

Eliza C. Heery

Department of Biology – University of Washington
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EDUCATION

- presently** **PhD Candidate – Biology**, [University of Washington](#), Seattle, WA
Thesis Title: “Artificial structures in urban waterways: Novel benthic assemblages and habitat connectivity in a complex, human-dominated, subtidal environment.”
Advisor: Kenneth P. Sebens
- 2007** **MS – Fisheries Science**, [Virginia Tech](#), Blacksburg, VA
Thesis Title: “The impact of bias in length frequency data on an age structured fisheries stock assessment model.”
Advisor: James M. Berkson
- 2004** **BS – Biology**, [Emory University](#), Atlanta, GA
Senior Project Title: “The formation and development of an artisanal longline fishery in Grenada, Eastern Caribbean.”

PROFESSIONAL EXPERIENCE

- 2016** **Visiting Researcher**, School of Biological, Earth and Environmental Science, University of New South Wales, Sydney, Australia. *Host:* Emma Johnston
- 2015** **Research Assistant**, Pelagic Ecosystem Functioning Apprenticeship, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA.
Research Consultant, Perkins+Will Global, “Research on adaptable and resilient urban forms with health and wellbeing outcomes and returns on investment.” *Research Lead:* David Green
- 2014** **Visiting Researcher**, Department of Biological, Geological, and Environmental Sciences, University of Bologna, Ravenna, Italy. *Host:* Laura Airoidi
- 2012-2014** **Graduate Fellow**, IGERT Program on Ocean Change, University of Washington, Seattle, WA.
- 2012** **Delegate**, Ocean Exchange, Savannah, GA.
- 2008-2010** **Statistician**, Pacific States Marine Fisheries Commission, Northwest Fisheries Science Center (NWFSC), NOAA, Seattle, WA.
- 2007** **Research Technician**, Sebens Lab, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA.
- 2004-2007** **Research Assistant**, Department of Fisheries and Wildlife, Virginia Tech, Blacksburg, VA.
- 2002-2003** **Undergraduate Fellow**, Ethics and Servant Leadership Program, Emory University, Atlanta, GA.
- 2002** **Research Intern**, Marine Science Department, Chulalongkorn University, Bangkok, Thailand.
- 2001-2002** **Student**, Three Seas Program, Northeastern University, Friday Harbor, WA, Discovery Bay, Jamaica, and Boston, MA.
- 1999-2001** **Careers In Science (CiS) Intern**, California Academy of Science, Education Department, San Francisco, CA.

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TEACHING EXPERIENCE

- 2016** **Instructor of Record**, Marine Ecological Processes (Biol 423), Biology Department, University of Washington (Fall 2016)
- Teaching Assistant**, Marine Botany (Biol 445), Friday Harbor Laboratories, University of Washington (Spring 2016)
- 2015** **Guest Lecturer**, Marine Biology Seminar (FHL 490), Friday Harbor Laboratories, University of Washington (Fall 2015)
- Instructor**, Marine Biology (BIOL 110) and Oceanography (OCEAN 101), Highline Community College, Des Moines, WA (Summer 2015)
- Teaching Assistant**, Evolution and Human Behavior (Honors 221), Honors Program, University of Washington (Winter 2015)
- 2014** **Teaching Assistant**, Foundations in Evolution and Systematics (Biol 354), Biology Department, University of Washington (Fall 2014)
- Graduate Field Instructor**, Garfield High School Oceanography Field School, Maui, HI (Spring 2014)
- Teaching Assistant**, Foundations in Ecology (Biol 356), Biology Department, University of Washington (Winter 2014)
- 2014-2016** **Capstone Supervisor**, UW SAFS capstone program
- Michealene Corlett, Topic: Intertidal communities on artificial structures in Cesenatico, Italy. (Graduation: Spring 2017)
- Michelle Louie, Topic: "Food consumption and growth rates of juvenile sea urchins, *Strongylocentrotus droebachiensis*, with varying food types." (Graduation: Spring 2015)
- Amy Green: "Analysis of *Enteroctopus dofelini* (giant Pacific octopus) midden contents from artificial reef den sites in Puget Sound." (Graduation: Fall 2014)
- 2013** **Graduate Field Instructor**, Garfield High School Oceanography Field School, Maui, HI (Spring 2013)
- 2011-2012** **GK-12 Fellow**, Biology and Honors Pre-Calculus, Roosevelt High School, NSF & Seattle Public Schools
- 2011** **Teaching Assistant**, Invertebrate Zoology (Biol 434), Friday Harbor Laboratories, University of Washington (Summer 2011)
- Teaching Assistant**, Introductory Biology (Biol 180 & 220), Biology Department, University of Washington (Winter & Spring 2011)
- 2009** **Instructor**, Pacific Northwest Field Ecology Course, Wildlands Studies (California State University Monterey Bay, Fall 2009)
- 2007** **Instructor**, Belize Field Ecology Course, Wildlands Studies (CSU Monterey Bay, Summer 2007)
- 2005** **Teaching Assistant**, Marine Conservation Biology Seminar, Department of Fisheries and Wildlife, Virginia Tech (Fall 2005)
- Teaching Assistant**, Marine Resource Population Dynamics Workshop, NMFS RTR Unit, Mote Marine Lab (Winter 2005)
- 2004** **Undergraduate Teaching Fellow**, PRISM Program, Emory University (Spring 2004)

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PUBLICATIONS

Heery, EC, MJ Bishop, L Citchley, AB Bugnot, L Airoidi, M Mayer-Pinto, EV Sheehan, RA Coleman, LHL Loke, EL Johnston, V Komyakova, RL Morris, EMA Strain, LA Naylor, and KA Dafforn. In Press. Identifying the consequences of ocean sprawl for sedimentary habitats. Journal of Experimental Marine Biology and Ecology.

Heery, EC and JM Cope. 2014. Co-occurrence of bycatch and target species in the groundfish demersal trawl fishery of the U.S. west coast; with special consideration of rebuilding stocks. Fishery Bulletin 112: 36-48.

Bellman, MA and **EC Heery**. 2013. Discarding and fishing mortality trends in the U.S. west coast groundfish demersal trawl fishery. Fisheries Research 147: 115-126.

Bellman, MA, **EC Heery**, J Jannot, and J Majewski. 2010. Estimated discard and total catch of selected groundfish species in the 2009 U.S. west coast fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Heery, EC, Bellman, MA, and J Majewski. 2010. Estimated bycatch of marine mammals, seabirds, and sea turtles in the 2002-2008 U.S. west coast commercial groundfish fishery. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **Heery, EC**, and J Majewski. 2010. Observed and estimated total bycatch of green sturgeon in the 2002-2008 U.S. west coast groundfish fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **Heery, EC**, and J Majewski. 2010. Observed and estimated total bycatch of salmon in the 2008 U.S. west coast groundfish fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Majewski. 2009. Estimated Discard and Total Catch of Selected Groundfish Species in the 2008 U.S. West Coast Fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Heery, EC, and MA Bellman. 2009. Observed and Estimated Total Discard of Pacific Halibut in the 2002-2008 U.S. West Coast Groundfish Non-Nearshore Fixed Gear Fishery. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Heery, EC, MA Bellman, and J Hastie. 2009. Observed and Estimated Total Bycatch of Salmon in the 2007 U.S. West Coast Groundfish Fisheries. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Bellman, MA, **EC Heery**, and J Hastie. 2008. Estimated Discard and Total Catch of Selected Groundfish Species in the 2007 U.S. West Coast Fisheries. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

Heery, EC and J Berkson. 2009. Systematic errors in length frequency data and their effect on age-structured stock assessment models and management. Transactions of the American Fisheries Society 138: 218-232.

Publications In Review

Heery, EC and KP Sebens. Chapter 10. The North-East Pacific: Interactions on subtidal hard substrata. In (*Eds*) Hawkins, S.J., L.B. Firth, K. Bohn, and G.A. Williams. *Interactions in the Marine Benthos – A Regional and Habitat Perspective*. Systematics Association Special Volume Series, Cambridge University Press.

Publications In Preparation

Hayes, AD, **EC Heery**, EA Maroon, AK McClaskey, and CC Stawitz. Trends in sea level rise adaptation planning among coastal cities in the United States.

Heery, EC, AY Green, BE Feist, and KP Sebens. Distribution patterns and habitat use by Giant Pacific Octopus (*Enteroctopus dofleini*) in an urban seascape.

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Heery, EC, M Louie, and KP Sebens. Spatial and temporal drivers of dominance by filamentous algal turf in a temperate, urban estuary.

Heery, EC and KP Sebens. Benthic assemblages on natural and artificial rocky substrates across a gradient of urbanization in Puget Sound, Washington, USA.

Heery, EC and KP Sebens. Material fluxes from artificial structures to soft sediment environments in an urban estuary.

Strain, EMA, V Cumbo, M Mayer-Pinto, AB Bugnot, KA Dafforn, RL Morris, LHL Loke, C Olabarria, **EC Heery**, P Brooks, LB Firth, and MJ Bishop. Reducing the collateral damage of ocean sprawl on biodiversity: a meta-analysis of the effect of adding habitat complexity.

Airoldi, L et al. (**EC Heery among 33 authors; order TBD**) Fostering nature revitalization for resilient marine urban waterfronts: Challenges, opportunities, and best practices.

Bugnot, AB et al. (**EC Heery among 11 authors; order TBD**) The extent of marine infrastructure: current trends, future projections, and data challenges.

PRESENTATIONS

Heery, EC and KP Sebens. 2015. Urban infauna: The effect of material fluxes from artificial structures on soft sediment species assemblages in urban, subtidal landscapes. Presented at the 55th annual meeting of the Estuarine Coastal Sciences Association, London, UK.

Heery, EC and KP Sebens. 2015. The effect of material fluxes from artificial structures on neighboring infaunal communities in an urban subtidal landscape. Aquatic Biodiversity and Ecosystems Conference, Liverpool, UK.

Heery, EC. 2015. "Equity" in Urban Marine Ecosystems. Invited Speaker: Equitable Bike Ramble, Organized by the AIA Seattle Urban Design Forum and Cascadia Bicycle Club (September 2015), Seattle, WA.

Heery, EC and KP Sebens. 2015. Benthic Communities in an Urbanized World. Seminar Speaker, Plymouth Marine Laboratory, UK.

Heery, EC and KP Sebens. 2014. Material fluxes from subtidal man-made structures to adjacent soft sediment habitats in the urban subtidal. Presented at the 95th annual Meeting of the Western Society of Naturalists, Tacoma, WA.

Heery, EC and KP Sebens. 2014. Subtidal riprap in Puget Sound: Its ecological structure and function, and its impact on adjacent soft sediment environments. Presented at the 2014 Salish Sea Ecosystem Conference, Seattle, WA.

Heery, EC. 2014. SCUBA Research in the Urban Subtidal. Invited Speaker: Being SCUBA Club (June 2014), Renton, WA.

Heery, EC. 2014. Urban Marine Ecosystems. Invited Speaker: Seattle Arboretum (April 2014), Seattle, WA.

Heery, EC and J Berkson. 2007. The impact of biased length frequency data on age-structured stock assessment models. Presented at the 137th annual meeting of the American Fisheries Society, San Francisco, CA.

Heery, EC and J Berkson. 2006. The impact of biased length frequency data on marine population models. Presented at the 91st annual meeting of the Ecological Society of America, Memphis, TN.

Chavanich, S, V Viyakam, **EC Heery** and C Raksataub. 2003. Effect of densities of the sea cucumber, *Holothuria atra*, on chlorophyll concentrations in sediments. Presented at the 32nd annual Benthic Ecology Meeting, Groton, CT.

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GRANTS AND AWARDS

- 2016** **National Science Foundation**, East Asia Summer Institute (\$5000)
Australian Academy of Science, East Asia Summer Institute (\$2000)
IGERT Program on Ocean Change, Research Grant (\$2500)
- 2014** **R.T. Paine Experimental and Field Ecology Award**, Research Grant (\$2500)
IGERT Program on Ocean Change, International Research Grant (\$2000)
- 2013** **R.T. Paine Experimental and Field Ecology Award**, Research Grant (\$5000)
- 2012** **National Science Foundation IGERT**, Program on Ocean Change Fellowship (2 years of support)
Biology-Friday Harbor Award (\$1250)
- 2011** **National Science Foundation GK-12**, Graduate STEM Fellowship (1 year of support)
- 2004** **NMFS-RTR Research Assistantship**, Virginia Tech (3 years of support)
- 2004** **National Science Foundation GK-12**, Undergraduate STEM Fellowship (Emory University PRISM Program, 1 semester of support)
- 2003** **Institute for International and Comparative Studies**, International Scholars Grant (\$3000)

HONORS AND PROFESSIONAL MEMBERSHIPS

American Fisheries Society
Ecological Society of America
National Honors Society
Phi Kappa Phi
Western Society of Naturalists

CERTIFICATIONS

Washington State Boater Training (2015)
Divemaster (National Association of Underwater Instructors, 2004)
Scientific Diver (American Association of Underwater Science, 2001)
Rescue Diver (Professional Association of Diving Instructors, 2001)
Advanced Open Water Diver (Professional Association of Diving Instructors, 1999)
Open Water Diver (Professional Association of Diving Instructors, 1998)
CPR/First Aid and Oxygen Certification (Updated Regularly)

RELEVANT COURSEWORK

Ecology & Field Techniques Biology and Ecology of Corals, Biology and Ecology of Fishes, Conservation Genetics, Coupled Human and Natural Systems, Fisheries Management, Genetics, Invertebrate Zoology, Marine Birds and Mammals, Ocean and Coastal Processes, Phycology, Reef Systems Through Time, Urban/Environmental Planning

Quantitative Analytical Methods for Community Ecology, Bayesian Statistics, Generalized Linear Models, Ecological Modeling, Fish Population Dynamics, Linear Algebra, Population Dynamics, Simulation Modeling, Statistics in Research

Communication & Ethics Communicating Ocean Sciences, Communicating Science to the Media (COMPASS workshop), Grant Writing, Science Ethics

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VOLUNTEER WORK

Diver, Marine Science and Technology Center (MaST) Carnival on the Dock (2014)

Holiday Gift Volunteer, TWCA, Seattle, WA (2013)

Diver, Bainbridge High School Underwater Robot Competition (2013)

Tutor, Youth Tutoring Program, Seattle, WA (2008)

Webmaster, Virginia Tech Chapter of the American Fisheries Society, Blacksburg, VA (2005-2006)

Tutor, Refugee Family Services, Clarksville, GA (2002-2004)

Intern, Hands On Atlanta, Atlanta, GA (2003)

Volunteer Lab Technician, Romberg Tiburon Center, San Francisco State University, Tiburon, CA (1998-2000)

References furnished upon request

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