

RONALD D. BASSAR

Curriculum Vitae

Silvio O. Conte Anadromous Fish Research Center
USGS Biological Resources Division
PO Box 796
One Migratory Way
Turners Falls, MA 01376
Email: rdbassar@yahoo.com
Phone: 949 680 0207

ACADEMIC POSITIONS

UNIVERSITY OF MASSACHUSETTS, AMHERST/CONTE ANADROMOUS FISH RESEARCH CENTER USGS
Postdoctoral Scholar, April 2012-Present
Population persistence modeling in Brook Trout
Advisor: Benjamin Letcher

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Postdoctoral Scholar, March 2011-March 2012
From genes to ecosystems: How do ecological and evolutionary processes interact in nature?
Advisor: David N. Reznick

EDUCATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE
Doctor of Philosophy in Evolution, Ecology and Organismal Biology, March 2011
Advisor: David N. Reznick
Dissertation title: *Interactions between ecology and evolution in the Trinidadian guppy*

PRESCOTT COLLEGE, Prescott, AZ

Bachelor of Arts in Environmental Studies: Emphasis in Ecology, May 2001
Senior Thesis Title: *The natural history of the Mogollon Rim, AZ*

PUBLICATIONS

- In Revision** Bassar, R. D., D. N. Reznick, A. López-Sepulcre, and J. Travis. Experimental evidence for density-dependent regulation and selection on Trinidadian guppy life histories. **American Naturalist**.
- In Review** Marshall, M. C., A. J. Binderup, E. Zandona, S. Goutte, **R. D. Bassar**, R. El-Sabaawi, S. A. Thomas, A. S. Flecker, S. S. Kilham, D. N. Reznick, and C. M. Pringle. Top-down control of benthic ecosystem structure and function among macroconsumer assemblages in a Neotropical stream. **PLoS One**.

- 2012** **Bassar, R. D.**, R. Ferriére, A. López-Sepulcre, M. C. Marshall, J. Travis, C. M. Pringle, and D. N. Reznick. Direct and indirect ecosystem effects evolutionary adaptation in Trinidadian guppies (*Poecilia reticulata*). **American Naturalist**.
- Reznick, D. N., **R. D. Bassar**, and F. H. Rodd. The demographics of density regulation in guppies (*Poecilia reticulata*). **Evolution**.
- Auer, S.K., A. Lopez-Sepulcre, T. Heatherly II, T.J. Kohler, **R.D. Bassar**, S.A. Thomas, D.N. Reznick. Life histories have a history: Effects of past and present conditions on adult somatic growth rates in wild Trinidadian guppies. **Journal of Animal Ecology**
- 2011** Zandonà, E., S. K. Auer, S. S. Kilham, J. H. Howard, A. López-Sepulcre, M. P. O'Connor, **R. D. Bassar**, O. Osorio, C. M. Pringle, and D. N. Reznick. Diet quality and prey selectivity correlate with life histories and predation regime in Trinidadian guppies. **Functional Ecology** DOI: 10.1111/j.1365-2435.2011.01865.x.
- Pires, M. N., **R. D. Bassar**, K. E. McBride, J. U. Regus, T. Garland, and D. N. Reznick. Why do placentas evolve? An evaluation of the life-history facilitation hypothesis in the fish genus Poeciliopsis. **Functional Ecology** 25:757-768.
- Walsh, M. R., D. F. Fraser, **R. D. Bassar**, and D. N. Reznick. The direct and indirect effects of guppies: implications for life-history evolution in *Rivulus hartii*. **Functional Ecology** 25:227-237.
- 2010** **Bassar, R. D.**, A. López-Sepulcre, M. R. Walsh, M. Turcotte, R. M. Torres-Mejia, and D. N. Reznick. Bridging the gap between ecology and evolution: integrating density regulation and life history evolution. **The Year in Evolutionary Biology** 1206:17-34.
- Bassar, R. D.**, M. C. Marshall, A. Lopez-Sepulcre, E. Zandona , S. K. Auer, J. Travis, C. M. Pringle, A. S. Flecker, S. A. Thomas, D. F. Fraser, and D. N. Reznick. Local adaptation in Trinidadian guppies alters ecosystem processes. **Proceedings of the National Academy of Sciences**. 107:3616-3621.
- 2007** Auer, S., **R. D. Bassar**, J. J. Fontaine, and T. E. Martin. Breeding biology of passerine in a subtropical montane forest in northwestern Argentina. **The Condor** 109:321-333.
- Auer, S., D. M. Logue, **R. D. Bassar**, and D. E. Gammon. Nesting biology of the black-bellied wren (*Thryothorus fasciatoventris*) in central Panama. **The Wilson Journal of Ornithology** 119:71-76.

- Auer, S. K., **R. D. Bassar**, and T. E. Martin. 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.
- Martin, T. E., S. K. Auer, **R. D. Bassar**, A. M. Niklison, and P. Lloyd. Geographic variation in avian incubation periods and parental influences on embryonic temperature. *Evolution* 61:2558-2569.
- 2006**
- Martin, T. E., **R. D. Bassar**, S. K. Bassar, J. J. Fontaine, P. Lloyd, H. A. Mathewson, A. M. Niklison, and A. Chalfoun. Life-history and ecological correlates of geographic variation in egg and clutch mass among passerine species. *Evolution* 60:390-398.
- 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.
- Manuscripts in Preparation:*
- Bassar, R. D.**, B. L. Bryan, M. C. Marshall, A. Lopez-Sepulcre, C. M. Pringle, and D. Reznick. Effects of local adaptation on primary production are due to changes in producer diversity. *To be submitted to Ecology*.
- Bassar, R.D.**, M.C. Marshall, and D.N. Reznick. The effects of population size-structure on ecosystem properties. *To be submitted to Functional Ecology*.
- Bassar, R. D.**, S. K. Auer, M. Pires, and D. N. Reznick. Life historical correlates of placental reproduction in the fish family Poeciliidae. *To be submitted to Evolution*.
- Binderup, A. J., C. M. Pringle, M. C. Marshall, **R. D. Bassar**, S. A. Thomas, A. S. Flecker, R. El-Sabaawi, A. Lopez-Sepulcre, and D. N. Reznick. Guppy presence decouples a detritus-based trophic cascade. *To be submitted to Ecology*.
- Binderup, A. J., M. C. Marshall, E. Zandona, **R. D. Bassar**, and C. M. Pringle. Experimental quantification of guppy (*Poecilia reticulata*) effects on algal basal resources reveals context-dependent effects of other macroconsumers. *To be submitted to Journal of Freshwater Biology*.
- El-Sabaawi, R., **R.D. Bassar**, M.C. Marshall, T. Kohler, D.N. Reznick, S.A. Thomas, and A.S. Flecker. The effects of light and guppy phenotype on stream ecosystem processes.
- Lopez-Sepulcre, A., **R.D. Bassar**, S.W. Fitzpatrick, A. Furness, S. Gordon, J. Heinen, J. Dowdall, M. Torres-Mejia, P. Bentzen, D.N. Reznick. Changes in size-specific selection throughout a species invasion of a novel environment: An individual-based long-term experiment in wild Trinidadian guppies.
- INVITED PRESENTATIONS**
- Contributed Symposium Speaker, Evolution 2012: Community Evolution Hynes Award New Investigators, Society for Freshwater Science 2012: McGill University, Montreal, Canada April 2012: Empirical studies of eco-evo feedbacks in Trinidadian streams.

Eco-evolutionary feedbacks in aquatic ecosystems, Invited Keynote Speaker, Kyoto, Japan (declined due to time conflict)

CONTRIBUTED PRESENTATIONS *indicates presenter

- 2011 Evolution 2011, Norman, Oklahoma*
- Evolution 2011, Norman, Oklahoma
- 2010 Evolution 2010, Portland, Oregon*
- Evolution 2010, Portland, Oregon
- Evolution 2010, Portland, Oregon
- ESA 2010, Pittsburgh, Penn*
- Western Evolutionary Biology Conference (WEB3) 2010, UC Berkeley*
- 2009 Evolution 2009, Moscow, Idaho*
- Evolution 2009, Moscow, Idaho
- 2008 ESA, Milwaukee, Wisconsin
- 2006 Evolution 2006, SUNY, Stony Brook*

FELLOWSHIPS, AWARDS

- 2012 Hynes Award for New Investigators, Society for Freshwater Science (\$500)
- 2010 Newell Travel Award, University of California (\$300)
Dissertation Year Fellowship, University of California (\$7,200)
- 2008 Distinguished Graduate Fellowship in Biology (\$7,500)
Exploration Fund, Explorers Club (\$1,500)
- 2007 Department of Education, Graduate Assistance in Areas of National Need (GAANN) Fellowship (\$9,824)
NSF Graduate Research Fellowship Honorable Mention
- 2006 University of California-Riverside Chancellor's Fellowship (\$19,000)
- 2005 Department of Education, Graduate Assistance in Areas of National Need (GAANN) Fellowship (\$53,970)

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 and students
- 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

TEACHING EXPERIENCE

- 2010 Teaching Assistant, UCR, Ecology and Evolution (2)
Teaching Assistant, UCR, Organismal Biology
- 2009 Teaching Assistant, UCR, Cellular Basis of Life
- 2007 Teaching Assistant, UCR, Cellular Basis of Life
- 2006 Teaching Assistant, UCR, Cellular Basis of Life

REVIEWER FOR*Journals*

Ecology, Evolution, Journal of Animal Ecology, Functional Ecology, Oecologia, Wilson Bulletin, Aquatic Sciences, Environmental Biology of Fishes, Animal Conservation, Quarterly Review of Biology

Funding Agencies

Graduate Women in Science

COLLABORATORS

David N. Reznick-UC Riverside, Alexander S. Flecker-Cornell, Steven A. Thomas-UNL, Joseph Travis-FSU, Thomas Martin-U of Montana, Sonya K. Auer-UCR, Andrés López-Sepulcre- École Normale Supérieure, Paris, Paris, Regis Ferriere- École Normale Supérieure, Paris, Michael C. Marshall-UGA, Catherine M. Pringle-UGA, Douglas F. Fraser-Siena College, Matthew Walsh-Yale University, Cameron Ghalambor-Colorado State University, Fort Collins, Eugenia Zandonà-Drexel