

Adam Michael Reitzel

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EDUCATION

- 2007-present **Postdoctoral Scholar/Fellow:** Department of Biology, Woods Hole Oceanographic Institution, Woods Hole, MA
Major Professors: Dr. Ann Tarrant and Dr. Mark Hahn
- 2002-2007 **Doctor of Philosophy:** Department of Biology, Boston University, Boston, MA
Major Professor: Dr. John Finnerty
- 1999-2002 **Masters of Science:** Department of Zoology, University of Florida, Gainesville, FL
Major Professor: Dr. David Julian (Dr. Larry McEdward, deceased)
- 1995-1999 **Bachelor of Arts:** Department of Biology, Illinois Wesleyan University, Bloomington, IL
Advisor: Dr. Jeff Frick

Workshops and Symposia

- 2008 **Tools for Emerging Model Systems in Development, Evolution, and Ecology**, NESCent
Invited workshop to discuss advancements in database generation and data dissemination for new organisms with extensive genomic data
- 2008 **Ecological Dissertations in Aquatic Sciences**, University of Hawaii
NSF-funded symposium for recent PhD recipients to discuss recent advances and directions in oceanography and limnology

Specialized Courses

- 2002 **Larval Biology:** Friday Harbor Laboratories, Friday Harbor, WA
Professors: Dr. Richard Strathmann, Dr. Craig Young, Dr. Danny Grünbaum
- 2001 **Antibody Applications Workshop:** University of Florida, Gainesville, FL
Co-sponsored by ICBR and Hybridoma Core
- 2000 **Comparative Marine Invertebrate Embryology:** Friday Harbor Laboratories, WA
Professors: Dr. Richard Strathmann, Dr. Billie Swalla, Dr. Jo van den Biggelaar
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PUBLICATIONS (* indicates co-lead authorship)

- Reitzel, A.M.** and A.M. Tarrant. 2009. The nuclear receptor complement of the sea anemone *Nematostella vectensis*: phylogenetic identity and developmental expression. *BMC Evolutionary Biology*.
- Darling, J.A., A. Kuenzi, and **A.M. Reitzel**. 2009. Human mediated transport determines the nonnative distribution of a dispersal limited estuarine invertebrate. *Marine Ecology Progress Series*.
- Sullivan, J.C., F.S. Wolenski, **A.M. Reitzel**, C.E. French, T.D. Gilmore, and J.R. Finnerty. 2009. Two alleles encoding transcription factor NF- κ B in the sea anemone *Nematostella vectensis* are widely distributed in natural populations and encode proteins with distinct DNA-binding and transactivation activities. *PLoS ONE*.
- Tarrant, A.M., **A.M. Reitzel**, C.H. Blomquist, F. Haller, J. Tokarz, and J. Adamski. 2009. Steroid metabolism in cnidarians: insights from *Nematostella vectensis*. *Molecular and Cellular Endocrinology*.
- Reitzel, A.M.**, M. Daly, J.C. Sullivan, and J.R. Finnerty. 2009. Comparative anatomy and histology of developmental and parasitic stages in the life history of the lined sea-anemone *Edwardsiella lineata*. *Journal of Parasitology*.
- Reitzel, A.M.**, J.A. Darling, J.C. Sullivan, and J.R. Finnerty. 2008. Global population genetic structure of

- the starlet sea anemone *Nematostella vectensis*: multiple introductions and conservation policy. *Biological Invasions*.
- Moran, Y., H. Weinberger, J.C. Sullivan, **A.M. Reitzel**, J.R. Finnerty, and M. Gurevitz. 2008. Concerted evolution of sea anemone neurotoxin genes is revealed through analysis of the *Nematostella vectensis* genome. *Molecular Biology and Evolution*. 25: 737-747.
- Reitzel, A.M.**, J.C. Sullivan, N. Traylor-Knowles, and J.R. Finnerty. 2008. A genomic survey of chemical and biological stress-response genes of the estuarine anemone *Nematostella vectensis*. *Biological Bulletin*. 214: 233-254.
- Moran, Y., H. Weinberger, **A.M. Reitzel**, J.C. Sullivan, R. Khan, D. Gordon, J.R. Finnerty, and M. Gurevitz. 2008. Intron retention as a post-transcriptional regulatory mechanism of neurotoxin expression at early life stages of the starlet anemone *Nematostella vectensis*. *Journal of Molecular Biology*. 380: 437-443.
- Sullivan, J.C., D. Sher, M. Eisenstein, K. Shigesada, **A.M. Reitzel**, H. Marlow, D. Levanon, Y. Groner, J.R. Finnerty, and U. Gat. 2008. The evolutionary origin of the Runx/CBF β transcription factors and clues to their function – studies of the most basal metazoans. *BMC Evolutionary Biology*. 8: 228.
- Reitzel, A.M.** and A. Heyland. 2007. Reduction in morphological plasticity in echinoid larvae: relationship of plasticity with maternal investment and food availability. *Evolutionary Ecology Research*. 9: 109-121.
- Reitzel, A.M.**, P. Burton, C. Krone, and J.R. Finnerty. 2007. Comparison of developmental trajectories in the starlet sea anemone *Nematostella vectensis* (Stephenson): embryogenesis, regeneration, and two forms of asexual fission. *Invertebrate Biology*. 126: 99-112.
- Sullivan, J.C., **A.M. Reitzel**, and J.R. Finnerty. 2007. Upgrades to StellaBase facilitate medical and genetic studies on the starlet sea anemone, *Nematostella vectensis*. *Nucleic Acids Research*. 36(Database issue): D607–D611.
- Reitzel, A.M.** and B.G. Miner. 2007. Reduced planktotrophy in larvae of *Clypeaster rosaceus* (Echinodermata, Echinoidea). *Marine Biology*. 151: 1525-1534.
- ***Reitzel, A.M.**, J.C. Sullivan, B.K. Brown, D.W. Chin, E.K. Cira, S.K. Edquist, B.M. Genco, O.C. Joseph, C.A. Kaufman, K. Kovitvongsa, M.M. Muñoz, T.L. Negri, J.R. Taffel, R.T. Zuehlke, and J.R. Finnerty. 2007. Ecological and developmental dynamics of a host-parasite system involving a sea anemone and two ctenophores. *Journal of Parasitology*. 93(6): 1392-1402.
- Heyland, A., **A.M. Reitzel**, D. Price, and L.L. Moroz. 2006. Endogenous thyroid hormone synthesis in facultative planktotrophic larvae of the sand dollar *Clypeaster rosaceus*: implications for the evolutionary loss of larval feeding. *Evolution and Development*. 8: 568-579.
- Sullivan J.C., **A.M. Reitzel**, and J.R. Finnerty. 2006. A high percentage of introns in human genes were present early in animal evolution: evidence from the basal metazoan *Nematostella vectensis*. *Genome Informatics*. 17: 219-229.
- Darling, J.A., **A.M. Reitzel**, and J.R. Finnerty. 2006. Characterization of microsatellite loci in the widely introduced estuarine anemone *Nematostella vectensis*. *Molecular Ecology Notes*. 6: 803-805.
- Reitzel, A.M.**, J.C. Sullivan, and J.R. Finnerty. 2006. Qualitative shift to indirect development in the parasitic sea anemone *Edwardsiella lineata*. *Integrative and Comparative Biology*. 46: 827-837.
- *Bishop, C. *et al.* (**A.M. Reitzel**, 11th of 14 authors). 2006. What is metamorphosis? *Integrative and Comparative Biology*. 46: 655-661.
- Reitzel, A.M.** and B. Chockley. 2005. Influences of habitat distribution and maternal investment on settlement of lecithotrophic larvae: modeling an ecological transition. *Evolutionary Ecology Research*. 7: 183-201.
- *Darling, J.A., **A.M. Reitzel**, P. Burton, M. Mazza, J. Ryan and J.R. Finnerty. 2005. A starlet in the mud: the starlet sea anemone *Nematostella vectensis*. *BioEssays*. 27: 211-221.
- Reitzel, A.M.**, C.M. Miles, A. Heyland, J.D. Cowart, and L.R. McEdward. 2005. The effect of the facultative feeding period on echinoid larval development and size at metamorphosis: a comparative approach. *Journal of Experimental Marine Biology and Ecology*. 317: 189-201.

- Heyland, A., **A.M. Reitzel**, and J. Hodin. 2004. Thyroxine induces facultative feeding in an obligatorily feeding sand dollar larva. *Evolution and Development*. 6(6): 382-392.
- Reitzel, A.M.**, B.G. Miner, and L.R. McEdward. 2004. Relationships between spawning date and larval development time for benthic marine invertebrates: a modeling approach. *Marine Ecology Progress Series*. 280: 13-23.
- Darling, J.A., **A.M. Reitzel**, and J.R. Finnerty. 2004. Regional population structure of a widely introduced estuarine invertebrate: *Nematostella vectensis* Stephenson in New England. *Molecular Ecology*. 13: 2969-2981.
- *Heyland, A., J. Hodin, and **A.M. Reitzel**. 2004. Hormone signaling in evolution and development: a non-model systems approach. *BioEssays*. 26: 1-12.
- Reitzel, A.M.**, J. Webb, and S. Arellano. 2004. Growth, development, and condition of larvae of *Dendraster excentricus* reared on laboratory and natural diets. *Journal of Plankton Research*. 26: 901-908.
- Bingham, B.L. and **A.M. Reitzel**. 2000. Solar damage to the solitary ascidian, *Corella inflata*. *Journal of Marine Biological Association of the United Kingdom*. 80: 515-521.
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GRANTS, FELLOWSHIPS, AND AWARDS

Awarded

- NSF Research Coordinating Network. (Member of steering committee).
 - NIH NRSA Postdoctoral Fellowship. 2009 – 2012.
 - 2008 Belamarich Award for Outstanding Doctoral Research, Boston University.
 - WHOI Tropical Research. “Retinoid Hormone Signaling in Tropical Reef Corals” (co-PI with Ann Tarrant). \$75,000
 - WHOI-Beacon Institute for Rivers and Estuaries Postdoctoral Fellowship. 2007 – 2009
 - EPA STAR Fellowship. 2005 – 2007
 - American Microscopical Society Student Research Fellowship. 2005
 - Young Investigator’s Award, SICB symposium for Complex Life Histories. 2005
 - Dean’s Fellowship. Boston University. 2002 - 2003
 - PADI Project AWARE Grant. 2002, 2003
 - Sigma Xi Research Grant. 2002
 - Fulbright Fellowship for International Study at University of Otago, New Zealand.
 - Best Student Poster for Division of Ecology and Evolution, SICB. 2002
 - Kohn Fellowship at Friday Harbor Laboratories. 2001
 - SeaSpace Grant for Graduate Research. 2000
 - Wayne Ward Wantland Award in Biology at Illinois Wesleyan University. 1999
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SERVICE

Undergraduate mentoring

- Tim Chu and Sara Edquist, Boston University: Ecophysiology of *Nematostella*
- Katherine Dubois, Boston University: Developmental regulatory genes of *Edwardsiella lineata*
- William Southerland and Arika Virapogias, University of Florida: Echinoid larval development and physiology

Community Service

- Co-organizer of Graduate Student Symposium: “Tactics for Post-Dissertation Employment” 2002
- Co-organizer for the Florida Ecology and Evolution Symposium: 2002

- Vice President for Zoology Graduate Student Association: 2001-2002
- Department of Zoology Seminar Committee: 2000-2001
- Department of Zoology Graduate Welcoming Committee: 2000-2001
- Student mentor for freshman biology majors at Illinois Wesleyan: 1997 to 1999

CONTRIBUTED PRESENTATIONS

Invited Talks

- 2008 - Department of Biology, Dalhousie University
2008 - Department of Biology, Hopkins Marine Station

Conferences

- 2009 - Society of Integrative and Comparative Biology (upcoming, four contributed presentations)
2008 - Ecological Dissertations in Aquatic Sciences
2007 - Estuarine Research Federation
2007 - Woods Hole Oceanographic Institution
2007 - Society of Molecular Biology and Evolution
2006 - Society of Integrative and Comparative Biology
2006 - EPA STAR conference
2005 - Comparative Genomics, Pennsylvania State University
2005 - Society of Integrative and Comparative Biology
2004 - Society of Integrative and Comparative Biology
2003 - Benthic Ecology Meeting
2003 - Gordon Research Conference: Ecological and Evolutionary Genomics
2003 - 7th International Coelenterate Biology Conference
2003 - Society of Molecular Developmental Biology
2003 - Society of Integrative and Comparative Biology
2002 - Florida Ecology and Evolution Symposium
2002 - Society of Integrative and Comparative Biology (Winner: Best Student Poster)
2001 - The Developmental Basis of Evolutionary Change, Chicago, IL
2001 - North American Echinoderm Conference
2000 - Larval Biology 2000

REVIEWER

BMC Genomics, Marine Ecology – Progress Series, Marine and Freshwater Research, Journal of Shellfish Research, Naturwissenschaften

TEACHING EXPERIENCE

- Teaching Assistant in Invertebrate Biology: Boston University, fall 2005
Professor: Dr. John Finnerty
Teaching Assistant in Introductory Biology: Boston University, spring 2004, 2005; fall 2006
Professor: Dr. Katie Kearns, Dr. Missy McElligiot
Teaching Assistant in Comparative Vertebrate Anatomy: Boston University, fall 2003, 2004
Professor: Dr. Gail Patt

Teaching Assistant in Morphogenesis: Boston University, summer 2004

Professor: Dr. Gail Patt

Teaching Assistant in Marine Biology: University of Florida, summer 2002

Professor: Dr. Frank Maturo

Teaching Assistant in Invertebrate Zoology: University of Florida, spring 2002

Professor: Dr. Frank Maturo

Teaching Assistant in Genetics: University of Florida, fall 2001

Professor: Dr. Ed Braun

Teaching Assistant in Integrative Principles of Biology: University of Florida, fall 2000 to spring 2001

Professor: Dr. Kent Vliet

Teaching Assistant in Invertebrate Zoology: University of Florida, fall 1999 to spring 2000

Professor: Dr. Frank Maturo

Teaching Assistant in General Biology: Illinois Wesleyan University, fall 1997 to spring 1999

Professor: Dr. Sheryl Soukup