique strains of *Anaplasma phagocytophilum* segregate among diverse questing and non-questing *Ixodes* tick species in the western United States. Ticks and Tick-borne Diseases 4: 482-487.
- Rejmanek, D., **G.S. Bradburd**, and J. Foley. (2012). Molecular characterization reveals distinct genospecies of *Anaplasma phagocytophilum* from diverse North American hosts. Journal of Medical Microbiology 61: 204-212.
- Near, T.J., C.M. Bossu, **G.S. Bradburd**, R.L. Carlson, R.C. Harrington, P.R. Hollingsworth Jr., B.P. Keck, D.A. Etnier. (2011). Phylogeny and temporal diversification of darters (*Percidae: Etheostominae*). Systematic Biology 60: 565-595

SOFTWARE

- Bradburd, G.S. 2016. SpaceMix. A program for estimating geogenetic maps from allele frequency data. R package version 0.13. <https://github.com/gbradbud/SpaceMix>
- Bradburd, G.S. 2013. BEDASSLE. Bayesian Estimation of Differentiation in Alleles by Spatial Structure and Local Ecology. R package version 1.5. <https://cran.r-project.org/web/packages/BEDASSLE>

TEACHING EXPERIENCE

Evolution Discussion Group (IBio 895)	Instructor	2017
UCLA/La Kretz Center Workshop in Conservation Genomics	Instructor	2014, 16
EVE100 Introduction to Evolution	Teaching Assistant	2015
EVE103 Macroevolution, Speciation, and Phylogeny (Lecture, Lab)	Teaching Assistant	2014
Herpetology (Field, Lab, Lecture)	Teaching Assistant	2012
Bodega Bay Applied Phylogenetics Workshop	Teaching Assistant	2012-13

INVITED TALKS

University of Chicago	Dept. of Ecology and Evolution	2017
Michigan State University	Kellogg Biological Station	2017
University of Michigan	Center for Statistical Genetics	2016
University of Wyoming	Dept. of Botany	2016
University of Colorado Boulder	Dept. Ecology and Evolutionary Biology	2016
University of San Francisco	Dept. of Biology	2016
University of California Berkeley	Museum of Vertebrate Zoology	2015
Michigan State University	Ecology, Evolutionary Biology and Behavior	2015
Stanford University	Dept. Genetics and Biology	2015
University of Southern California	Molecular and Computational Biology	2014
University of Montana	Division of Biological Sciences	2014
University of Minnesota	Dept. of Plant Biology	2014
Sonoma State University	Biology Dept.	2014
University of Texas, Austin	Dept. Integrative Biology	2013

CONTRIBUTED PRESENTATIONS

Midwestern Population Genetics Meeting	2016
American Society of Naturalists	2016
Society for Molecular Biology and Evolution	2015
Society for the Study of Evolution	2012-13,15
Bay Area Population Genomics (BAPG)	2014
E&EB Senior Symposium, Yale University	2008

SERVICE & LEADERSHIP

Organizing Committee, Midwest Population Genetics Conference	2016-present
Curriculum Planning Committee (Intro to Evolution - IBio 445)	2016-17
Student Representative, Population Biology Grad Group Steering Committee	2013-14
Chair of Student Research Symposium, Center for Population Biology/Pop Bio Grad Group	2013
Course Organizer, The Bodega Bay Applied Phylogenetics Workshop	2012-13
Chair, UC Davis Non-Model Genomics Workshop Committee	2010
Graduate Student Mentor	2009-2015

REVIEWER

Evolution; Genetics; Molecular Ecology; Heredity; Methods in Ecology and Evolution; Diversity and Distributions; Integrative and Comparative Biology; Bioinformatics; Nature - Scientific Reports; Genes, Genomes, Genetics (G3); New Phytologist; NSERC

SOCIETY MEMBERSHIPS

Society for the Study of Evolution (SSE); Society for Molecular Biology and Evolution (SMBE); International Association of Landscape Ecology (US-IALE); American Society of Naturalists (ASN)