

# RONALD D. BASSAR

Department of Biology, Williams College  
Thompson Biological Laboratory, Williams College  
Williamstown, MA, 01267, USA  
Email: rdb4@williams.edu, Phone: 413-597-2119  
Departmental Website: <https://biology.williams.edu/profile/rdb4/>  
Personal Website: [www.ron-bassar.squarespace.com](http://www.ron-bassar.squarespace.com)

---

## EDUCATION

PhD University of California-Riverside. Evolution, Ecology and Organismal Biology, March 2011  
BA Prescott College, Arizona. Ecology, May 2001

---

## APPOINTMENTS & EXPERIENCE

2017- Assistant Professor, Department of Biology, Williams College  
2014-2017 Postdoctoral Scholar, Department of Zoology, University of Oxford  
2012-2014 Postdoctoral Scholar, Department of Environmental Conservation, University of Massachusetts-Amherst  
2011-2012 Research Scientist, Department of Biology, University of California-Riverside  
2006-2011 Graduate Research Associate and Project Co-Coordinator, University of California, Riverside, The Guppy Project, site: Trinidad, West Indies  
2005 Research Associate, Washington Department of Fish and Wildlife  
2004 Research Assistant, Department of Biology, University of Illinois-Urbana-Champaign, field sites: Panama  
2001-2005 Research Associate and Field Site Coordinator, Montana Cooperative Wildlife Research Unit, University of Montana, sites: Arizona, Venezuela, South Africa  
1998,1999 Wildland Firefighter, US Forest Service-Coconino National Forest, AZ

---

## FUNDING & AWARDS

### RESEARCH GRANTS

2016-2019: *The paradox of coexistence: the evolution of ontogenetic interactions*. USA National Science Foundation (NSF). With Joseph Travis (PI) and (co-PIs) Ronald Bassar, David Reznick, Tim Coulson. Award amount: ~\$996,000  
2014-2017 *Trait-mediated density-dependence and community level eco-evolutionary dynamics*. National Environmental Research Council (NERC), UK. Named PDRA with Tim Coulson, Mark Rees and Dylan Childs. £505,298 (US equivalent: \$828,270).  
2009-2010 Exploration Fund, Explorers Club of America (\$2,500)

### FELLOWSHIPS

2010 Newell Travel Award, University of California (\$300)  
2010-2011 Dissertation Year Fellowship, University of California (\$7,500)  
2008-2009 Distinguished Graduate Fellowship, University of California (\$7,500)

2007-2008 Department of Education, Graduate Assistance in Areas of National Need Fellowship (\$9,824)  
2006 NSF Graduate Research Fellowship Honorable Mention  
2006-2007 University of California-Riverside Chancellor's Fellowship (\$19,000)  
2005-2006 Department of Education, Graduate Assistance in Areas of National Need Fellowship (\$53,970)

### **AWARDS**

2012 Hynes Award for New Investigators, Society for Freshwater Science

---

## **PROFESSIONAL SERVICE**

### **EDITORIAL STAFF**

2014- Associate Editor, Journal of Animal Ecology

### **JOURNAL REFEREE**

Ecology Letters, Quarterly Review of Biology, Ecology, Evolution, American Naturalist, Journal of Animal Ecology, Functional Ecology, Oecologia, Animal Conservation, The Wilson Bulletin, Aquatic Sciences, Environmental Biology of Fishes, Journal of Freshwater Biology, Biology Letters, The Year in Evolutionary Biology, Climate Research

### **FUNDING REFEREE**

USA National Science Foundation (NSF); Graduate Women in Science; CNRS, France

### **COMMUNITY OUTREACH**

2010 Invited graduate student presentation, American Livebearer Association Meeting, Detroit, MI  
2007 Graduate student mentor in the (CHAMP) program for K-12 teachers  
2006 Graduate student mentor in the Accelerated Literacy Integrating Algebra and Science (ALIAS) program for K-12 teachers and students.  
2005-2010 K-12 science fair judge, Riverside Unified School District

---

## **PUBLICATIONS**

Citations: 1009, h-index: 14, i10-index: 19, Source: Google Scholar

- 31) Auer, S. K., G. J. Anderson, S. McKelvey, R. D. Bassar, D. McLennan, J. D. Armstrong, K. H. Nislow, H. K. Downie, L. McKelvey, T. A. J. Morgan, K. Salin, D. L. Orell, A. Gauthey, T. C. Reid, and N. B. Metcalfe. *In review*. Oligotrophication has evolutionary consequences for salmon. *PNAS*.
- 30) Handelsman, C., R.D. Bassar, C. Ghalambor, J. Arendt, T. Coulson, E. Ruell, J. Torres-Dowdall, J. Travis, D.N. Reznick. *In review*. Eco-evolutionary feedbacks predict the time course of rapid life history evolution. *Nature*.
- 29) Bassar, R.D., J. Travis, and T. Coulson. *In review*. Predicting coexistence in species with continuous niche shifts and competitive asymmetry. *Ecology*.

- 28) Simon, T.N., R.D. Bassar, A.J. Binderup, A.S. Flecker, M.C. Freeman, J.F. Gilliam, M.C. Marshall, S.A. Thomas, J. Travis, D.N. Reznick, and C.M. Pringle. *In press*. Local adaptation in Trinidadian guppies alters stream ecosystem structure at landscape scales despite high environmental variability. *Copeia*.
- 27) Bassar, R.D., T.N. Simon, W. Roberts, J. Travis, D.N. Reznick. 2017. The evolution of coexistence: reciprocal adaptation promotes the assembly of a simple community. *Evolution*. 71: 373-385.
- 26) Bassar, R.D., B.L. Bryan, M.C. Marshall, C.M. Pringle, D.N. Reznick, and J. Travis. 2017. Local adaptation of fish consumers alters primary production through changes in algal community composition and diversity. *Oikos*. 126:594-603.
- 25) Auer, S.K., R.D. Bassar, K. Salin, and N. Metcalfe. 2016. Repeatability of metabolic rate is lower for animals living under field versus laboratory conditions. *Journal of Experimental Biology*. 219: 631-634.
- 24) Bassar, R.D., D. Childs, M. Rees, S. Tuljapurkar, D. Reznick and T. Coulson. 2016. The effects of asymmetric competition on the life history of Trinidadian guppies. *Ecology Letters*. 19: 268-278.
- 23) Bassar, R.D., B.H. Letcher, K. Nislow and A. Whiteley. 2016. Seasonal changes in climate outpace compensatory density dependence in eastern brook trout. *Global Change Biology*. 22: 577-593.
- 22) Bassar, R. D., T. I. Heatherly, M. C. Marshall, S. A. Thomas, A. S. Flecker, and D. N. Reznick. 2015. Population size structure dependent fitness and ecosystem consequences in Trinidadian guppies. *Journal of Animal Ecology*. 84:955-968
- 21) El-Sabaawi\*, R. W., R.D. Bassar\*, C. Rakowski, M.C. Marshall, B.L. Bryan, S. N. Thomas, C. Pringle, D.N. Reznick and A.S. Flecker. 2015. Intraspecific phenotypic differences in fish affect ecosystem processes as much as bottom-up factors. *Oikos*. 124:1181-1191.  
\*Shared first authors
- 20) El-Sabaawi, R., M. C. Marshall, R. D. Bassar, A. López-Sepulcre, C. Dalton, and E. P. Palkovacs. 2015. Assessing the effects of guppy life history evolution on nutrient recycling: from experiments to the field. *Freshwater Biology*. 60:590-601.
- 19) Letcher, B. P. Schueller, R. D. Bassar, K. Nislow, J. Coombs, K. Sakrejda, M. Morrissey, D. Sigourney, A. Whiteley, M. O'Donnell. 2015. Robust estimates of environmental effects on population vital rates: an integrated capture-recapture model of seasonal brook trout growth, survival and movement in a stream network. *Journal of Animal Ecology*. 84:337-352.
- 18) Travis, J., D. N. Reznick, R. D. Bassar, A. López-Sepulcre, R. Ferriere, and T. Coulson. 2014. Do eco-evo feedbacks help us understand nature? Answers from studies of the

Trinidadian guppy. Pages 1-40 in J. Moya-Larano, J. Rowntree, and G. Woodward, editors. *Advances in Ecological Research*.

- 17) Bassar, R. D., Auer, S. K. & Reznick, D. N. 2014. Why do placentas evolve? A test of the life history facilitation hypothesis in two clades in the genus *Poeciliopsis* representing two independent origins of placentas. *Functional Ecology*. 28:999-1010.
- 16) Bassar, R. D., D. N. Reznick, A. López-Sepulcre, and J. Travis. 2013. Experimental evidence for density-dependent regulation and selection on Trinidadian guppy life histories. *The American Naturalist* 181:25-38.
- 15) Marshall, M. C., A. J. Binderup, E. Zandonà, S. Goutte, R. D. Bassar, R. El-Sabaawi, S. A. Thomas, A. S. Flecker, S. S. Kilham, D. N. Reznick, and C. M. Pringle. 2012. Effects of consumer interaction on benthic resources and ecosystem processes in a Neotropical stream. *PLoS One* 7:1-11.
- 14) Bassar\*, R. D., R. Ferriere\*, A. López-Sepulcre, M. C. Marshall, J. Travis, C. M. Pringle, and D. N. Reznick. 2012. Direct and indirect ecosystem effects evolutionary adaptation in Trinidadian guppies (*Poecilia reticulata*). *The American Naturalist* 180:167-185.  
\*Shared first authors
- 13) Reznick, D. N., R. D. Bassar, and F. H. Rodd. 2012. The demographics of density regulation in guppies (*Poecilia reticulata*). *Evolution*. 66:2903-2915
- 12) Auer, S.K\*, A. Lopez-Sepulcre, T. Heatherly II, T.J. Kohler, R. D. Bassar, S.A. Thomas, D.N. Reznick. 2012. Life histories have a history: Effects of past and present conditions on adult somatic growth rates in wild Trinidadian guppies. *Journal of Animal Ecology* 81:818-826.  
\*Elton prize winner, British Ecological Society
- 11) Zandonà, E., S. K. Auer, S. S. Kilham, J. H. Howard, A. López-Sepulcre, M. P. O'Connor, R. D. Bassar, A. Osorio, C. M. Pringle, and D. N. Reznick. 2011. Diet quality and prey selectivity correlate with life histories and predation regime in Trinidadian guppies. *Functional Ecology* 25:964-973.
- 10) Pires, M. N., R. D. Bassar, K. E. McBride, J. U. Regus, T. Garland, and D. N. Reznick. 2011. Why do placentas evolve? An evaluation of the life-history facilitation hypothesis in the fish genus *Poeciliopsis*. *Functional Ecology* 25:757-768.
- 9) Walsh\*, M. R., D. F. Fraser, R. D. Bassar, and D. N. Reznick. 2011. The direct and indirect effects of guppies: implications for life-history evolution in *Rivulus hartii*. *Functional Ecology* 25:227-237.  
\*Runner up for the Haldane Prize for Young Investigators
- 8) Bassar, R. D., A. López-Sepulcre, M. R. Walsh, M. Turcotte, R. M. Torres-Mejia, and D. N. Reznick. 2010. Bridging the gap between ecology and evolution: integrating density regulation and life history evolution. *The Year in Evolutionary Biology* 1206:17-34.

- 7) Bassar\*, R. D., M. C. Marshall, A. Lopez-Sepulcre, E. Zandonata, S. K. Auer, J. Travis, C. M. Pringle, A. S. Flecker, S. A. Thomas, D. F. Fraser, and D. N. Reznick. 2010. Local adaptation in Trinidadian guppies alters ecosystem processes. *Proceedings of the National Academy of Sciences*.107:3616-3621.  
\*Hynes Award for Young Investigators, Society for Freshwater Science,  
\*Runner up Thomas M. Frost Award for Excellence in Graduate Research-ESA
- 6) Auer, S., R. D. Bassar, J. J. Fontaine, and T. E. Martin. 2007. Breeding biology of passerine in a subtropical montane forest in northwestern Argentina. *The Condor* 109:321-333.
- 5) Auer, S., D. M. Logue, R. D. Bassar, and D. E. Gammon. 2007. Nesting biology of the black-bellied wren (*Thryothorus fasciatoventris*) in central Panama. *The Wilson Journal of Ornithology* 119:71-76.
- 4) Auer, S. K., R. D. Bassar, and T. E. Martin. 2007. Biparental incubation in the chestnut-vented tit-babbler (*Parisoma subcaeruleum*): mates devote equal time, but males keep eggs warmer. *Journal of Avian Biology* 38:278-283.
- 3) Martin, T. E., S. K. Auer, R. D. Bassar, A. M. Niklison, and P. Lloyd. 2007. Geographic variation in avian incubation periods and parental influences on embryonic temperature. *Evolution* 61:2558-2569.
- 2) Martin, T. E., R. D. Bassar, S. K. Bassar, J. J. Fontaine, P. Lloyd, H. A. Mathewson, A. M. Niklison, and A. Chalfoun. 2006. Life-history and ecological correlates of geographic variation in egg and clutch mass among passerine species. *Evolution* 60:390-398.
- 1) Lloyd, P., T.E. Martin, R.L. Redmond, M.M. Hart, U. Langer, and R.D. Bassar. Assessing the influence of spatial scale on the relationship between avian nesting success and forest fragmentation: A case study. *in* J. Wu, K.B. Jones, H. Li, and O.L. Loucks, editors. *Scaling and Uncertainty Analysis in Ecology: Methods and Applications*. Columbia University Press, New York.

---

## RESEARCH PRESENTATIONS

### **INVITED DEPARTMENT SEMINARS**

- 2017 Department of Integrative Biology, University of South Florida.
- 2017 Department of Biosciences, Rice University.
- 2017 Department of Biology, University of Virginia.
- 2016 Department of Biology, Williams College.
- 2016 Department of Biology. Royal Holloway University.
- 2014 Wildlife Biology Program. The University of Montana.
- 2014 Institute of Biodiversity, Animal Health and Comparative Medicine. University of Glasgow.
- 2013 Swiss Federal Institute of Aquatic Science and Technology (EAWAG), Kastenienbaum, Switzerland.
- 2013 Netherlands Institute of Ecology (NIOO).

- 2013 Odum School of Ecology, University of Georgia-Athens.  
2012 Department of Ecology and Evolutionary Biology, Cornell University.  
2012 Redpath Museum, McGill University.

### **INVITED CONFERENCE SYMPOSIA**

- 2014 *Empirical studies of eco-evolutionary feedbacks*. Joint Aquatic Sciences Meeting, Portland, Oregon. (declined due to time conflict)  
2013 *Eco-evolutionary dynamics: what's your question?* Ecological Society of America  
2013: Is the interaction of evolutionary and ecological dynamics widespread or a special case?  
2013 *Feedbacks between ecology and evolution: linking theoretical models with empirical data*. Rapid evolution and sustainability. Mathematical Biosciences Institute, The Ohio State University.  
2012 *The evolution of Trinidadian stream communities*. Evolution 2012: Towards an Evolutionary Community Ecology.  
2012 *Modelling population persistence of brook trout to environmental change using spatially explicit Integral projection models*, U.S. Geological Survey Powell Center, Fort Collins, Colorado  
2012 *Eco-evolutionary feedbacks are determined by indirect ecological effects of local adaptation in Trinidadian guppies*. Hynes Award for New Investigators, Society for Freshwater Science 2012  
2011 *Eco-evolutionary feedbacks in aquatic ecosystems*, Invited Keynote Speaker, Kyoto, Japan (declined due to time conflict)

---

### **WORKING GROUPS**

- 2015 *Ontogeny, adaptation and chance in life-history trajectories: do individual differences matter?* University of Tromsø, Norway.  
2015 *Brook trout modelling group*. Penn State University, Pennsylvania.  
2013 *Rapid evolution and sustainability*. Mathematical Biosciences Institute, Columbus, Ohio.  
2013 *Understanding the dynamic interplay between ecology and evolution in a changing world*. Lorentz Center, Leiden, The Netherlands,  
2013 *Modelling species response to environmental change II: development of integrated, scalable Bayesian models of population persistence*, U.S. Geological Survey Powell Center, Fort Collins, Colorado  
2012 *Modelling species response to environmental change I: development of integrated, scalable Bayesian models of population persistence*, U.S. Geological Survey Powell Center, Fort Collins, Colorado

---

### **TEACHING AND MENTORING EXPERIENCE**

#### **LECTURER**

- 2018 Ecology, Williams College, Department of Biology  
2017 Rapid Evolution in Ecology, Williams College, Department of Biology  
2016 Biotic Interactions, University of Oxford, Department of Zoology

- 2014 Biotic Interactions, University of Oxford, Department of Zoology  
2013 Tropical Freshwater Ecosystems, University of Glasgow, UK

**TEACHING ASSISTANT**

- 2010 Ecology and Evolution, University of California, Riverside  
2010 Organismal Biology, University of California, Riverside  
2009 Cellular Basis of Life, University of California, Riverside  
2007 Cellular Basis of Life, University of California, Riverside  
2006 Cellular Basis of Life, University of California, Riverside  
1999 Statistics Tudor, College of the Redwoods

**GRADUATE STUDENT MENTORING**

- 2017 Tomos Potter, PhD student, University of Oxford  
2015 Lara Veylit, PhD student, University of Oxford  
2015 Tomos Potter, Masters student, University of Amsterdam  
2014 Naomi Eeltik, Masters student, University of Amsterdam

**UNDERGRADUATE STUDENT MENTORING**

- 2015 Stefanie White, Senior Thesis, University of Oxford  
2015 Elena Ruiz, Senior Thesis, University of Oxford  
2006- Numerous recent postgraduates on independent research projects in Trinidad

---

**ACADEMIC ADVISORS**

- Post-doc Dr. Tim Coulson, Department of Zoology, University of Oxford, Oxford, UK,  
tim.coulson@zoo.ox.ac.uk  
Post-doc Dr. Benjamin Letcher, Ecology Section Leader, USGS S.O. Conte Anadromous Fish  
Research Center, bletcher@eco.umass.edu  
PhD Dr. David Reznick, Department of Biology, University of California, Riverside,  
david.reznick@ucr.edu  
BA Dr. Thomas Fleischner, Prescott College, tfleischner@prescott.edu