

# RACHAEL E. BLAKE

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## Education

- 2012 Ph.D. Marine Science, *College of William & Mary* Gloucester Point, VA  
2001 B.A. Environmental Studies, *Oberlin College* Oberlin, OH

## Professional Positions

- 5/2017 – present *Data Analyst & Consultant*, University of Washington, Seattle, WA  
Analysis of ecological data from the Gulf of Alaska
- 1/2017 – 4/2017 *Education and Outreach Coordinator*, NSF Arctic Data Center, Santa Barbara, CA  
Conducted outreach and planned training activities
- 2015 – 2017 *Post-doctoral Associate*, Univ. of California Santa Barbara, Santa Barbara, CA  
Synthesis of long-term ecological data from the Gulf of Alaska
- 2012 – 2015 *Post-doctoral Researcher*, Louisiana State University, Baton Rouge, LA  
Conducting research examining effects of multiple stressors in saltmarshes
- 2004 – 2011 *Ph.D. Student*, Virginia Institute of Marine Science, Gloucester Point, VA  
Dissertation Title: *Effects of Anthropogenic Stressors and Changes in Biodiversity on Lower Chesapeake Bay, VA USA Seagrass Systems*
- 2001 – 2004 *Post-graduate Researcher*, University of California Davis, Davis, CA  
Investigated impact of a *Spartina* hybrid invasion on saltmarsh invertebrates
- 1999 – 2000 *Aquatic Invertebrate Researcher*, The Nature Conservancy, Sheffield, MA  
Examined and monitored *Dreissena polymorpha* invasion in a lake system

## Publications

**Blake, R.E.**, J. Olin. *In Prep.* Multiple stressors have mixed effects in an experimental *Spartina alterniflora* – herbivore system.

**Blake, R.E.**, C.L. Ward, M.E. Hunsicker, A.O. Shelton, A.B. Hollowed. *In Review.* Spatial community structure of groundfish is conserved across the Gulf of Alaska. *Ecology*.

Couture, J. L., **R. E. Blake**, G. McDonald, C. Ward. *In Revision.* Funder imposed data publication requirements seldom inspire data sharing. *PLOSOne*.

Shelton, A. O., M. E. Hunsicker, E. J. Ward, B. E. Feist, **R. E. Blake**, C. L. Ward, B. Williams, J. T. Duffy-Anderson, A. B. Hollowed, A. C. Haynie. 2017. Spatio-temporal models reveal subtle changes to demersal communities following the Exxon Valdez oil spill. *ICES Journal of Marine Science*. doi: 10.1093/icesjms/fsx079

Zador, S. G. , S. K. Gaichas, S. Kasperski, C. L. Ward, **R. E. Blake**, N.C. Ban, A. Himes-Cornell, Z. Koehn. 2017. Linking ecosystem processes to communities of practice through commercially fished species in the Gulf of Alaska. *ICES Journal of Marine Science* fsx054. doi: 10.1093/icesjms/fsx054

**Blake, R.E.,** J.E. Duffy. 2016. Influence of environmental stressors and grazer immigration on ecosystem properties of an experimental eelgrass community. *Journal of Experimental Marine Biology & Ecology*. 480: 45-53.

**Blake, R.E.,** J.E. Duffy, J. Paul Richardson. 2014. Patterns of seagrass community response to local shoreline development. *Estuaries & Coasts*. 37: 1549-1561.

**Blake, R.E.,** J.E. Duffy. 2012. Changes in biodiversity and environmental stressors influence community structure of an experimental eelgrass (*Zostera marina*) system. *Marine Ecology Progress Series*. 470, 41-54.

**Blake, R.E.,** J.E. Duffy. 2010. Grazer diversity affects resistance to multiple stressors in an experimental seagrass ecosystem. *Oikos*. 119, 1625-1635.

Grosholz, E., **R.E. Blake**. 2010. The Effects of Grazing Geese on Hybrid and Native *Spartina* in San Francisco Bay. In: Ayres, D.R., D.W. Kerr, S.D. Ericson and P.R. Olofson, eds. 2010. Proceedings of the Third International Conference on Invasive *Spartina*, 2004 Nov 8-10, San Francisco, CA, USA. San Francisco Estuary Invasive *Spartina* Project of the California State Coastal Conservancy: Oakland, CA. 191-196. [http://www.spartina.org/project\\_documents/Conference\\_proceedings.htm](http://www.spartina.org/project_documents/Conference_proceedings.htm)

Neira, C., E. Grosholz, L. Levin, **R.E. Blake**. 2006. Mechanisms Generating Modification of Benthos Following Tidal Flat Invasion by a *Spartina* Hybrid. *Ecological Applications*. 16(4), 1391-1404.

Funding, Fellowships, & Awards

- |                    |                                                                                                                                                                                              |                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 2018 Feb.          | Early Career Travel Grant for Ocean Sciences Meeting                                                                                                                                         | Portland OR                          |
| 2013               | Gulf of Mexico Research Initiative RFP IV: Coastal Waters Consortium award \$201,071 sub-budget for "Saltmarsh Plant Diversity and Ecosystem Functioning in the Face of Multiple Stressors". |                                      |
| 2008 – 2010        | National Estuarine Research Reserve Graduate Research Fellowship                                                                                                                             |                                      |
| 2004 – 2007 & 2011 | Graduate Assistantship                                                                                                                                                                       | Virginia Institute of Marine Science |
| 2000 – 2001        | Leopold Schepp Foundation Scholarship                                                                                                                                                        | Oberlin College                      |
| 1997 – 2001        | Work Study Grant                                                                                                                                                                             | Oberlin College                      |

Teaching & Mentoring Experience

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|-------------|--------------------------------------------------------------------|------|
| 2013 Spring | Co-Instructor, Saltmarsh Ecosystems (OCS 8900)                     | LSU  |
| 2011 Fall   | Teaching Assistant, Fundamentals of Marine Science (MSCI 501)      | VIMS |
| 2011 Summer | Teaching Assistant, Research Experience for Undergraduates Program | VIMS |

Undergraduate Mentees:

- |             |                                                                                                   |                                      |
|-------------|---------------------------------------------------------------------------------------------------|--------------------------------------|
| 2012 – 2013 | Kelli Smith                                                                                       | Louisiana State University           |
| 2008 – 2012 | Sally Bornbush, Katelyn Jenkins, Alyssa Popovich, Heather Richardson, Soyoun Hwang, Caitlin Smoot | Virginia Institute of Marine Science |

Professional Service

- 2016 – 2017 – Co-organizer Write-On-Site writing group and writing retreat
- 2016 - Organizer, NCEAS Roundtable Talks

2014 February - Presentation Judge, Graduate Student Symposium, LUMCON

2006 Aug – 2009 March - Program Co-Chair, Atlantic Estuarine Research Society

2005 April - Benthic Ecology Meeting Organizing Committee

Manuscript reviewer for: *Estuaries and Coasts*, *Ecological Engineering*, *Diversity & Dynamics*, *Journal of Experimental Marine Biology & Ecology*, *Marine Ecology Progress Series*, *Nature Scientific Reports*, *Zoology & Ecology*

#### Certifications & Skills

2012 – 2015 Certified Boat Operator

Louisiana State University

2007 – 2012 Certified Boat Operator

Virginia Institute of Marine Science

Advanced R programming, basic Python programming, basic command line programming, basic GIS analysis, Git/GitHub user

#### Professional Training

2016 CREDITS Team Science Retreat, *Univ. of California, Los Angeles*

Los Angeles, CA

2016 Alda-Kavli Leadership Program, *Univ. of California, Santa Barbara*

Santa Barbara, CA

2007 GIS class, *Smithsonian Conservation Biology Institute*

Front Royal, VA

2000 Oceanic Policy class, *Shoals Marine Laboratory*

Appledore Island, ME

1999 Marine Science program, *Sea Education Association*

Woods Hole, MA

1998 Maritime Studies program, *Williams-Mystic Maritime Studies*

Mystic, CT

#### Oral Presentations

**Blake, R.E.**, C.L. Ward, M. Hunsicker, A.O. Shelton, A.B. Hollowed. 2017. Temporal and spatial patterns in the central Gulf of Alaska groundfish community. Society for Conservation Biology, Santa Cruz Chapter (May 6, 2017, Santa Cruz, CA).

**Blake, R.E.**, C.L. Ward, M. Hunsicker, A.O. Shelton, A.B. Hollowed. 2016. Patterns of diversity: Gulf of Alaska groundfish. Western Society of Naturalists Annual Meeting (Nov 10-13, 2016, Monterey, CA).

**Blake, R.E.**. June 12, 2014. Impacts of anthropogenic stressors in vegetated coastal habitats. *Invited seminar* at Smithsonian Environmental Research Center (Edgewater, MD).

**Blake, R.E.**, J.A. Olin. 2014. Direct and indirect effects of multiple stressors on *Spartina alterniflora*. Benthic Ecology Meeting (March 19-22, 2014, Jacksonville, FL).

**Blake, R.E.**, J.A. Olin. 2014. Response of *Spartina alterniflora* to chemical and herbivore stressors. Gulf of Mexico Oil Spill & Ecosystem Science Conference (January 26-29, 2014, Mobile, AL).

**Blake, R.E.**, J.A. Olin. 2013. Response of *Spartina alterniflora* to chemical and herbivore stressors. 22<sup>nd</sup> Biennial Conference of the Coastal & Estuarine Research Federation (Nov 3-8, 2013, San Diego, CA).

**Blake, R.E.**, J.E. Duffy. 2012. Coastal development impacts on seagrass communities in lower Chesapeake Bay. Benthic Ecology Meeting (March 21-24, 2012, Norfolk, VA).

**Blake, R.E.,** J.E. Duffy. 2011. Anthropogenic stressors and Chesapeake Bay eelgrass communities: an experimental examination of potential impacts. Benthic Ecology Meeting (March 16-20, 2011, Mobile, AL).

**Blake, R.E.,** J.E. Duffy. 2010. Impacts of local coastal development on Chesapeake Bay, VA eelgrass (*Zostera marina*) communities. Western Society of Naturalists Annual Meeting (Nov 11-14, 2010, San Diego, CA).

**Blake, R.E.,** J.E. Duffy. 2010. Grazer diversity influences multi-stressor impacts in an experimental seagrass system. Benthic Ecology Meeting (March 10-13, 2010, Wilmington, NC).

**Blake, R.E.,** J.E. Duffy. 2007. Responses of an experimental seagrass community to environmental stressors. 19<sup>th</sup> Biennial Conference of the Estuarine Research Federation (Nov 4-8, 2007, Providence, RI).

**Blake, R.E.,** J.E. Duffy. 2007. Impacts of multiple stressors in a model experimental seagrass (*Zostera marina*) community. Benthic Ecology Meeting (March 21-25, 2007, Atlanta, GA).

#### Poster Presentations

**Blake, R.E.,** J. Couture, C.L. Ward. 2015. Synthetic Ecology Across Scales: a Gulf of Alaska case study. Coastal & Estuarine Research Federation (Nov 8-13, 2015, Portland, OR).

**Blake, R.E.,** J.A. Olin, R.E. Turner. 2015. Variation in *Spartina alterniflora* function in south Louisiana saltmarshes. Gulf of Mexico Oil Spill & Ecosystem Science Conference (Feb. 16-20, 2015, Houston, TX).

**Blake, R.E.,** J.E. Duffy. 2009. Assessing the influence of local shoreline development on the eelgrass (*Zostera marina*) community of lower Chesapeake Bay, VA. 20<sup>th</sup> Biennial Conference of the Coastal & Estuarine Research Federation (Nov. 1-5, 2009, Portland, OR).

**Blake, R.E.,** J.E. Duffy. 2009. Faunal Community Composition in Chesapeake Bay eelgrass (*Zostera marina*) beds along a gradient of shoreline development. Benthic Ecology Meeting (March 4-7, 2009, Corpus Christi, TX).

Wozniak, A., **R.E. Blake,** L. Gerald, L. Haas. 2005. Hydrodynamic Influence on Nutrient Limitation and Species Composition of the York River, VA Spring Bloom. 18<sup>th</sup> Biennial Conference of the Estuarine Research Federation (Oct 16-20, 2005, Norfolk, VA).

**Blake, R.E.,** C. Tyler, E. Grosholz. 2004. Estimating the Time for Ecosystem Recovery Following *Spartina* Eradication. Western Society of Naturalists Annual Meeting (Nov 11-14, 2004, Rohnert Park, CA).

**Blake, R.E.,** E. Grosholz, W. S. Norton, N. Rayl. 2003. Selective Grazing by Canada Geese and the *Spartina* Invasion in San Francisco Bay. 17<sup>th</sup> Biennial Conference of the Estuarine Research Federation (Sept 14-18, 2003, Seattle, WA).