

Elizabeth L. Harvey

Biology Department

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EDUCATION

Ph.D., University of Rhode Island, RI	Oceanography <i>Advisor: Susanne Menden-Deuer</i>	2013
M.S., Western Washington University, WA	Environmental Science <i>Advisor: Stephen Sulkin</i>	2008
B.S., University of Maine	Marine Science	2003

PROFESSIONAL EXPERIENCE

Postdoctoral Investigator; Woods Hole Oceanographic Institution, MA	2013-present
Graduate Research Assistant; University of Rhode Island, RI	2008-2013
Graduate Research Assistant; Western Washington University, WA	2005-2008
Laboratory Field Technician; Bowdoin College, ME	2004-2005
Laboratory Assistant; Darling Marine Center, ME	2003
REU Internship; Mote Marine Laboratory, FL	2003
Summer Internship; Darling Marine Center, ME	2002

PUBLICATIONS

Published:

Van Alstyne, K.L., **E.L. Harvey**, M. Cataldo. 2014. Effects of dopamine, a compound released by the green-tide macroalga *Ulvaria obscura* (Chlorophyta), on marine algae and invertebrate larvae and juveniles. *Phycologia*. 53(2): 195-202.

Harvey, E.L., H. J. Jeong, S. Menden-Deuer. 2013. Avoidance and attraction: Chemical cues influence predator-prey interactions of planktonic protists. *Limnol. & Oceanogr.* 58(4): 1176-1184.

Strom, S.L., **E.L. Harvey**, K.A. Fredrickson, S. Menden-Deuer. 2013. Broad halo-tolerance as a refuge from predation in the harmful raphidophyte alga, *Heterosigma akashiwo*. *J. Phycol.* 49: 20-31.

Harvey, E.L. and S. Menden-Deuer. 2012. Phytoplankton fleeing from predators: a new mechanism for harmful algal bloom formation? *PLoS ONE* 7(9): e46438.

Harvey, E.L. and S. Menden-Deuer. 2011. Avoidance, movement, and mortality: the interactions between a protistan grazer and *Heterosigma akashiwo*, a harmful algal bloom species. *Limnol. & Oceanogr.* 56(1): 371-378.

Submitted/in prep:

Harvey, E.L., K. Bidle, M. Johnson. *submitted*. Combined influence of chemical and structural traits on protist grazing on *Emiliania huxleyi*.

Harvey, E.L., T. Rynearson, S. Menden-Deuer. *In prep*. Behavioral diversity among isolates of *Heterosigma akashiwo*

Harvey, E.L., R. Hickox, S. Menden-Deuer. *In prep*. The role of temperature and light on the survival of *Heterosigma akashiwo* along a salinity gradient

FUNDING AWARDS

2011	International Travel Experience Award, USDA (\$7400)
2010	Travel Funding, 14 th International HAB Meeting, Crete, Greece (\$800)
2009	Travel Funding, course: <i>Scaling the effects of climate change on marine zooplankton</i> , South American Climate Change Consortium (\$2500)
2008	National Needs Fellowship, USDA (provided full PhD tuition and stipend for 3 years; \$45,000 per year)
2006	Graduate Research Fellowship, NERRS/NOAA (provided full tuition and stipend for 2 years; \$40,000 per year)

HONORS

2012	Outstanding Student Presentation Award, Association for the Sciences of Oceanography and Limnology Conference, Salt Lake City, Utah
2012	Simmons Award, University of Rhode Island
2011	Ann Durbin Award, University of Rhode Island
2010	Ada L. Sawyer Award for Oceanography, University of Rhode Island
2003	Eugene A. Jordan Scholarship, University of Maine
2003	Presidential Pin for Academic Achievement, University of Maine

TEACHING AND MENTORING

2013 – present	Research mentor, WHOI – 2 summer student fellows, 1 high school student
2012	Teaching Assistant, URI – Oceans, Atmospheres, and Global Climate
2008 – 2012	Research mentor, URI – 5 undergraduate students
2006	Teaching Assistant, WWU – Wetlands Wastewater Treatment
2006	Teaching Assistant, WWU – Biogeochemistry of Marine Sediment

SYNERGISTIC ACTIVITIES

Peer Reviewer	Delaware Sea Grant, <i>Estuarine Coastal Shelf Science, Limnology and Oceanography, Harmful Algae, J. Plankton Research</i>
Short Courses and Workshops	<i>Next-generation sequencing 2014</i> , MSU (Titus Brown) - 2014 <i>Scaling the effects of climate change on marine zooplankton</i> , South American Climate Change Consortium - 2009
Groups and Leadership	President, Postdoctoral Committee (WHOI) – 2013-present Member, Women's Committee (WHOI) – 2013-present Treasurer, Chowder and Marching (URI) – 2009-2011 Student Member, Space Committee (URI) – 2008-2012 Leader, Graduate Student Committee (WWU) – 2006-2008
Service and Outreach	Science Interpreter, National Network for Ocean and Climate Change Interpretation - 2014 Judge, Bourne High School Science Fair (WHOI) – 2013 Judge, RI Science and Engineering Fair (URI) – 2009-2010 Judge, Quahog Bowl (National Ocean Science Bowl) - 2009
Art Collaboration	Rubin, C.B., S. Menden-Deuer, E.L. Harvey . Traces at SIGGRAPH 2013, The Society for Art and Science, Tokyo, Japan, vol. 35: 11-12. Rubin, C.B., S. Menden-Deuer, E.L. Harvey , J. Fishenden. 2013. Traces: plankton on the move. ACM SIGGRAPH, 412-413. http://planktonportraiture.blogspot.com/
Memberships	Association for the Sciences of Limnology and Oceanography, International Society for the Study of Harmful Algae

FIELD EXPERIENCE

2014	Monterey Bay, CA – UNOLS Chief Scientist Training Program; samples for meta-transcriptomic analysis
2011	Gulf of Maine – dilution experiments, photosynthetic efficiency, chlorophyll a
2008	Gulf of Maine – samples for genetic analysis, chlorophyll a
2008 & 2009	Daily summer small boat work, Shannon Point Marine Center, WA – microzooplankton dilution experiments, nutrients, chlorophyll a

PRESENTATIONS

2014	Harvey, E.L. and M. Johnson. Untangling the complex: the impact of intra-specific prey variability on grazing interactions. <i>Marine Microbes, Gordon Conference, Waltham, MA</i>
2014	Poulson-Ellestad, K., E.L. Harvey , K. Rathjen, M.D. Johnson, and T.J. Mincer. Sound the alarm: listening in on predator-prey interactions among protists. <i>American Society for Microbiology, Boston, MA</i>
2014	Menden-Deuer, S., E.L. Harvey , R. Schuech, and J. Graff. Linking organismal movements with ecological rates. <i>ASLO Ocean Sciences, Honolulu, HI</i>
2013	Harvey, E.L. Out to lunch: planktonic predator-prey interactions and their macroscale implications. <i>Bigelow Laboratory, ME (invited)</i>
2012	Harvey, E.L. and S. Menden-Deuer. Predator-prey interactions and salinity tolerance can impact harmful algal bloom formation in <i>Heterosigma akashiwo</i> . <i>ASLO Ocean Sciences, Salt Lake, UT (Outstanding Student Presentation Award)</i>
2011	Harvey, E.L. and S. Menden-Deuer. Bloom formation in <i>Heterosigma akashiwo</i> – role of predation and physiology. <i>6th USA HAB Meeting, Austin, TX</i>
2011	Harvey, E.L. and S. Menden-Deuer. Understanding harmful algal blooms in the ocean: the impact of predator/prey interactions. <i>Environmental Protection Agency - Northeast Division, Narragansett, RI (invited)</i>
2011	Menden-Deuer, S. and E.L. Harvey . Linking microscopic plankton behaviors to large-scale ecological patterns and processes. <i>ASLO Aquatic Sciences, San Juan, PR</i>
2011	Menden-Deuer, S., E.L. Harvey , W. Day, and J. Graff. Deciphering predator prey interactions in the plankton. <i>Bio-Physical Meeting, Aspen, CO</i>
2010	Harvey, E.L. and S. Menden-Deuer. Anti-predator defense mechanisms of the toxic raphidophyte alga, <i>Heterosigma akashiwo</i> against potential heterotrophic protist predators. <i>14th International HAB Meeting, Crete, Greece</i>
2010	Harvey, E.L. and S. Menden-Deuer. The role of halo-tolerance in providing a refuge for the toxic raphidophyte alga, <i>Heterosigma akashiwo</i> from heterotrophic protists and enhancing bloom formation. <i>Gordon Conference (Marine Microbes), Tilton, NH</i>
2010	Menden-Deuer, S and E.L. Harvey . Avoidance, movement, and mortality: the role of predator-prey interactions in harmful algal bloom dynamics. <i>Eastern Pacific Ocean Conference, Mt. Hood, OR</i>
2010	Harvey, E.L. , S. Strom, S. Menden-Deuer. 2010. Can the halo-tolerance of the toxic raphidophyte alga, <i>Heterosigma akashiwo</i> provide a refuge from microzooplankton predation? <i>ASLO Ocean Sciences, Portland, OR</i>
2009	Menden-Deuer, S., E.L. Harvey , K. Fredrickson, S. Graham, and S. Strom. Predator impacts on the vertical distribution and population dynamics of the toxic raphidophyte, <i>Heterosigma akashiwo</i> . <i>5th USA HAB Meeting, Ocean</i>

- Shores, WA*
- 2009 **Harvey, E.L.** and S. Menden-Deuer. Distribution and swimming behaviors of heterotrophic protist predators in response to the toxic raphidophyte algal, *Heterosigma akashiwo*. *ASLO Aquatic Sciences, Nice, France*.
- 2009 VanAlstyne, K.L., **E.L. Harvey**, M. Cataldo, A. Salas, S. Gifford, A. Nicely, A. Gehman, L. Chomiczewski. The release of dopamine by *Ulvaria obscura* and its allelopathic effects on algae and invertebrate larvae. *Plant Biology Meeting, Honolulu, HI*
- 2008 **Harvey, E.L.** Effects of the toxic alga *Heterosigma akashiwo* on the distribution of single-celled planktonic grazers. *New England Estuarine Research Society, Block Island, RI*
- 2007 **Harvey E.L.** The effects of high density ulvoid macroalgae exposure on the settlement of crab megalopae and survival and growth of young juveniles. *Western Society of Naturalists Conference, Ventura, CA*
- 2004 **Harvey E.L.** Toxicity, due to Permanone®31-66, to the inland silverside, *Menidia beryllina* and mysid, *Mysidopsis bahia*. *ASLO Winter Meeting, Honolulu, HI*