

CURRICULUM VITAE*Rose L. Carlson*Department of Organismic and Evolutionary Biology
& Museum of Comparative Zoology

Harvard University

26 Oxford Street

Cambridge, MA 02138

Ph.: (617) 496-7199, Fax: (617) 496-7205

r Carlson@oeb.harvard.edu<http://www.forcipiger.net>**CURRENT POSITION**

HARVARD UNIVERSITY, Cambridge, MA

Postdoctoral Research Fellow

2008-2010

Department of Organismic and Evolutionary Biology & Museum of Comparative Zoology

Function of the paired fins during benthic station-holding and the evolution of fin shape diversity in darter fishes (Percidae: Etheostomatinae).

Advisor: George V. Lauder

EDUCATION

UNIVERSITY OF CALIFORNIA, Davis, CA

Ph.D., Population Biology

2008

The evolution of ecological and morphological diversity in darter fishes (Percidae: Etheostomatinae).

Committee: Peter C. Wainwright (major professor), H. Bradley Shaffer, Phil S. Ward

CORNELL UNIVERSITY, Ithaca, NY

B.A., Biological Sciences, distinction in all subjects, *summa cum laude*, Phi Beta Kappa

2002

Distribution of the common periwinkle Littorina littorea (L.) in the Gulf of Maine.

Honors thesis advisor: Myra J. Shulman

SELECTED GRANTS and AWARDS

NSF Postdoctoral Fellowship in Biological Informatics (2008-2010)	\$123,000
NSF Doctoral Dissertation Improvement Grant (PI Peter Wainwright) (2007-2008)	\$5555
UC Davis Office of Graduate Studies Travel Award (2007)	\$1000
UC Davis Graduate Student Association Travel Grant (2005, 2007)	\$350, \$200
UC Davis Center for Biosystematics (2005-2006)	\$1000
UC Davis Graduate Research Mentorship Fellowship (2003-2004)	\$18,600
NSF Graduate Research Fellowship (2004-2007)	\$121,500
UC Davis Center for Population Biology (2003-2007)	\$300-1200
Sigma Xi Grant-in-Aid of Research, Cornell University Chapter (2001-2002)	\$600
Cornell University College of Arts and Sciences (2001-2002)	\$300

PUBLICATIONS

Carlson, R.L. and P.C. Wainwright. *in press*. The ecological morphology of darter fishes (Percidae: Etheostomatinae). *Biological Journal of the Linnean Society*.

Carlson, R.L. and G.V. Lauder. 2010. Living on the bottom: the kinematics of benthic station-holding in darter fishes (Percidae: Etheostomatinae). *Journal of Morphology* 271: 25-35.

Carlson, R.L., P.C. Wainwright, and T.J. Near. 2009. Relationship between species co-occurrence and rate of morphological change in *Percina* darters (Percidae: Etheostomatinae). *Evolution* 63(3): 767-778.

Perez, K. *, **R.L. Carlson** *, M.J. Shulman, and J.C. Ellis. 2009. Why are intertidal snails rare in the subtidal? Predation, growth, and the vertical distribution of *Littorina littorea* (L.) in the Gulf of Maine. *Journal of Experimental Marine Biology and Ecology* 369(2): 79-86.
*Equal contribution.

Carlson, R.L. 2008. Morphological change in the tessellated darter (*Etheostoma olmstedi*) following the introduction of the banded darter (*E. zonale*) to the Susquehanna River drainage. *Copeia* 3: 661-668.

Carlson, R.L., M.J. Shulman, and J.C. Ellis. 2006. Factors contributing to spatial heterogeneity in the abundance of the common periwinkle *Littorina littorea* (L.). *Journal of Molluscan Studies* 72: 149-156.

McCune, A.R. and **R.L. Carlson**. 2004. Twenty ways to lose your bladder: common natural mutants in zebrafish and widespread convergence of swimbladder loss among teleost fishes. *Evolution and Development* 6(4): 246-259.

MANUSCRIPTS IN REVIEW

Bolnick, D.I., K.M. Hendrix, **R.L. Carlson**, and L.K. Snowberg. *in review*. Persistent among-individual variation in microhabitat use within a population of three-spine stickleback (*Gasterosteus aculeatus*). *Canadian Journal of Zoology*.

MANUSCRIPTS IN PREPARATION (*available upon request*)

Carlson, R.L. and G.V. Lauder. *in prep*. Use of the boundary layer by the Missouri saddled darter *Etheostoma tetrazonum* (Percidae) during benthic station-holding.

Carlson, R.L., T.J. Near, and P.C. Wainwright. *in prep*. Does temporal variation in ecological diversification rate explain microhabitat conservatism in darter fishes (Percidae: Etheostomatinae)?

Carlson, R.L. and P.C. Wainwright. *in prep*. Tempo and mode of morphological diversification in North American darter fishes (Percidae: Etheostomatinae).

Near, T.J., **R.L. Carlson**, B.P. Keck, P.K. Hollingsworth, C.M. Bossu, R.C. Harrington, and D.A. Etnier. *in prep*. Phylogenetic relationships among darter fishes (Percidae: Etheostomatinae) based on mitochondrial and nuclear loci.

PUBLISHED ILLUSTRATIONS

Figure 1 in: Baythavong, B.S., M.L. Stanton, and K.J. Rice. 2009. Understanding the consequences of seed dispersal: contrasting patterns of environmental heterogeneity with distance from a maternal site on serpentine and non-serpentine soils. *Ecology* 90(8): 2118-2128.

INVITED SEMINARS

- 2010 Fordham University, Bronx, NY. **Carlson, R.L.** Causes and consequences of morphological disparification in darter fishes (Percidae: Etheostomatinae).
- 2009 Early Career Scientists Symposium, University of Michigan. **Carlson, R.L.** The ecological diversification of darter fishes (Percidae: Etheostomatinae).

CONTRIBUTED SCIENTIFIC PRESENTATIONS

- 2009 American Society of Ichthyologists and Herpetologists. **Carlson, R.L.** and G.V. Lauder. Kinematics and performance limits of four species of *Etheostoma* darters (Percidae: Etheostomatinae) during benthic station-holding.
- 2009 American Society of Naturalists/Society for the Study of Evolution. **Carlson, R.L.**, P.C. Wainwright, and T.J. Near. Origin of habitat conservatism in darter fishes (Percidae: Etheostomatinae).
- 2007 American Society of Ichthyologists and Herpetologists. **Carlson, R.L.** Variation in the rate of morphological change among clades of darters (Percidae: Etheostomatinae).
- 2007 American Society of Naturalists/Society for the Study of Evolution. **Carlson, R.L.**, P.C. Wainwright, and T.J. Near. Relationship between species co-occurrence and morphological change in darters (Percidae: Etheostomatinae).
- 2006 American Society of Ichthyologists and Herpetologists. **Carlson, R.L.**, P.C. Wainwright, and T.J. Near. Rate of morphological change correlates with extent of sympatry in *Percina* spp. (Percidae: Etheostomatinae).
- 2005 American Society of Naturalists/Society for the Study of Evolution. **Carlson, R.L.**, P.C. Wainwright, and T.J. Near. Evolution of morphological diversity in darter fishes (Percidae).
- 2004 Society for Integrative and Comparative Biology. **Carlson, R.L.**, M.J. Shulman, and J.C. Ellis. Distribution patterns of the common periwinkle (*Littorina littorea* (L.)) in the southern Gulf of Maine.
- 2002 Benthic Ecology. **Carlson, R.L.**, M.J. Shulman, and J.C. Ellis. Dry out, grow fast, or be eaten: Factors affecting the vertical distribution of the common periwinkle *Littorina littorea* (L.).
- 1997 Student Symposium on Marine Affairs. **Carlson, R.L.** Contrasting jaw morphologies in two species of longnose butterflyfishes Genus *Forcipiger*.

FIELD SITES

- 2009 Vancouver Island, BC, Canada; Tennessee, North Carolina, USA
- 2008 Vancouver Island, BC, Canada; Alabama, Tennessee, Illinois, Missouri, USA
- 2007 Pennsylvania, Kentucky, Missouri, Arkansas, Mississippi, Alabama, Georgia, USA
- 2006 New Jersey, Virginia, West Virginia, Florida, Texas, Alabama, Georgia, USA
- 2005 Tennessee, Kentucky, North Carolina, South Carolina, USA
- 2002 Alabama, Florida, USA
- 2001 Appledore Island, Maine, USA

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Naturalists, American Society of Ichthyologists and Herpetologists, Society for Study of Evolution, Society for Integrative and Comparative Biology

REVIEWER

American Naturalist, Functional Ecology, Marine Ecology Progress Series, Animal Biology, Journal of Applied Ecology, Environmental Management, Bulletin of the Peabody Museum of Natural History, National Science Foundation

TEACHING EXPERIENCE

Guest Lecturer/Teaching Assistant:

--*First-year graduate student core course in Integrative Biology* (phylogenetics and macroevolution section) with Prof. D. Bolnick, UT Austin, Spring 2009

Teaching Assistant Positions:

--*Introductory Biology* (BIS 1B) with Profs. J. Rosenhiem and R. Kimsey, UC Davis, Winter 2008.

--*Introduction to Evolution* (EVE 100) with Prof. A. Kopp, UC Davis, Fall 2005.

--*Vertebrates: Structure, Function, and Evolution* (EEB 274) with Prof. K. Zamudio, Cornell University, Spring 2001.

Readership Positions:

--*Introductory Biology* (BIS 1B, BIS 2B) with Dr. P. Trenham (1B) and Profs. R. Grosberg and J. Stachowicz (2B), UC Davis, Spring 2008.

--*Introduction to Evolution* (EVE100) with Profs. D. Begun and M. Turelli, Spring 2008.

--*Introduction to Evolution* (EVE 100) with Prof. A. Kopp, UC Davis, Summer & Fall 2006, Fall 2007; responsible for course website design, content, and maintenance