

CURRICULUM VITAE

DANIEL I. BOLNICK

Section of Integrative Biology
University of Texas at Austin
One University Station C0930
Austin, TX 78712
(512) 289-7455; fax: (512) 471-3878

1006 Lund St,
Austin TX 78704
USA
(512) 440-0964
danbolnick@mail.utexas.edu

RESEARCH INTERESTS

Evolutionary ecology, including: the genetic and ecological basis of host-parasite coevolution, the origin of species, and the ecological forces maintaining genetic variation within populations.

APPOINTMENTS

- 2009-2015 Early Career Scientist, Howard Hughes Medical Institute.
- 2009- Associate Professor, Section of Integrative Biology, University of Texas at Austin. UTeach Program and DSSC Affiliate.
- 2009- Adjunct Associate Professor, Department of Microbiology and Immunology, University of Texas Medical Branch at Galveston.
- 2004-2009 Assistant Professor, Section of Integrative Biology, University of Texas at Austin
Faculty Affiliate of the UTeach Program
Faculty Affiliate of the Division of Statistics and Scientific Computation (DSSC)
- 1996-1998 Biology and Applied Math Teacher, Same Secondary School, Tanzania,
United States Peace Corps

EDUCATION

- 1992-1996 *Williams College* B.A., Magna Cum Laude with Highest Honors in Biology
Minor in Environmental Studies,
Thesis: "Drought suppression of hybrids in an intrograding natural population of willows, *Salix sericea*, *S. eriocephala*, and their hybrid".
Advisor: Dr. Colin M. Orians.
- 1998-2003 *University of California at Davis* Ph.D. in Population Biology
Thesis: "Intraspecific competition and niche evolution".
Advisor: Dr. Peter C. Wainwright.
- 2003-2004 *Postdoctoral Fellow:*

University of California at Davis. Advisor: Dr. Michael Turelli

2004 *Postdoctoral Fellow:*

University of California at Davis. Advisor: Dr. Peter C. Wainwright

HONORS AND AWARDS

- Elected, Secretary of the American Society of Naturalists, 2010-2012
- Stand Up for Science Award, 2009; Texas Freedom Network. In recognition of efforts to prevent creationists on the Texas State Board of Education from watering down the K-12 science curriculum. The TFN is a non-profit group that defends separation of church and state issues in Texas.
- Howard Hughes Early Career Scientist, 2009-2015
- David and Lucille Packard Foundation Fellow, 2007-2012
- College of Natural Sciences Teaching Excellence Award, 2006-7, UT Austin
- George Mercer Award 2005. Awarded by the Ecological Society of America for an outstanding ecological research paper published within the past two years by a younger researcher (less than 40 years old).
- Dobzhansky Prize 2005. Awarded by the Society for the Study of Evolution "in recognition of the accomplishments and future promise of an outstanding young evolutionary biologist."
- American Society of Naturalists' Young Investigators Prize 2005. "recognize outstanding and promising work by investigators who have received their doctorates in the three years preceding the application deadline or who are in their final year of graduate school. "
- Merton Love Award for best dissertation in Evolution and Ecology; Univ. of California at Davis 2004.
- Henry A. Dwight, 1829, Botanical Prize; Williams College 1996.
- Thomas G. Hardie III, 1978, Prize in Environmental Studies; Williams College 1996.
- Fulbright Grant (Malawi), 1996 (award declined in order to teach through U.S. Peace Corps).
- Phi Beta Kappa (elected 1996).
- Sigma Xi (elected 1996).

PUBLICATIONS

Manuscripts in preparation (complete first draft or later)

70. Schreiber, S.J., R. Burger, D.I. Bolnick. In prep. From dynamic monophagy to facilitation: the impacts of phenotypic variation in predation on community dynamics. Ecology
69. Bolnick, D.I., et al. In prep. Why intraspecific trait variation matters in ecology. Trends In Ecology and Evolution.
68. Carlson, R.L., M. Brinkman., **D.I. Bolnick**, In prep. Isotopic evidence for among-individual niche variation based on size and shape in multiple co-occurring fish species in a central Texas stream community.

67. Jiang, Y., D.I. Bolnick, and M. Kirkpatrick. In prep. Strong tendency towards positive assortative mating within populations in many animal taxa.
66. Parent, C., D. Agashe, and **D.I. Bolnick**, In prep. Intraspecific competition and niche expansion in *Tribolium castaneum*.
65. Stutz, W.E., O.L. Lau, and **D.I. Bolnick**. In prep. Variation in parasite loads within and among lake populations of threespine stickleback..
64. Paull, J., **D.I. Bolnick**, and L.K. Snowberg. In prep. The effect of spatial scale on measures of intrapopulation niche variation..
63. Snowberg, L. K, and **D.I. Bolnick**. In prep. Variable variation: a survey of intrapopulation niche variation across lake populations of threespine stickleback..

Manuscripts in review

62. Bolnick, D.I. In review. Sympatric speciation in threespine stickleback: all dressed up and nowhere to go? *American Naturalist*
61. Keuffler, R., **D.I. Bolnick**, A. Hendry, and C. Peichel. In review. (Non) parallel morphological variation in lake-stream stickleback and its ecological and genetic correlates. *Evolution*
60. Agashe, D., and **D.I. Bolnick**. In review. Genetic variation facilitates niche shifts onto unfamiliar resources in *Tribolium castaneum*. *Evolution*
59. Araujo, M.S., and **D.I. Bolnick**. In review. Partitioning the relative effects of diet and trophic morphology on fitness in stickleback. *American Naturalist*
58. Ingram, T., W.E. Stutz, **D.I. Bolnick**. In revision. Does intraspecific size variation in a predator affect its interactions with lower trophic levels? *Journal of Animal Ecology*.
57. Bolnick, D.I., K. Hendrix, and R.L. Carlson. In review (revision). Persistent among-individual variation in microhabitat use by three-spine stickleback. *Behavioral Ecology and Sociobiology*
56. Agashe, D., and **D.I. Bolnick**. In review. Concurrent diet change and population dynamics in a novel habitat. *Ecology Letters*

In Press

2010

55. Agashe, D., and **D.I. Bolnick**. 2010. Intraspecific genetic variation and competition interact to facilitate niche expansion. *Proceedings of the Royal Society of London, Ser. B*. Online Early
54. Mathews, B., K.B. Marchinko, **D.I. Bolnick**, A. Mazumder. 2010 Specialization of trophic position and habitat use by sticklebacks in an adaptive radiation. **Ecology**. 91: 1025-1034.
53. Berner, D., W.E. Stutz, and **D.I. Bolnick**. 2010. Diversification in phenotypic (co)variances among lacustrine populations of threespine stickleback. **Evolution**. Early View. DOI: 10.1111/j.1558-5646.2010.00982.x
52. Sih, A. **D. I. Bolnick**, B. Luttbeg, J.L. Orrock, S.D. Peacor, L.M. Pintor, E. Preisser, J.S. Rehage, J.R. Vonesh. 2010. Predator-prey naïveté, antipredator behavior, and the ecology of predator invasions. **Oikos**. 119:610-621.
51. **Bolnick, D.I.**, T. Ingram, L.K. Snowberg, W.E. Stutz, O.L. Lau, and J.S. Paull. 2010 Ecological release from interspecific competition leads to decoupled changes in population and individual niche widths. **Proceedings of the Royal Society of London, Ser. B**. 277: 1789–1797.

2009

50. Hendry, A., D.I. Bolnick, D. Berner, and C.L. Peichel. 2009 Forth and back on the speciation continuum: explorations with stickleback. **Journal of Fish Biology**. 75: 2000-2036.
49. **Bolnick, D.I.**, and J. Paull. 2009. Diet similarity declines with morphological distance between conspecific individuals. **Evolutionary Ecology Research**. 11:1217-1233.
48. **D. I. Bolnick**, L. Snowberg, C. Patenia, O. L. Lau, W. E. Stutz, and T. Ingram. 2009. Habitat choice contributes to adaptive divergence between lake and stream populations of three-spine stickleback. **Evolution** 63:2004-2016 (journal cover photograph)
47. Araujo, M.S., **D.I. Bolnick**, L. A. Martinelli, A.A. Giaretta, and S.F. dos Reis. 2009 Individual-level diet variation in four species of Brazilian frogs. **Journal of Animal Ecology**. 78: 848-856.
46. **Bolnick, D. I.** 2009 Hybridization and speciation in Centrarchids. In Cooke, S., and D. Phillip (eds.), *Biology of the Centrarchids*. Oxford University Press. Pgs 39-69.
45. Baptestini, E.M., M.A.M. de Aguiar, **D.I. Bolnick** and M.S. Araujo. 2009 The shape of the competition and carrying capacity kernels affects the likelihood of disruptive selection. **Journal of Theoretical Biology** 259: 5-11.
44. E.L. Preisser, **D.I. Bolnick**, and J. Grabowski. 2009. Resource dynamics influence the magnitude of non-consumptive effects of predators on prey. **Ecology Letters**. 12:315-323.

2008

43. L. K. Snowberg, and **D. I. Bolnick**. 2008. Assortative mating by diet in a phenotypically unimodal but ecologically variable population of stickleback. **American Naturalist** **172**:733-739.
42. Preisser, E.L., **D.I. Bolnick**. 2008. When predators don't eat their prey: nonconsumptive predator effects on prey dynamics. **Ecology** **89**: 2414-2415.
41. Peckarsky, B. L., P.A. Abrams, **D.I. Bolnick**, L. Dill, J. Grabowski, B. Luttbeg, J. Orrock, S. Peacor, E.L. Preisser, O. Schmitz, G. Trussell, 2008. Rewriting the Textbooks: The relative importance of consumptive and non-consumptive predator effects in classic studies of predator-prey interactions. **Ecology** **89**: 2416-2425.
40. Svänback, R., and **D. I. Bolnick**. 2008. Behavioral ecology: Food specialization in The Encyclopedia of Ecology. Elsevier. 2: 1636-1642.
39. Araújo, M., P.R. Guimaraes, R. Svanbäck, A. Pinheiro, P. Guimaraes, S. Reis, and **D.I. Bolnick**. 2008. In press. Network analysis reveals contrasting effects of intraspecific competition on individual vs. population diets. **Ecology**. **89**:1981-1993.
38. Preisser, E.L., **Bolnick, D.I.** 2008. The many faces of fear: categorizing the pathways and impacts of nonconsumptive predator effects on prey populations. **PLOS One** **3**: e2465.
37. **Bolnick, D.I.**, and O.L. Lau. 2008. Predictable patterns of disruptive selection in three-spine stickleback. **American Naturalist** **172**:1-11.
36. **Bolnick, D. I.**, E. J. Caldera, and B. Matthews. 2008. Evidence for asymmetric migration load in a pair of ecologically divergent lacustrine stickleback populations. **Biological Journal of the Linnean Society**. **94**:373-387.
35. **Bolnick, D.I.**, M. Turelli, H. López-Fernández, P.C. Wainwright, and T.J. Near. 2008. Does accelerated mitochondrial evolution explain 'Darwin's corollary'? asymmetric viability of reciprocal F1 hybrids in centrarchid fishes. **Genetics** **178**:1037-1048.
34. Kitano, J., **D.I. Bolnick**, D.A. Beauchamp, S. Mori, T. Nakano, and C.L. Peichel. 2008. Reverse evolution of armor plates in the threespine stickleback. **Current Biology** **18**:769-774.
33. Caldera, E. J., and **D. I. Bolnick** 2008. Effects of colonization history and landscape structure on genetic variation within and among lacustrine populations of three-spine sticklebacks in a watershed. **Evolutionary Ecology Research** **10**:1-24.

2007

32. Araújo, M., G. Machado, A. Giaretta, S. Reis, and **D.I. Bolnick**. 2007. Individual-level diet variation in four species of Brazilian frogs (Leptodactylidae). **Copeia**. 2007: 855-865.

31. H. López-Fernández, and **D.I. Bolnick**. 2007. Is partial hybrid viability due to incomplete penetrance are parents heterozygous for Dobzhansky-Mueller incompatibilities? **PLOS One** 2007 (12): e1294.
30. **Bolnick, D.I.** and P. Nosil. 2007. Migration load and the strength of selection. **Evolution**. 61:2229-2243.
29. **Bolnick, D.I.**, 2007. The ‘invisible hand’ leaves an evolutionary fingerprint. **Current Biology**. 17:596-597.
28. **Bolnick, D. I.**, and B. Fitzpatrick. 2007. Sympatric speciation: theory and empirical data. **Annual Review of Ecology Evolution and Systematics**. 38:459-487.
27. **Bolnick, D.I.**, R. Svänback, M. Araujo, L. Persson. 2007. More generalized populations are also more heterogeneous: comparative support for the niche variation hypothesis. **Proceedings of the National Academy of Sciences**. 104:10075-10079.
26. Araujo, M.S., **D.I. Bolnick**, G. Machado, A. Giaretta, and S. Reis. 2007. Using $\delta^{13}\text{C}$ stable isotopes to quantify individual-level diet variation. **Oecologia**. 152:643-654.
25. Svänback, R., and **D. I. Bolnick**. 2007. Intraspecific competition drives increased resource use diversity within a natural population. **Proceedings of the Royal Society of London, Section B**. 274:839-844.
24. **Bolnick, D. I.** 2007. ANOPA: ‘statistical’ systematics for young earth creationists. **Reports of the National Center for Science Education**. 26:22-31. (This paper reviews and critiques a paper published by a young earth creationist in a peer-reviewed scientific journal. Not peer-reviewed)

2006

23. **Bolnick, D. I.**, T J. Near, and P. C. Wainwright. 2006. Body size divergence promotes post-zygotic reproductive isolation in centrarchids. **Evolutionary Ecology Research**. 8:903-913.
22. **Bolnick, D. I.** 2006. A multi-species outcome of a common model of sympatric speciation. **Journal of Theoretical Biology** 241: 734-744.
21. **Bolnick, D. I.** and C. E. Miller. 2006. Intergeneric spawning between the Sacramento Perch (*Archoplites interruptus*) and the Rock Bass (*Ambloplites rupestris*), Teleostei: Centrarchidae. **American Midland Naturalist**. 156: 299-304.
20. Bolnick, D. A., **D. I. Bolnick**, and D. G. Smith. 2006. Y Chromosomes Reveal Assymmetric Male and Female Genetic Histories in Eastern North America. **Molecular Biology and Evolution**, 23: 2161-2174.

2005

19. **Bolnick, D. I.** and E. L. Preisser. 2005. Resource availability modifies the strength of trait-mediated predator-prey interactions. **Ecology** 86:2771-2779.
18. **Bolnick, D. I.**, and T. J. Near. 2005. Tempo of post-zygotic reproductive isolation in sunfishes (Teleostei: Centrarchidae). **Evolution**. 59:1754-1767.
17. Near, T.J., **D. I. Bolnick**, and P. C. Wainwright. 2005. Fossil calibrations and molecular divergence time estimates in centrarchids fishes (Teleostei: Centrarchidae) . **Evolution**.59:1768-1782.
16. Svanbäck, R. and **D. I. Bolnick**. 2005. An optimal foraging approach to modeling individual specialization. **Evolutionary Ecology Research**. 7: 993-1012.
15. Preisser, E., **D. I. Bolnick**, and M. F. Benard. 2005. Scared to death? behavioral effects dominate predator-prey interactions. **Ecology**. **86**: 501-509.
14. Alfaro, M.A., **D.I. Bolnick**, and P.C. Wainwright. 2005. Evolutionary consequences of many-to-one mapping of jaw morphology to mechanics in Labrid fishes. **American Naturalist**. 165: e140 – e154.
13. Wainwright, P. C., M. E. Alfaro, **D. I. Bolnick**, and C. D. Hulsey. 2005. Many-to-one mapping of form to function: a general principle of organismal design. **Integrative and Comparative Biology**. 45: 256-262

2004

12. **Bolnick, D.I.** 2004. Does intraspecific competition generate disruptive selection? An experimental test in natural populations of sticklebacks. **Evolution**. 58:608-618.
11. **Bolnick, D. I.** 2004. Waiting for sympatric speciation. **Evolution**. 58:895-899.
10. Near, T.J., **D.I. Bolnick**, and P.C. Wainwright. 2004. Investigating phylogenetic relationships of the Centrarchidae (Actinopterygii: Perciformes) using DNA sequences from mitochondrial and nuclear genes. **Molecular Phylogenetics and Evolution**. 32:344-357.
9. Alfaro, M.A., **D.I. Bolnick**, and P.C. Wainwright. 2004. The evolutionary dynamics of complex biomechanical systems. **Evolution**. 58:495-503.

2003

8. **Bolnick, D.I.**, R. Svanbäck, J.A. Fordyce, L.H. Yang, J.M. Davis, C.D. Hulsey, and M.L. Forister. 2003. The ecology of individuals: incidence and implications of individual specialization. **American Naturalist** 161:1-28. Winner of the 2005 Mercer Award from the Ecological Society of America
7. **Bolnick, D.I.**, and M. Doebeli. 2003. Sexual dimorphism and adaptive speciation: two sides of the same ecological coin. **Evolution**. 57: 2433-2449.

2002

6. **Bolnick, D.I.**, L.H. Yang, J.A. Fordyce, J.M. Davis, and R. Svanbäck. 2002. Measuring individual-level diet specialization. **Ecology** 83:2936–2941.
5. **Bolnick, D.I.** 2002. Indspec1.0 – a windows application for calculating measures of individual specialization. **Ecological Archives** E083-056-S1.
4. Ferry-Graham, L. **D.I. Bolnick**, and P.C. Wainwright. 2002. Using functional morphology to examine the ecology and evolution of specialization. **Integrative and Comparative Biology** 42:265-278.
3. **Bolnick, D.I.**, and L. Ferry-Graham. 2002. Optimizing prey capture behaviors to maximize expected net benefit. **Evolutionary Ecology Research** 4:843-855.

2001

2. **Bolnick, D.I.** 2001. Intraspecific competition favours niche width expansion in *Drosophila melanogaster*. **Nature** 410:463-466.

1999

1. Orians, C.M., **D.I. Bolnick**, B.M. Roche, R. S. Fritz, and T. Floyd. 1999. Water availability alters the relative performance of *Salix sericea*, *Salix eriocephala*, and their F₁ hybrids. **Canadian Journal of Botany** 77:514-522.

Books (Non-Scientific):

Ho, J.D., **D.I. Bolnick**, J.C. Cluett, W.S. Morgan, D.A. Beiler, N. Gerhart, and E.B. Grossmann. 1995. Farms to Forests, a Naturalists Guide to Hopkins Memorial Forest. Williams College Center for Environmental Studies: Williamstown, MA. 169 pp.

Bolnick, B.R., D.J. Bolnick, and **D.I. Bolnick**. 1999. Waterfalls of the White Mountains. Countryman Press: Woodstock, VT. 318 pp.

Williams Outing Club. North Berkshire Outdoor Guide. Williams College, Williamstown MA. 182 pp.

FUNDING AWARDS

Research Awards (major awards highlighted in bold)

- 2009** NSF CAREER Grant \$647,000- recommended for funding, but the Program Officer declined funding knowing that I was unable to accept the grant as per the rules of HHMI, which prevents me from holding three major junior faculty awards (HHMI, Packard, and CAREER).
- 2009-2015** Howard Hughes Medical Institute, Early Career Scientist. (\$1,500,000 plus addition access to large equipment grants, and full salary support).
- 2009-2011** National Institute for Mathematical and Biological Synthesis, Working Group Grant: Ecological consequences of intraspecific niche variation. (\$~80,000)

- 2008-2009 National Science Foundation DEB 0808356 Dissertation Research: The roles of genetic variation and competition in resource niche expansion. Co-PI: Deepa Agashe (\$12,000)
- 2008 Faculty Travel Grant, UT Austin (\$1200)
- 2008-2009 Dwight W. and Blanche Faye Reeder Centennial Fellowship in Ecology, (\$10,000)
- 2008-2012 David and Lucile Packard Foundation Fellowship for Science and Engineering (\$825,000)**
- 2008-2009 Dwight W. and Blanche Faye Reeder Centennial Fellowship in Systematic and Evolutionary Biology, (\$10,000)
- 2007 Faculty Travel Grant, UT Austin (\$1000)
- 2006-2007 Dwight W. and Blanche Faye Reeder Centennial Fellowship in Systematic and Evolutionary Biology, (\$10,000)
- 2006-2007 University of Texas Faculty Research Grant (\$6,000)
- 2006 Research Experience for Undergraduates Supplement (\$6,000) to DEB-0412802.
- 2005 Small Grants for Research on Private Land in Central Texas, UT Environmental Science Institute (\$2000)
- 2005 Rom Rhome International Professional Development Fund (\$1000)
- 2005 Faculty Travel Grant, UT Austin (\$350)
- 2005-2006 National Center for Ecological Analysis and Synthesis working group grant “When, and how much, does fear matter? Quantitatively assessing the impact of predator intimidation of prey on community dynamics” Co-PI with E. L. Preisser. (\$56,160)**
- 2004-2007 National Science Foundation DEB-0412802. A Comparative Study of Fitness Landscapes: Testing Competitive Disruptive Selection in Sticklebacks. (\$320,000)**
- 2003 Center for Population Biology Travel Grant (\$1,000)
- 2002 Shirley Ashton Scholarship (\$10,000).
- 2001-2002 U.C. Davis Humanities Research Grant (\$3,000).
- 2001 National Science Foundation, Dissertation Improvement Grant (\$10,000).
- 2001 Sigma Xi Research Grant (\$1,000).
- 2001 Phi Beta Kappa Scholarship, Northern California Chapter (\$3,500).
- 2000 Center for Biosystematics Grant (\$1,000).
- 2000,2002 Center for Population Biology Research Grant (\$850).
- 1999, 2001 Daphne and Ted Pengelley Research Grant (\$1,500) .
- 1999 Jastro-Shields Research Grant, U.C. Davis (\$1,500).
- 1994 Mullen Grant for Research in Environmental Studies, Williams College (\$3,000).

Stipend Awards

- 2006 Summer Research Assignment, University of Texas at Austin (\$15,000)
- 2003-2004 University of California Davis Dissertation Year Fellowship (declined)
- 2002, 2003 ARCS Foundation Scholar (two awards of \$5,000 each).
- 2002, 2003 Summer Research Fellowship, U.C. Davis (\$4,000).
- 1998-2001 National Science Foundation Graduate Research Fellowship.
- 1993, 1995 Howard Hughes Medical Foundation Undergraduate Research Fellow.

TEACHING EXPERIENCE

Instructor:

- “Introduction to Ecology Evolution and Behavior” (graduate course), University of Texas at Austin; Taught macroevolution section of a two-semester series that serves as the graduate core course of the EEB graduate program.
- “Muddyboots Statistics” (graduate course), University of Texas at Austin
- “Teaching Evolution”, University of Texas at Austin
- “The Ecology of Speciation” (graduate course), University of Texas at Austin
- “Speciation” (graduate course), University of Texas at Austin
- “Research Methods”, UTeach Program, University of Texas at Austin.
- Introduction to Ecology (EVE 101), University of California, Davis; Summer Session II 2003.
- Advanced Biology and Applied Mathematics from 1996 through 1998 at Same Secondary School, Same, Kilimanjaro Region, Tanzania, through the United States Peace Corps. Included a 1 ½ month teacher training program. 32 hours of class time per week. Side projects included HIV education and organizing training programs for Tanzanian teachers.

Teaching Assistant Positions:

- Introduction to Zoology (Bioscience 1B), University of California, Davis, Winter 2003.
- Genetics (Bioscience 101), University of California, Davis, Fall 1999.
- Community Ecology (Biology 302), Williams College, Spring 1996.
- Introductory Ecology (Biology 203), Williams College, Fall 1994, 1995.
- Introduction to Environmental Sciences (Environmental Studies 102), Spring 1995.

Teaching grants

- 2005 FAST Tex grant to develop online database of digital teaching media for biology (\$5,000)
- 2006 FAST Tex grant to beta-test online database of digital teaching media (Bio-Doc) (\$2,000)
- 2006-2009 Participant, NSF REU: Integrated Watershed Science, with Environmental Science Institute

INVITED SEMINARS

- 2011 (upcoming April) Graduate Student Symposium keynote speaker, University of Toronto system.
- 2011 (upcoming March) Distinguished Ecologist lecture, Colorado State University
- 2011 (upcoming March) Graduate Student Invitee, University of Pittsburgh
- 2011 (upcoming February) Howard Hughes Medical Institute Science Meeting
- 2010 (upcoming December) First European Conference on Speciation, International Institute for Applied Systems Analysis (IIASA), Laxenburg Austria
- 2010 (upcoming November) Tulane University, New Orleans LA
- 2010 Max Planck Institute for Evolutionary Biology, Ploen, Germany. "Sympatric speciation in threespine stickleback: why NOT?"
- 2010 Society for the Study of Evolution, Portland OR. Symposium on sexual dimorphism and natural selection. "Sexual dimorphism and disruptive selection in threespine stickleback"

- 2010 Harvard University "Sympatric speciation in stickleback: all dressed up and nowhere to go?"
- 2010 University of Chicago, "Sympatric speciation in stickleback: all dressed up and nowhere to go?"
- 2009 Association for the Study of Animal Behavior Winter Conference, London, UK "Causes and consequences of niche variation within populations"
- 2009 EAWAG, Switzerland "Between-population variation in threespine stickleback"
- 2009 University of Bern, Switzerland, "Causes and consequences of niche variation within populations"
- 2009 Howard Hughes Medical Institute, "Maintenance of genetic diversity within populations"
- 2009 University of British Columbia "Yes, we are all individuals: Causes and consequences of niche variation"
- 2009 Michigan State University "Yes, we are all individuals: Causes and consequences of niche variation"
- 2008 Guest lecture, UT Austin College of Education, "The Evolution of Creationism"
- 2008 David and Lucille Packard Foundation, Annual Meeting for Packard Fellows, Park City Utah. "Incorporating within-population variation into ecology".
- 2008, University of Koln, Germany, keynote speaker at the Graduate Meeting of the Ecology Section of the German Zoological Society, on The ecology of specialized individuals in populations: prerequisites, constraints, development, relevance. "“Yes, we are all individuals: the ecology and evolution of within-population niche variation”"
- 2007, Rice University "“Yes, we are all individuals: the ecology and evolution of within-population niche variation”"
- 2007, McGill University "Does intraspecific competition promote genetic and phenotypic variation?"
- 2007, European Society for Evolutionary Biology, Uppsala, Sweden, "Habitat choice and adaptive divergence at multiple spatial scales in threespine stickleback", in the symposium on "Phenotype-dependent habitat choice".
- 2007, Texas A&M University "Diversifying effect of intraspecific competition"
- 2007, University of Calgary "Diversifying effect of intraspecific competition"
- 2007, University of Guelph "Diversifying effect of intraspecific competition"
- 2006, Workshop on Genetic and Evolutionary Diversification, Erwin Schrodinger Institute for Mathematical Physics, Vienna. "Diet variation in natural populations: implications for frequency-dependent selection"
- 2006, National Center for Ecological Synthesis and Analysis "A rose is a rose is a rose, but is a stickleback a stickleback?"
- 2006, University of Michigan, Young Scientists' Symposium "Diversifying effect of intraspecific competition"
- 2006, State University of New York, Stony Brook "Niche variation in stickleback populations"
- 2005, Texas State University, San Marcos "Evolution of post-mating isolation in sunfish"
- 2005, Population Biology Seminar Series, UT Austin. "Evolution of post-mating isolation in sunfish"
- 2005, European Society for Evolutionary Biology, Krakow, Poland. Invited speaker for symposium titled: "Genetic diversification by frequency-dependent selection: theoretical approaches and empirical facts". Talk title: "Empirical tests of frequency-dependence and disruptive selection"

- 2005 Dobzhansky Award / ASN Young Investigator Award address, Fairbanks AK
 “Diversifying effect of intraspecific competition”
- 2005 Speciation seminar, University of Uppsala, Sweden “Diversifying effect of intraspecific competition”
- 2004, University of Tennessee at Knoxville “Diversifying effect of intraspecific competition”
- 2004, University of California at Davis. Merton Love Award Talk “Multiple perspectives on the evolution of biodiversity: species richness, ecological variation, and morphological diversity”
- 2004, University of New Mexico, “Diversifying effect of intraspecific competition”
- 2003, Department of Integrative Biology, University of Texas at Austin. “Diversifying effect of intraspecific competition”
- 2003, Center for Population Biology Seminar, University of California at Davis. “Diversifying effect of intraspecific competition”
- 2001, Center for Population Biology Seminar, University of California at Davis. “Diversifying effect of intraspecific competition”

CONTRIBUTED TALKS/POSTERS AT MEETINGS

- 2010 Society for the Study of Evolution, Portland OR. Parent, C.E., D. Agashe, DI Bolnick
 "Contrary to expectations, intraspecific competition suppresses niche width in flour beetles".
- 2010 Society for the Study of Evolution, Portland OR. Berner, D., W.E. Stutz, D.I. Bolnick.
 Foraging trait (co)variances in stickleback evolve deterministically and do not predict trajectories of adaptive diversification".
- 2009 David and Lucille Packard Foundation Meeting, "Testing the garlic eater's hypothesis" (poster)
- 2008, Society for the Study of Evolution, Minneapolis MN. D.I. Bolnick, “Predictable patterns of disruptive selection in three-spine stickleback”
- 2008, Society for the Study of Evolution, Minneapolis MN. Agashe, D and D.I. Bolnick, "Does genetic variation facilitate niche expansion?"
- 2007, Society for Integrative and Comparative Biology, San Antonio, TX. D. Agashe, and DI Bolnick, “Genetic variation facilitates niche width expansion”
- 2007, Society for Integrative and Comparative Biology, San Antonio, TX. L. Snowberg and DI Bolnick, “Assortative mating by diet in threespine stickleback”.
- 2007, Ecological Society of America Meeting, San Jose, CA. “Quantitative patterns of niche variation: more generalized populations are also more variable”
- 2006, Ecological Society of America. E.L. Preisser and D.I. Bolnick. “Multifarious mechanisms of non-consumptive effects in predator-prey interactions”
- 2005, Co-organizer of symposium on the “Evolutionary biology of Centrarchidae” at the meeting of the American Society of Ichthyology and Herpetology, Tampa, FL. “Tempo of reproductive isolation in sunfish”
- 2005 Society for Study of Evolution / American Society of Naturalists meeting, Fairbanks AK
 “Tempo of reproductive isolation in sunfish”
- 2004, Ecological Society of America meeting, Portland, OR “Using optimal foraging theory to explain how population density affects the degree of individual specialization”
- 2004, Society for Integrative and Comparative Biology, New Orleans, LA “Comparative approaches to intra-population niche variation”

- 2003, Society for Study of Evolution, Chico, CA “Does intraspecific competition generate disruptive selection?”
- 2003, Society for Study of Evolution, Chico, CA. Tom Near, DI Bolnick and PC Wainwright, “Strategies for fossil calibration of molecular clocks in sunfish and basses (Perciformes:Centrarchidae), a multi-gene approach”
- 2003, Society for Study of Evolution, Chico, CA. M. Alfaro, DI Bolnick, PC Wainwright, “Many-to-one mapping in the 4-bar linkage of wrasses”
- 2002, American Society of Naturalists. Banff, Canada. “Does intraspecific competition generate disruptive selection?”
- 2001, Society for Study of Evolution. Knoxville, TN. “Intraspecific competition and niche width evolution”
- 2000, California Population and Evolutionary Genetics Meeting, Santa Cruz, CA. “Intraspecific competition drives niche expansion in *Drosophila*”
- 1996, Ecological Society of America, Providence, RI. “Drought mediates introgression between two species of willows”

PROFESSIONAL SERVICE

Secretary, American Society of Naturalists 2009-2012

Associate Editor, American Naturalist 2008-present

Ad hoc Editor, Ecology (5 papers)

Manuscripts reviewed for: American Naturalist, Animal Behavior, Behavior Ecology and Sociobiology, Behavioral Ecology, Biological Journal of the Linnean Society, Biology Letters, BMC Evolutionary Biology, Copeia, Ecology, Ecology Letters, Ethology, Evolution, Evolutionary Applications, Evolutionary Ecology, Frontiers in Ecology and the Environment, Frontiers in Zoology, Genetica, Fundamental and Applied Limnology, Journal of Animal Ecology, Journal of Evolutionary Biology, Journal of Fish Biology, Journal of Theoretical Biology, Marine Ecology Progress Series, Molecular Ecology, Nature, Oecologia, Oikos, PLOS One, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society of London, Quarterly Review of Biology, Science, Transactions of the American Fisheries Society, Trends in Ecology and Evolution

Grant reviewer for

National Science Foundation. 9 proposals reviewed.

Netherlands Organization for Scientific Research (NWO). 2 proposals reviewed.

Austrian Science Fund (FWF, 3 proposals)

Swiss National Science Foundation (1 proposal)

Grant Agency, Academy of Sciences of the Czech Republic (1 proposal)

University of Texas at Austin, Faculty Research Grants

Grant Review Panel

National Science Foundation

Doctoral Dissertation Improvement Grant (DDIG) Panel, 2009

Howard Hughes Medical Institute

2010 Review Panel for HHMI Undergraduate Science Education Program

Participant/presenter

- 2003 University of California Technology in Teaching Workshop
- 2004 College of Natural Sciences' Teaching Strategies Workshop
- 2005 Presenter, College Natural Sciences Discovery Learning Luncheon (Topic: Uteach Research Methods course)
- 2006 Panelist for debate on Intelligent Design, Paul Nelson vs Sahotra Sarkor
- 2006 Presenter, College Natural Sciences Discovery Learning Luncheon (Topic: teaching evolution)
- 2008 Presenter, College of Natural Sciences Teaching Strategies Workshop
- 2008 Presenter, UTeach Institute Replication Conference, May 2008 (Topic: Uteach Research Methods course)
- 2008 Presenter, UTeach Institute Replication Conference, May 2008 (Topic: Teaching Evolution course)
- 2009 Testimony before the Texas State Board of Education regarding the inclusion of "weaknesses" of evolution in Texas Essential Knowledge and Skills revisions
- 2009 Evolution Weekend, Congregation Beth Shalom, Corpus Christi, Texas

Committee membership

- 2006- Ecological Society of America, Mercer Award Committee
 - 2005- International Science Opportunities Committee, University of Texas at Austin
 - 2007- UTeach Steering Committee
- Faculty Job Search Committees:
- 2008 Marine Science Institute, Fish Ecology
 - 2006 Section of Integrative Biology, Ecosystem Ecologist
- 2008- Environmental Science B.S. Degree Plan planning committee

2008- Evolution, Ecology, and Behavior Graduate Group, Grant Committee

Other

2005 Judge, Southwest Regional Siemens Competition in Science Math and Technology

2006 Contributor to the Reports of the National Center for Science Education.

2006 Consultant, Center for Food Safety, regarding a lawsuit over transgenic bentgrass testing.

2005-6 Developed on-line searchable site collecting high-content electronic media for teaching biology (e.g., simulations, animations) for use by teachers (www.bio-doc.org)

2006 Guest Lecturer, Kealing Middle School, Austin TX

2007 Lead Judge, Southwest Regional Siemens Competition in Science Math and Technology

2008 Wrote and collected >100 signatures from biology faculty in Texas, on an open letter to the Texas Education Agency protesting the forced resignation of their science curriculum director for supporting evolution.

2008 Speaker, Austin Journal Club (a group of area medical doctors), Jan 2008. “The evolution of creationism, the teaching of evolution, and why it matters”.

2008 Led a discussion with a religious group consisting of Austin-area physicians about creationism, intelligent design, and evolution

2008 Instructor, SoundVision Science Literacy Training, a science journalism training program for mid-career National Public Radio reporters. Lectured on current topics in evolutionary biology.

2008- Co-founder, 21st Century Science Coalition (www.texasscientists.org) to put pressure on the State Board of Education to improve evolution education in the state curriculum.

2009 Guest speaker for Evolution Weekend at Temple Beth Israel, Corpus Christi, TX

Media exposure

- 2003 Interview, Todd Mundt Show on National Public Radio, about Bolnick et al 2003.
- 2007 Newspaper article, Austin American Statesman, regarding the open letter to the Texas Education Agency (TEA)
- 2007 Interview on Austin NBC news, re: open letter to TEA
- 2007 Interview on KETK/NBC news, Tyler TX, re: open letter to TEA
- 2008. Kitano et al 2008 covered in the Seattle P-I (http://seattlepi.nwsourc.com/local/363263_oddfish16.html); Seattle Times (http://seattletimes.nwsourc.com/html/localnews/2004416183_webstickleback15m.html),

KIRO-TV (Seattle), and the Discovery Channel <http://dsc.discovery.com/news/2008/05/15/fish-evolution-lake.html>

- 2008 News articles about launch of 21st Century Science Coalition:
<http://www.texscience.org/releases/21st-century-news-articles.htm>
- 2008 Op-Ed published in Waco Tribune, excerpted in Austin Statesman, supporting Evolution education in Texas.
- 2009. San Diego Union Tribune, story on current status of speciation research.
<http://www3.signonsandiego.com/stories/2009/jan/01/1c01species20419-evolution-abounds-and-science-sho/>

Memberships:

Society for Study of Evolution, 1997-98; 2002-present.
American Society of Naturalists, 2001-present.
Ecological Society of America, 2004-present
Genetics Society of America, 2008-
Society for Integrative and Comparative Biology 2003-present.
National Center for Science Education, 2002-present.
Sierra Club, 2002-present.
Nature Conservancy, 1992-present.

ADVISEES

Graduate students

Current students:

Yuexin Jiang, Mark Brinkmann , Lisa Snowberg, Will Stutz, Chad Brock, Anna Siwertsson (visiting from Norway for 6 months)

Graduated students

Dr. Deepa Agashe

Dr. Marcio Araujo (visited from UNICAMP, Brazil, for 6 months)

PhD Committee member for:

Deepa Agashe, Jelena Pantel, Samraat Pawar, Jeremy Brown, Frank Stearns, Stephen Goodyear, Amanda Kenney, Christian Rabeling ,Pam Willis , Allison Gainesbury, Luis Bonachea, Chad Smith, Simone Cappellari, Joanne Clavel (INRES, Universite' Madame-Curie, Paris, France).

Postdoctoral researchers

Current

Christine Parent 2008-2011

Rose Carlson (co-advised with George Lauder at Harvard University) 2008-2010

Daniel Warren (2009 - 2011)

Former

Marcio Araujo 2008-2009

Hernan López-Fernández, 2005-2006

Richard Svanback (co-sponsor, primary sponsor is Dolph Schluter, other co-sponsor is Michael Doebeli) 2005-2006

Lab technicians

On Lee Lau (2005-2008)

Eric Caldera (2005)

Jeff Paull (2008-2009)

JuJulie Day (2009-2012)

Undergraduate students

Zach Lanfear, Molly Hartzler (UTeach), Divya Balakrishnan (UTeach), Randy Schurr, Tania Tasneem (UTeach; REU student), Jessica Conover, Angela Chen, Claire Patenia (REU student), Joyce Valera (REU student from King's College), Todasporn Rodbumrung (UTeach), Chris Harrison. Additional students have worked directly with my Ph.D. students or postdocs, but are not listed because I did not advise them directly.