

**Jason S. Grear, Research Ecologist, in EPA's National Health and Environmental Effects Research Laboratory**

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**Area of Expertise:** Most of my research aspires to integrate quantitative ecology and evolutionary biology into the study of ecosystem response to environmental change. This includes an interest in how ecosystems are controlled by “bottom-up” forces such as nutrients and climate as well as the “top-down” influences of the biota on ecosystem response to these forces. These are essentially “scaling” problems, since they involve translation of small studies into large predictions. My work in ecological risk assessment is a special case within this broad area, since it is concerned with the prediction of population-level processes from organism-level observations. I have worked on these problems to varying degrees in a range of ecosystems from coastal oceans to cloud forests, from marine algae to terrestrial vertebrates, and in tropical and temperate environments. My EPA research currently focuses on interactions between nutrients, biota, acidification and hypoxia in coastal ecosystems.

**Select Publications** ([Several links exit this site](#)):

- Grear, J. S. *In press*. Translating crustacean biological responses from CO<sub>2</sub> bubbling experiments into population-level predictions. *Population Ecology*. DOI: [10.1007/s10144-016-0562-1](https://doi.org/10.1007/s10144-016-0562-1).
- Gledhill, D. K., M. M. White, J. Salisbury, H. Thomas, I. Mlsna, M. Liebman, B. Mook, J. Grear, A. C. Candelmo, R. C. Chambers, C. J. Gobler, C. W. Hunt, A. L. King, N. N. Price, S. R. Signorini, E. Stancioff, C. Stymiest, R. A. Wahle, J. D. Waller, N. D. Rebeck, Z. A. Wang, T. L. Capson, J. R. Morrison, S. R. Cooley, and S. C. Doney. 2015. [Ocean and coastal acidification off New England and Nova Scotia](#). *Oceanography*. 28:182–197
- Wallace R., H. Baumann, J. Grear, R. Aller, and C. Gobler. 2014. [Coastal ocean acidification: The other eutrophication problem](#). *Estuarine, Coastal and Shelf Science*. **148**:1-13.
- Grear, J. S., D. Borsay Horowitz, and R. Gutjahr-Gobell. 2011. [Mysid population responses to resource limitation differ from those predicted by cohort studies](#). *Marine Ecology Progress Series*. **432**:115-123.
- Grear, J. S., M. W. Meyer, J. H. Cooley, Jr., A. Kuhn, W. H. Piper, M. G. Mitro, H. S. Vogel, K. M. Taylor, K. P. Kenow, S. M. Craig, and D. E. Nacci. 2009. [Population growth and demography of common loons in the northern United States](#). *Journal of Wildlife Management*. **73**:1108-1115.
- Grear, J. S., and B. D. Elder. 2008. [Bias in population growth rate estimation: Sparse data, partial life cycle analysis and Jensen's inequality](#). *Oikos*. **117**:1587-1593.

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**Education:**

- Ph.D., Yale University School of Forestry and Environmental studies, New Haven, CT; Ecology, 2003
- M.S., University of Florida, Gainesville, FL; Ecology, 1992
- B.A., Connecticut College, New London, CT; Zoology, 1986

**Professional Experience:**

- Research Ecologist, US EPA Atlantic Ecology Division, Narragansett, RI, 2005 - present
- Adjunct Assistant Professor, University of Rhode Island, 2010-present
- Visiting Faculty, Rhode Island School of Design, 2011-present
- Visiting Faculty, Yale University, 2004
- Postdoc, US EPA Atlantic Ecology Division, Narragansett, RI, 2003-2005
- Field Instructor, Yale University, 2001-2003
- Doctoral Fellow, Yale University, 1998-2003
- Biologist/Senior Biologist, Long Island Sound Programs, CT Dept. Env. Prot., 1992-1998
- Graduate Research Assistant, University of Florida, 1989-1992
- Research Assistant, Manomet Center for Conservation Sciences, Manomet, MA, 1988-1989