

## Sarah K. Henkel

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### Education

Ph.D. University of California, Santa Barbara, 2008	Marine Science
M.S. California State University, Fullerton, 2003	Biological Science
B.S. College of William and Mary, 2000	Biology

### Current Positions

Associate Director: Pacific Marine Energy Center, 2018–present  
Associate Professor, Senior Research: Oregon State University, 2018–present

### Past Experience

Director of Environmental Research: Northwest National Marine Renewable Energy Center, 2013–2018  
Assistant Professor, Senior Research: Oregon State University, 2009–2018  
Consultant: MPA Monitoring Enterprise, 2009  
California Sea Grant State Fellow: Ocean Science Trust, 2008–2009  
EPA Star Fellow: University of California Santa Barbara, 2005–2008  
Research Assistant: Partnership for Interdisciplinary Studies of Coastal Oceans, 2004–2005  
Sea Grant Trainee & Research Assistant: California State University, Fullerton, 2000–2003  
Research Assistant: College of William and Mary, 2000, Virginia Institute of Marine Science, 1999

### Teaching Experience

BI 399	Pacific Northwest Coastal Ecosystems: Oregon State University, Summer 2018
BI 370	Ecology: Oregon State University, Fall 2015, Winter 2017, Winter 2018
BI 450	Marine Biology-Marine Conservation: Oregon State University, 2010-2018
MCDB1B/EEMB2	Introductory Biology 2: University of California Santa Barbara, 2004
EEMB 112	Invertebrate Biology: University of California Santa Barbara, 2003
Biology 422	Coastal Ecology: California State University, Fullerton, 2002
Biology 241	Botany: California State University, Fullerton (Grader), 2002
Biology 317	Field Marine Biology: California State University, Fullerton, 2001
Biology 500	Professional Aspects of Biology: California State University, Fullerton, 2001
Biology 101	Elements of Biology Lab: California State University, Fullerton, 2000

### Peer-Reviewed Publications

**Henkel, SK.** and Nelson, WG. (In press) Assessment of spatial patterns in benthic macrofauna of the U.S. west coast continental shelf. *Journal of Biogeography*.

Voorhies, KJ, Wootton, JT, and **Henkel, SK.** (In press) Longstanding signals of marine community structuring by winter storm wave-base. *Marine Ecology Progress Series*. <https://doi.org/10.3354/meps12703>

Hemery LG, **Henkel SK,** Cochrane GR. 2018. Benthic assemblages of mega epifauna on the Oregon continental margin. *Continental Shelf Research*. 159(1): 24-32. <https://doi.org/10.1016/j.csr.2018.03.004>

Hemery, LG, Politano, KK, **Henkel, SK.** 2017. Assessing differences in macrofaunal assemblages as a factor of sieve mesh size, distance between samples and time of sampling. *Environmental Monitoring and Assessment*. 189(8) 413. <https://doi.org/10.1007/s10661-017-6127-8>.

Mendoza, M and **Henkel, SK.** 2017. Benthic effects of artificial structures deployed in a tidal estuary. *Plankton and Benthos Research*. 12(3): 1–11.

Havron, A, Goldfinger, C, **Henkel, S,** Marcot, B, Romsos, C, and Gilbane, L. 2017. Mapping marine habitat suitability and uncertainty using Bayesian networks: a case study of northeastern Pacific benthic macrofauna. *Ecosphere*. 8(7):e01859. <https://doi.org/10.1002/ecs2.1859>

- Henkel, SK** and Politano, KK. 2017. Small proportions of silt linked to distinct and predictable differences in marine macrofaunal assemblages on the continental shelf. *Continental Shelf Research*. 144: 38–49. <https://doi.org/10.1016/j.csr.2017.06.016>
- Hemery, LG, Romsos, C, Marion, S, Kurapov, A, and **Henkel, SK**. 2016. Diversity and species distribution modeling of sea stars along the Pacific Northwest continental shelf. *Diversity and Distributions*. 22, 1314–1327. <https://doi.org/10.1111/ddi.12490>
- Lewis, NL and **Henkel, SK**. 2016. Characterization of ecosystem structure within transplanted and natural eelgrass (*Zostera marina*) beds. *Northwest Science*. 90 (3): 355–375.
- Hemery, LG and **Henkel, SK**. 2016. Patterns of benthic mega-invertebrate communities and habitat associations in temperate continental shelf waters: a reassessment. *Biodiversity and Conservation*. 25(9): 1761–1772. <https://doi.org/10.1007/s10531-016-1158-y>
- Henkel, SK**, Conway, F, Boehlert, G. 2013. Environmental and Human Dimensions of Ocean Renewable Energy Development. *Proceedings of the IEEE* 101(4): 991–998. (Invited)
- LeDee, O, Barnes, RT, Emanuel, R, Fisher, PB, **Henkel, SK**, Marlon, JR. 2011. Training a “New Scientist” to Meet the Challenges of a Changing Environment. *EOS Trans*. 92(16):135–136.
- Henkel, SK**, Kawai, H and Hofmann, GE. 2009. Interspecific and interhabitat variation in *hsp70* gene expression in native and invasive kelp populations. *MEPS* 386: 1–13. (Feature article)
- Henkel, SK** and Hofmann, GE. 2008. Thermal ecophysiology of gametophytes cultured from invasive *Undaria pinnatifida* (Harvey) Suringar in coastal California harbors. *JEMBE* 367: 164–173.
- Henkel, SK** and Hofmann, GE. 2008. Differing patterns of *hsp70* gene expression in invasive and native kelp species: Evidence for acclimation-induced variation. *J App Phyc* 20: 915–924.
- Woodson, CB, DI Eerkes-Medrano, A Flores-Morales, M Foley, **S Henkel**, M Hessing-Lewis, D Jacinto, L Needles, M Nishizaki, J O’Leary, CE Ostrander, M Pespeni, K Schwager, JA Tyburczy, KA Weersing, A Kirincich, J Barth, MA McManus, and L Washburn. 2007. Local diurnal upwelling driven by sea breezes in northern Monterey Bay. *Cont Shelf Res* 27(18): 2289–2302.
- Henkel, SK**, Hofmann, GE and Whitmer, AC. 2007. Morphological and genetic variation in *Egregia menziesii* over a latitudinal gradient. *Bot Mar* 50: 159–170.
- Henkel, SK** and Murray, SN. 2007. Reproduction and morphological variation in southern California populations of the lower intertidal kelp *Egregia menziesii* (O. Laminariales). *J Phycol* 43:242–255.
- Book Chapter**
- Henkel, SK**, Suryan, RM, Lagerquist, B. 2014. “Marine Renewable Energy and Environmental Interactions: Baseline Assessments of Seabirds, Marine Mammals, and Benthic Communities on the Oregon Shelf” In *Marine Renewable Energy Technology and Environmental Interactions*. Ed. by M. A. Shields, A.I.L. Payne. Springer, Dordrecht pp. 93-110.
- Reports**
- Henkel, SK, Goldfinger C, et al. 2014. Benthic Habitat Characterization Offshore the Pacific Northwest. US Department of the Interior, Bureau of Ocean Energy Management, Pacific OCS Region. OCS Study BOEM 2014-662. 371 pp.
- Henkel, SK, Heppell, SA, Heppell, S, Politano, K & Politano, V. 2014. 2012 Ocean Bioaccumulation Survey. Prepared for The City of Newport, Oregon. 72 pp.
- Pacific Energy Ventures, LLC. 2012. West Coast Environmental Protocols Framework: Baseline and Monitoring Studies. Report for the U.S. Department of Interior, Bureau of Ocean Energy Management, Pacific OCS Region, Camarillo, CA. Report No. BOEM 2012-013, 309 pp.
- Henkel, SK**. 2011. Baseline characterization and monitoring of the OSU Mobile Ocean Test Berth Site: Benthic habitat characteristics and organisms on the central Oregon coast. A report prepared for the Oregon Wave Energy Trust. 31 pp. Available online at [www.oregonwave.org](http://www.oregonwave.org)
- Henkel, SK**. 2011. Characterization of benthic conditions and organisms on the Oregon south coast: A rapid evaluation of habitat characteristics and benthic organisms at the proposed Reedsport wave park. A report prepared for OWET. 15 pp. Available online at [www.oregonwave.org](http://www.oregonwave.org)

- Carlisle, J, Chan, D, Golub, M, **Henkel, S**, Painter, P, Wu, K. 2009. Toxicological Profile for Bisphenol A (BPA). D. Seigel (Ed.), Office of Environmental Health Hazard Assessment. Prepared for Cal-OPC.
- Carlisle, J, Painter, P, Qiao, D, Li, L-H, **Henkel, S**. 2009. Toxicological Profile for Di-(2-Ethylhexyl) Phthalate (DEHP). D. Seigel (Ed.), Office of Environmental Health Hazard Assessment. Prepared for California Ocean Protection Council.
- Murray, SN, Cox, E, Kido, J, Yee, E, Smith, J, Frisch, S, **Henkel, S**, Gilbane, L, Bullard, A, Gerrard, A. 2002. Trends in the status of selected rocky intertidal populations in Orange County, California. A progress report: 1996-97 through 2002-03. Coastal Marine Ecology Laboratory, CSUF 75 pp.

### **Professional Activities and Service**

- President's Commission on the Status of Women (PCOSW), 2017–2019
- Faculty Senate, 2016–2018
- Hatfield Student Organization Faculty Advisor, 2010–2018
- Hatfield Marine Science Center Seminar Committee Member, 2009–2018
- Participant in Scientists and Fishermen Exchange (SAFE) group, 2010–2018
- California Ocean Renewable Energy (CORE) Conference, Invited speaker, 2016
- Marine Studies Initiative: Faculty Governance Working Group, 2014–2015
- NSF GRFP Panelist, 2014
- Ocean Renewable Energy Conference IX, Portland, OR. Invited panelist, 2014
- International Energy Agency Annex IV Experts Workshop on Environmental Effects of Marine Hydrokinetic Energy, Stornoway, Scotland, Invited participant, 2014
- South Coast California MPA Baseline Program final reports review panel, 2014
- OSU Department of Zoology Seminar Committee Member, 2010–2013
- North Central Coast California MPA Baseline Program final reports review panel, 2013
- Oregon Marine Renewable Energy Environmental Science Experts Workshop, Invited participant, 2012
- Environmental Interactions of Marine Renewables: Orkney, Scotland, *Invited keynote speaker*, 2012
- Coastal and Marine Spatial Planning Science Workshop: Corvallis, Oregon, 2011
- Research at the Intersection of Marine/Hydrokinetic Energy and the Environment, NSF-funded workshop, *Invited speaker*, 2011
- Advanced MRE Instrumentation Experts Workshop: Golden, CO, *Invited speaker*, 2011
- Oregon Wave Energy Trust Ecological Committee Member, 2010–2011
- International Energy Agency Annex IV Experts Workshop on Environmental Effects of Marine Hydrokinetic Energy: Dublin, Ireland, Invited participant, 2010
- California Ocean Protection Council Meeting: Hydrokinetic Energy Development: Sacramento, CA, Invited panel member, 2010
- Oregon Marine Reserves Community Team: Scientist Stakeholder Representative, 2010

### **Research Grants**

- U.S. Department of Energy (Co-PI) January 2017 to December 2021
- Bureau of Ocean Energy Management (PI) Cross-shelf Habitat Classification and Suitability Modeling for Macrofauna. June 2016 – September 2019
- Oregon Wave Energy Trust (PI) Investigation of Seafloor Recovery after Anchor Removal. April 2016 – October 2016
- U.S. Department of Energy (Co-PI) Advanced Laboratory and Field Arrays (ALFA) for Marine Energy: Using Multiple Approaches to Assess Nekton Communities. January 2015 – December 2018
- U.S. Army Corps of Engineers (PI) Benthic Data Collection & Analysis at Dredged Material Disposal Sites at the Mouth of the Columbia River. March 2014 – May 2016
- U.S. Department of Energy (Co-PI on sub-award) WindFloat Pacific Pilot Project. March 2013 – March 2015

Oregon Built Environment and Sustainable Technologies (PI) Environmental assessment strategy and system monitoring plan to support industry commercialization of a submerged wave energy conversion technology. August 2012 – April 2013

Bureau of Ocean Energy Management (Co-PI) Oregon Renewable Energy Science Conference

City of Newport, Oregon (PI) Ocean Bioaccumulation Survey (Testing for potential accumulation of metals & organics in benthic fish & invertebrates from paper plant outfall). July 2012 – February 2014

Oregon Wave Energy Trust (PI) Characterization of Benthic Organisms on the Oregon South Coast in Areas Targeted for Wave Energy Development. June 2011 – December 2011

Minerals Management Service (now BOEM) (Co-PI) Survey of Benthic Communities near Potential Renewable Energy Sites Offshore the Pacific Northwest. June 2010 – August 2014

Oregon Wave Energy Trust (PI) Baseline Characterization and Monitoring of Ocean Test Berth Site. May 2010 – December 2011

Environmental Protection Agency: Science to Achieve Results (STAR). 2005 – 2008

### **Honors and Awards**

ICES/PICES Oceans of Change Early Career Scientist, 2012

Honorable Mention – Hatfield Marine Science Center Community Service Award, 2011

DISCCRS (DISsertations initiative for the advancement of Climate Change ReSearch) Scholar, 2010

Feature Article, Marine Ecology Progress Series, 2009

British Phycological Society Annual Meeting Best Student Poster Award, 2005

Service to Department Award, CSUF Department of Biological Science, 2003

Northwest Algal Symposium Best Student Presenter Award. 2002