

## CURRICULUM VITAE

Megan Nichols Dethier  
University of Washington  
Friday Harbor Laboratories and Dept. of Biology  
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### EDUCATION:

The Baldwin School, Bryn Mawr, PA, 1971, summa cum laude  
Carleton College, Northfield, MN, 1975, B.A. in Biology, magna cum laude, Honors in Biology  
University of Washington, Seattle, WA, Department of Zoology, PhD 1981. Dissertation title:  
The natural history and community structure of Washington tidepools: Disturbance,  
herbivory, and maintenance of pattern in intertidal microcosms.

### ACADEMIC AWARDS:

Membership in Sigma Xi, 1974  
Membership in Phi Beta Kappa, 1975  
National Science Foundation Graduate Fellowship, 1975-1979  
Member of review panel for NSF's Research Initiation and Support Program, 1977  
Friday Harbor Laboratories Postdoctoral Fellowship, 1983  
President of the Western Society of Naturalists, 1991  
Nominated for Aldo Leopold Fellowship, 1998  
Stifel Faculty Fellow, Shoals Marine Lab, Cornell University, 2002 – 2004  
Naturalist of the Year, Western Society of Naturalists, 2011  
Conservation Research award, Seattle Aquarium, 2018

### BIOLOGICAL POSITIONS:

Research Scientist II, Washington State Dept. of Natural Resources, Natural Heritage Program,  
Oct. 1988 - June 1989 (designed a marine and estuarine habitat classification system)  
Research Associate, Institute for Environmental Studies, University of Washington, 1985 - 1990  
Research Biologist, Washington State Department of Ecology's Oil Spill Compensation Group,  
1992-94 (modified habitat classification system and researched possible oil damage to  
habitat types)  
Marine Ecologist, TMA Corporation (assessed ecological sensitivity to oil spills of marine  
waters of Washington and Oregon; project funded by the Coast Guard); 1991 - 1992  
Peer-Reviewer for research plan for Prince William Sound, Exxon Valdez Trustees Council,  
1993  
Research Asst. Professor, Inst. for Environmental Studies, University of Washington, 1990 - 1995  
Research Asst. Professor, Dept. of Zoology, Univ. of Washington, 1995 - 1997  
Adjunct Research Associate Professor, Environmental Science, Washington State University,  
2001-2004  
Research Associate Professor, Dept. of Biology, Univ. of Washington, 1998 – 2006  
FHL coordinator, NSF Ocean and Coastal Interdisciplinary Science Program

Research Professor, Dept. of Biology, Univ. of Washington, 2006 - present  
Associate Director for Academics and the Environment, Friday Harbor Labs, College of the Environment, 2014 – present  
Interim Director, Friday Harbor Labs, College of the Environment, June 2019 – April 2020  
Director, Friday Harbor Labs, College of the Environment, April 2020

#### **FORMAL TEACHING EXPERIENCE:**

Summer 1982: Marine Ecology; Bamfield Marine Station, Bamfield, B.C., Canada  
Summer 1982: Marine Invertebrate Zoology; Friday Harbor Laboratories (UW)  
Summer 1983: Marine Invertebrate Zoology; Bamfield Marine Station  
Springs 1984, 1985, 1988: Marine Ecology; Friday Harbor Laboratories  
Spring 1986: Marine Biology; Carleton College (at the Friday Harbor Labs and Catalina Marine Science Center)  
Fall 1989 and 1991: Marine Biology; Carleton College program in Australia  
Fall 1990 - 1998: Invertebrate Zoology; Northeastern University East-West Program  
Summer 1993: Benthic Algal Ecology; Bamfield Marine Station  
Summers 1984 – 2004: Field Marine Science; Shoals Marine Lab (Cornell University), Appledore Island, Maine  
Springs 1987 - 2019: Marine Biology (Invertebrate Zoology); Friday Harbor Labs  
Winter 2001: Marine Ecology; Cornell University (visiting instructor)  
Fall 2003: Ecological responses to closed fishing zones (FHL Apprenticeship); Friday Harbor Labs  
Springs 2007-2009: Benthic marine ecology (FHL Apprenticeship); Friday Harbor Labs  
Springs 2011-2015: Nearshore Ecology Research Experience; Friday Harbor Labs  
Summer 2015: Ecology Between and Below Pacific Tides; Friday Harbor Labs  
Springs 2018 – 2019: Introduction to the Marine Biology of the San Juan Islands; Friday Harbor Labs

#### **GRANTS FUNDED:**

Sigma Xi: Grant-in-Aid for Research, June 1983  
National Science Foundation, Biological Oceanography Program: 2-year research grant, entitled "The ecology of algal crusts" (with R.S. Steneck) (1983)  
National Science Foundation, Biological Oceanography: 2 year renewal of "The ecology of algal crusts" (with R.S. Steneck) (1986)  
Supplement to above grant from Research Experience for Undergraduates Program, NSF (1986)  
Minerals Management Service, 2-year grant to study the impact of an oil spill on the intertidal biota of Olympic National Park (1989)  
National Park Service, 5 year grant to continue a baseline and monitoring program for intertidal resources and biodiversity (1993-7)  
Royalty Research Fund, University of Washington: 1-year grant "Induction of chemical defenses in kelps" (1995)  
National Marine Sanctuary Program: Grant to continue baseline monitoring of Olympic coast intertidal zone (1996-7)  
Washington Dept. of Natural Resources: "Refining and testing shoreline classification models in

Puget Sound" (1997-1999)

National Science Foundation, Biological Oceanography Program: 3-year grant (collaboration with Dr. Susan Williams, SDSU) "Effects of herbivory and stress on seaweed resource acquisition, allocation patterns, and fitness" (1999)

National Sea Grant College Program: 3-year grant (collaboration with Dr. Sally Hacker, Washington State University): "Invasion and eradication of the alien plant, *Spartina anglica*, in salt marshes and mud flats of Puget Sound, Washington" (1999)

National Park Service: 1-year grant: "Intertidal monitoring program protocol review" (2002)

National Sea Grant College Program: 3-year grant (collaboration with Dr. Jen Ruesink, UW, and Helen Berry, WA DNR): "Linking nearshore processes with intertidal diversity in Puget Sound" (2004)

The Nature Conservancy: three grants (2006-2009) for subtidal surveys in the San Juans

King County Dept. of Natural Resources: 5-year contract (2006-2010) to study the impact of a new sewage outfall pipe on shoreline communities, King County, WA

Washington Sea Grant: Geochemical and ecological consequences of disturbances associated with geoduck aquaculture operations in Washington; 3 year grant (2008-2010), team of UW researchers

National Sea Grant College Program: 4-year (2010-2014) grant (collaboration with scientists on campus at UW and with WA DNR), "Impacts of armoring on Puget Sound beaches: diverse effects on diverse scales".

U.S. Geological Survey: 2-year contract (2011-2013): "Acquisition and benthic-biological analysis of sea floor video from Puget Sound."

Skagit River System Cooperative, Washington Dept. of Fish and Wildlife (2012-2014): "Biological impacts of shoreline armoring in northern Puget Sound."

Dethier (PI), Ruesink (Co-PI): Washington Sea Grant. "Relative strengths of factors causing post-settlement mortality in economically important juvenile clams in diverse Washington waters." Locations: Willapa Bay, Hood Canal, and Puget Sound, Washington. March 2016 – Feb. 2018.

Washington Dept. of Natural Resources: ongoing contracts (through 2021): "Shoreline biota in Puget Sound: extending spatial and temporal comparisons." \$65,058 for the biennium.

Cordell, Toft, Dethier, and Howe: Washington Sea Grant. "Shoreline Armoring Removal: Synthesis and Assessment of Restoration Effectiveness in Puget Sound" March 2016 – Feb. 2018.

South Puget Sound Salmon Enhancement Group, "Effects of bulkhead removal on beaches and their biota." Estuary and Salmon Restoration Program, 2015-2017 and renewal, 2018-2020.

Dethier, Toft, Cordell, and Snohomish County, 2-year project "Railroad grade beach nourishment planning." Estuary and Salmon Restoration Program, 2015-2017 and renewal, 2018-2020.

#### **CURRENT COMMITTEE ASSIGNMENTS:**

Curriculum Committee (Chair, 2015-2018), College of the Environment, UW

Marine Biology Curriculum Committee, UW (2017 to present)

Marine Biology Executive Committee, UW (2019 to present)

Subject-matter Editor, Marine Ecology (journal)  
Marine Resources Committee, San Juan County  
Lead Integrating Organization, San Juan County  
Science Advisory Committee, Sea Doc Society

#### **MEMBERSHIPS IN PROFESSIONAL SOCIETIES:**

Phi Beta Kappa  
Sigma Xi  
Ecological Society of America  
Western Society of Naturalists  
Coastal and Estuarine Research Federation

#### **PUBLICATIONS:** Peer-reviewed

Dethier, M.N. 1980. Tidepools as refuges: predation and the limits of the harpacticoid copepod *Tigriopus californicus* (Baker). *J. Exp. Mar. Biol. Ecol.* 42: 99-111.

Dethier, M.N. 1981. Heteromorphic algal life histories: the seasonal pattern and response to herbivory of the brown crust, *Ralfsia californica*. *Oecologia* 49: 333-339.

Dethier, M.N. 1982. Pattern and process in tidepool algae: factors influencing seasonality and distribution. *Bot. Mar.* 25: 55-66.

Dethier, M.N. 1984. Disturbance and recovery in intertidal pools: maintenance of mosaic patterns. *Ecol. Monogr.* 54: 99-116.

Dethier, M.N. and D.O. Duggins. 1984. An "indirect commensalism" between marine herbivores and the importance of competitive hierarchies. *Am. Nat.* 124:205-219.

Duggins, D.O. and M.N. Dethier. 1985. Experimental studies on herbivory and algal competition in a low intertidal habitat. *Oecologia* 67: 183-191.

Dethier, M.N. 1987. The distribution and reproductive phenology of intertidal fleshy crustose algae in Washington. *Can. J. Bot.* 65:1838-1850.

Dethier, M.N. and D.O. Duggins. 1988. Variation in strong interactions along a geographical gradient: a Washington-Alaska comparison. *Mar. Ecol. Prog. Ser.* 50:97-105.

Dethier, M.N., D.O. Duggins, and T.F. Mumford. 1989. Harvesting of non-traditional marine resources: trends and concerns. *Northwest Environmental Journal* 5:71-87.

Steneck, R.S., S.D. Hacker and M.N. Dethier. 1991. Mechanisms of competitive dominance between crustose coralline algae: an herbivore-mediated reversal. *Ecology* 72:938-950.

Dethier, M.N., K.M. Paull and M.M. Woodbury. 1991. Distribution and thickness patterns of subtidal encrusting algae from Washington. *Botanica Marina* 34:201-210.

Dethier, M.N. 1992. Classifying marine and estuarine natural communities: an alternative to the Cowardin system. *Natural Areas Journal* 12(2):90-100.

Dethier, M.N. 1992. Sampling biodiversity of the marine intertidal zone of the Olympic coast. *Northwest Environmental Journal* 8:139-140 (Research Note).

Dethier, MN, Graham, ES, Cohen, S, and Tear, LM 1993. Visual versus random-point percent cover estimations: "objective" is not always better. *Mar. Ecol. Prog. Ser.* 96:93-100.

Steneck, R.S. and M.N. Dethier 1994. A functional group approach to the structure of algal dominated communities. *Oikos* 69:476-498.

Dethier, M.N. 1994. The ecology of intertidal algal crusts: variation within a functional group. *J.*

exp. mar. Biol. Ecol. 177:37-71.

Steneck, R.S. and M.N. Dethier. 1995. Are functional classifications different for marine vs terrestrial plants? A reply to Grime. Oikos 73:122-124.

Schoch, G.C. and M.N. Dethier. 1996. Scaling up: the statistical linkage between organismal abundance and geomorphology on rocky intertidal shorelines. J. exp. mar. Biol. Ecol. 201:37-72.

Simenstad, C.A., M.N. Dethier, C. Levings and D. Hay. 1996. The Terrestrial/Marine Ecotone. Chapter 7 (pp. 149-187) in: The Rain Forests of Home: Profile of a North American Bioregion. P. Schoonmaker, B. von Hagen, and E. Wolf, editors. Island Press.

Schoch, G.C. and M.N. Dethier. 1998. Marine nearshore ecosystems: are they healthy? Exclusive Economic Zone Technology, 2<sup>nd</sup> Edition, pp. 27-32.

Hammerstrom, K., M.N. Dethier and D.O. Duggins. 1998. Rapid phlorotannin induction and relaxation in five Washington kelps. Marine Ecology Progress Series 165:293-305.

Van Alstyne, K.L., M.N. Dethier and D.O. Duggins. 2001. Spatial patterns in macroalgal chemical defenses. Chapter 8 (invited) in: J. McClintock and B. Baker, eds. Marine Chemical Ecology. CRC Press.

Dethier, M.N. and R.S. Steneck. 2001. Growth and persistence of diverse intertidal crusts: survival of the slow in a fast-paced world. Mar. Ecol. Prog. Ser. 223:89-100.

Hacker, S.D., D. Heimer, C.E. Hellquist, T.G. Reeder, B. Reeves, T. Riordan, and M.N. Dethier. 2001. A marine plant (*Spartina anglica*) invades widely varying habitats: potential mechanisms of invasion and control. Biological Invasions 3:211-217.

Haring, R.N., M.N. Dethier and S.L. Williams. 2002. Desiccation facilitates wave-induced mortality of the intertidal alga, *Fucus gardneri*. Marine Ecology Progress Series 232:75-82.

Dethier, M.N., K. McDonald, and R.R. Strathmann. 2003. Colonization and connectivity of habitat patches for coastal marine species distant from source populations. Conservation Biology 17:1024-1035.

Hacker, S.D. and M.N. Dethier. 2003. Community dependent invasion and removal of English cordgrass, *Spartina anglica*, in Puget Sound, Washington. Botanical Electronic News 312.

J.T. Wright, S.L. Williams and M.N. Dethier. 2004. No zone is always greener: *Fucus gardneri* embryos, juveniles and adults are differentially affected by season and zone. Marine Biology 145:1061-1073.

Dethier, M.N. and G.C. Schoch. 2005. The consequences of scale: assessing the distribution of benthic populations in a complex estuarine fjord. Estuarine, Coastal and Shelf Science 62:253-270.

Dethier, M.N., S.L. Williams and A. Freeman. 2005. Seaweeds under stress: manipulated stress and herbivory affect critical life history functions. Ecological Monographs 75:403-418.

Dethier, M.N. and S.D. Hacker. 2005. Physical factors vs. biotic resistance in controlling the invasion of an estuarine marsh grass. Ecological Applications 15:1273-1283.

Williams, S.L. and M.N. Dethier. 2005. High and dry: variation in net photosynthesis of the intertidal seaweed, *Fucus gardneri*. Ecology 86:2375-2379.

Hacker, S.D. and M.N. Dethier. 2005. Where do we go from here? Alternative control and restoration trajectories for a marine grass (*Spartina anglica*) invader in different habitat types. Proc. 3<sup>rd</sup> International Invasive *Spartina* Conference. Cambridge Press.

Dethier, M.N. and G.C. Schoch. 2006. Taxonomic sufficiency in distinguishing natural spatial patterns on an estuarine shoreline. *Marine Ecology Progress Series* 306:41-49.

Murray, S.N., R.F. Ambrose and M.N. Dethier. 2006. Monitoring Rocky Shores. U.C. Press.

Griffiths, J., M.N. Dethier, A. Newsom, J. Byers, J. Meyer, F. Oyarzun, and H. Lenihan. 2006. Invertebrate community responses to recreational clam digging. *Marine Biology* 149:1489-1497.

Hacker, S.D. and M.N. Dethier. 2006. Community modification by a grass invader has differing impacts for marine habitats. *Oikos* 113:279-286.

Dethier, M.N. 2006. Native Shellfish in Nearshore Ecosystems of Puget Sound. Puget Sound Nearshore Partnership Report No. 2006-04. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington. 21 pp.

Dethier, M.N. 2007. Two invited chapters in: M.W. Denny and S.D. Gaines, eds. Encyclopedia of Tidepools and Rocky Shores. University of California Press, Berkeley.

Hacker, S.D. and M.N. Dethier. 2009. Differing consequences of removing ecosystem-modifying invaders: significance of impact and community context to restoration potential. Invited chapter for: G. Rilov and J.A. Crooks, eds. Biological Invasions in Marine Ecosystems. Ecological Studies 204, Springer-Verlag, Berlin.

Dethier, M.N. and S.L. Williams. 2009. Seasonal stresses shift optimal intertidal algal habitats. *Marine Biology* 156:555-567.

Dethier, M.N., J. Ruesink, H. Berry, A. G. Sprenger, B. Reeves. 2010. Restricted ranges in physical factors may constitute subtle stressors for estuarine biota. *Marine Environmental Research* 69:240-247.

Dethier, M.N. 2010. Variation in recruitment does not drive the cline in diversity along an estuarine gradient. *Marine Ecology Progress Series* 410:43-54.

Dethier, M.N. 2010. Overview of the Ecology of Puget Sound Beaches. In: Shipman, H., Dethier, M.N., Gelfenbaum, G., Fresh, K.L. and Dinicola, R.S. (editors), 2010, Puget Sound Shorelines and the Impacts of Armoring—Proceedings of a State of the Science Workshop: U.S. Geological Survey Scientific Investigations Report 2010-5254, 260 p.

Coyle, J.M. and M. N. Dethier. 2010. Review of Shoreline Armoring Literature. In: Shipman, H., Dethier, M.N., Gelfenbaum, G., Fresh, K.L. and Dinicola, R.S. (editors), 2010, Puget Sound Shorelines and the Impacts of Armoring—Proceedings of a State of the Science Workshop: U.S. Geological Survey Scientific Investigations Report 2010-5254, 260 p.

Wahl, M., V. Jormalainen, B. K. Eriksson, J.A. Coyer, M. Molis, H. Schubert, M.N. Dethier, A. Ehlers, R. Karez, I. Kruse, M. Lenz, G. Pearson, S. Rohde, S. A. Wikstrom, and J. L. Olsen. 2011. “Stress Ecology in *Fucus*: Abiotic, Biotic and Genetic Interactions”. *Advances in Marine Biology*, Volume 59, pp. 37-105

Skewgar, E. and S.F. Pearson (Eds.). 2011. *State of the Washington Coast: Ecology, Management, and Research Priorities*. Washington Department of Fish and Wildlife, Olympia, WA. (contributing author). [Winner, 2011 Best Paper Award, WDFW].

Fresh K.L., M.N. Dethier, C. Simenstad, M. Logsdon, H. Shipman, C. Tanner, T. Leschine, T. Mumford, G. Gelfenbaum, R. Shuman, J. Newton. 2011. Implications of Observed

Anthropogenic Changes to the Nearshore Ecosystems in Puget Sound. Prepared for the Puget Sound Nearshore Ecosystem Restoration Project. Technical Report 2011-03.

Dethier M.N. and Harper J. 2012. Classes of Nearshore Coasts. In Wolanski E. and McLusky D.S. (eds) *Treatise on Coastal and Estuarine Science*, Volume 1, pp. 61-74. Waltham MA. Academic Press.

Britton-Simmons, K.H., A.L. Rhoades, R.E. Pacunski, A.W.E. Galloway, A.T. Lowe, E.A. Sosik, M.N. Dethier, and D.O. Duggins. 2012. Habitat and bathymetry influence the landscape-scale distribution and abundance of drift macrophytes and associated invertebrates. *Limnology and Oceanography* 57(1): 176-184.

Dethier, M.N., J. Ruesink, H. Berry, A. G. Sprenger. 2012. Decoupling of recruitment from adult clam assemblages along an estuarine shoreline. *Journal of Experimental Marine Biology and Ecology* 422:48-54.

Orians, G.H., M. Dethier, C. Hirshman, A. Kohn, D. Patten, and T. Young. 2012. Sound Indicators: A Review for the Puget Sound Partnership. Washington State Academy of Sciences, Olympia, Wa. 102 pp.

Dethier, M.N., Elizabeth Sosik, Aaron W. E. Galloway, David O. Duggins, Charles A. Simenstad. 2013. Addressing assumptions: variation in stable isotopes and fatty acids of marine macrophytes can confound conclusions of food web studies. *Marine Ecology Progress Series* 478:1-14. (*Feature Article*)

Ruesink, J.L., A.C. Trimble, H. Berry, A.G. Sprenger, M.N. Dethier. 2014. Environmental correlates of growth and stable isotopes in intertidal species along an estuarine fjord. *Estuaries and Coasts* 37:149-159.

Heerhartz, S.M., M. N. Dethier, J. D. Toft, J. R. Cordell, and A. S. Ogston. 2014. Effects of shoreline armoring on beach wrack subsidies to the nearshore ecotone in an estuarine fjord. *Estuaries and Coasts* 37:1256-1268.

Lowe, A.T., Galloway, A.W.E., Yeung, J., Dethier, M.N., Duggins, D.O. 2014. Broad sampling and diverse biomarkers allow characterization of nearshore particulate organic matter. *Oikos* 123:1341-1354.

Galloway, A. W. E., M. E. Eisenlord, M. N. Dethier, G. W. Holtgrieve, M. T. Brett. 2014. Quantitative estimates of isopod resource utilization using a Bayesian fatty acid mixing model. *Marine Ecology Progress Series* 507:219-232. doi: 10.3354/meps10860

Dethier, M.N., A.S. Brown, S. Burgess, M.E. Eisenlord, A.W.E. Galloway, J. Kimber, A.T. Lowe, C.M. O'Neil, W.W. Raymond, E.A. Sosik, and D.O. Duggins. 2014. Degrading detritus: changes in food quality of aging kelp tissue varies with species. *J. Exp. Mar. Biol. Ecol.* 460:72-79.

Lowe, A.T., R. Whippo, A.W.E. Galloway, K.H. Britton-Simmons and M.N. Dethier. 2015. Sedentary urchins influence benthic community composition below the macroalgal zone. *Marine Ecology* 36:129-140.

Cochrane, G.R., Dethier, M.N., Hodson, T.O., Kull, K.J., Golden, N.E., Ritchie A.C., Moegling, C., and Pacunski, R.E., (G.R. Cochrane, ed.), 2015, Salish Sea Map Series—Admiralty Inlet, Washington: U.S. Geological Survey Open-File Report 2015-1073, 34 p., 4 sheets, available at <http://dx.doi.org/10.3133/ofr20151073>.

Murray, S, Stephen B Weisberg, Peter T Raimondi, Richard F Ambrose, Christy A Bell, Carol A Blanchette, Jennifer L Burnaford, Megan N Dethier, Jack M Engle, Michael S Foster, C

M Miner, Karina J Nielsen, John S Pearse, Daniel V Richards, Jayson R Smith. 2016. Evaluating Ecological States of Rocky Intertidal Communities: A Best Professional Judgment Exercise. *Ecological Indicators* 60:802-814.

Heerhartz, S.M., Jason D. Toft, Jeffery R. Cordell, Andrea S. Ogston, Megan N. Dethier. 2016. Shoreline armoring in an estuary constrains wrack-associated invertebrate communities. *Estuaries and Coasts* 39: 171-188.

D.O. Duggins, M.C. Gómez-Buckley, R.M. Buckley, A. T. Lowe, A.W.E. Galloway, M.N. Dethier. 2016. Islands in the stream: kelp detritus as faunal magnets. *Marine Biology* 163:17. DOI: 10.1007/s00227-015-2781-y

Dethier, M.N., W.W. Raymond, A. McBride, J. Toft, J. Cordell, A. Ogston, S. Heerhartz, and H. Berry. 2016. Multiscale impacts of armoring on Salish Sea shorelines: evidence for threshold and cumulative effects. *Estuarine, Coastal, and Shelf Science* 175:106-117.

Dayton, P.K., M.N. Dethier, D. Duggins, P. Kareiva, M. Koehl, B.A. Menge, C.A. Pfister, J.L. Ruesink, K. Sebens, B.R. Silliman, and J. T. Wootton. 2016. Resolutions of respect: Robert Treat Paine III, 1933-2016. *Bulletin of the Ecological Society of America* 97:359-363.

Dethier, M.N., J.D. Toft, H. Shipman (2017). Shoreline armoring in an inland sea: science-based recommendations for policy implementation. *Conservation Letters* 10(5), 626–633. doi/10.1111/conl.12323

Feehan, C.J., B.C. Grauman-Boss, R.R. Strathmann, M.N. Dethier, D.O. Duggins. 2017. Kelp detritus provides high-quality food for sea urchin larvae. *Limnology and Oceanography*. doi: 10.1002/lo.10740

Dobkowski, K.A., J. Kobelt, S. Brentin, K. Van Alstyne, M.N. Dethier. 2017. Picky *Pugettia*: A tale of two kelps. *Marine Biology* 164: 210. DOI 10.1007/s00227-017-3244-4

King, William and Dethier, Megan N. (2017). Oil dispersant effectiveness and ecological consequences in San Juan County marine waters. University of Washington Friday Harbor Laboratories. *Encyclopedia of Puget Sound*. 25 pgs. <https://www.eopugetsound.org/articles/oil-dispersant-effectiveness-and-ecological-consequences-san-juan-county-marine-waters>

Lee TS, Toft JD, Cordell JR, Dethier MN, Adams JW, Kelly RP. (2018) Quantifying the effectiveness of shoreline armoring removal on coastal biota of Puget Sound. *PeerJ* 6:e4275 <https://doi.org/10.7717/peerj.4275>

Schram, J.B., Julia N. Kobelt, Megan N. Dethier, Aaron W. E. Galloway. 2018. Trophic Transfer of Macroalgal Fatty Acids in Two Urchin Species: Digestion, Egestion, and Tissue Building. *Frontiers in Ecology and Evolution*, section Population and Evolutionary Dynamics. <https://doi.org/10.3389/fevo.2018.00083>

Dethier, M.N., Julia Kobelt, Dara Yiu, Lindsay Wentzel, Jennifer L. Ruesink. 2018. Context-dependence of abiotic and biotic factors influencing performance of juvenile clams. *Estuarine, Coastal and Shelf Science* 219:201-209.

Dethier, M.N., Griffin Hoins, Julia Kobelt, Alex Lowe, Aaron W.E. Galloway, Julie B. Schram, Martha Raymore, David O. Duggins. 2019. Feces as Food: the nutritional value of urchin feces and implications for benthic food webs. *Journal of Experimental Marine Biology and Ecology* 514-515:95-102.

Dethier, M.N., Katie Dobkowski, Alifaire Noreen, Malise Yun, Abigail Moosmiller. 2019.

Vulnerability of Juvenile Clams to Predation by Shore Crabs. Aquaculture 506:350-354.  
<https://doi.org/10.1016/j.aquaculture.2019.03.070>

Submitted:

Dennison, W.; Bracken, M.E.S; Brown, M.; Bruno, J.F.; Carlton, J.T.; Carpenter, R.C.; Carruthers, T.J.B.; Dethier, M.N.; Duarte, C.M.; Fisher, T.R.; Fourqurean, J.W.; Grosberg, R.K.; Hamdan, L.J.; Heck, K.L.; Howard, D.J.; Hughes, A.R.; Hughes, B.B.; Kendrick, G.A.; Kenworthy, W.J.; Mars, F.; McRoy, C.P.; Naylor, R.L.; Nyden, B.; Ogden, J.C.; Olyarnik, S.; Orth, R.J.; Short, F.T.; Sorte, C.J.B.; Stachowicz, J.J.; Strong, D.R.; Sur, C.; Waycott, M. "Susan Lynn Williams: The life of an exceptional scholar, leader and friend (1951-2018)". *Estuaries and Coasts*.

Hughes, B.B., Ali, B.A., Noor, N.N., Soto, S.G., Dethier, M.N. Native and invasive macrophytes differ in their effectiveness as nurseries for juvenile endangered salmon. *Estuaries and Coasts*.

Dobkowski, K., Bryce O'Brien, Kathryn L. Van Alstyne, and Megan Dethier. Ecologically relevant interactions between Northern Kelp Crab (*Pugettia producta*) and bull kelp (*Nereocystis luetkeana*) in the lab and in the field. *Marine Ecology Progress Series*

**REPORTS** (not peer-reviewed): 35, available upon request.

**SELECTED RECENT PUBLIC SEMINARS AND PAPERS AT PROFESSIONAL MEETINGS:**

"Impacts of armoring on Salish Sea Shorelines: regional, threshold, and cumulative effects." Monster Jam Seminar, NOAA Northwest Fisheries Science Center (with WebEx broadcast), Oct. 2014

"Nearshore habitats in the Salish Sea". Invited speaker, Northwest Straits Annual Conference, Nov. 2015

"Armoring on Salish Sea shorelines: documented impacts and implications for future actions". San Juan Nature Institute Seminar Series, Feb. 2016.

"Ecosystem services of beaches that are affected by armoring, and how this relates to priorities for bulkhead removal". Salish Sea Ecosystem Conference, Vancouver, BC, April 2016.

"Uses and abuses of our beloved shorelines: Choices and consequences". Invited public lecture, Oregon Inst. of Marine Biology, Oct. 2017.

"Shoreline armoring removal: assessment of restoration effectiveness in the Salish Sea". (J. Toft, first author). Salish Sea Ecosystem Conference, Seattle, WA. April 2018.

"Experiments on factors affecting survival and growth of outplanted juvenile manila clams at 8 sites in Washington." Invited talk, 25<sup>th</sup> Conference for Shellfish Growers, March 2018.

**RECENT GRADUATE COMMITTEE WORK:**

PhD Committee, Aaron Galloway, University of Washington (Fisheries)  
PhD Co-Supervisor, Sarah Heerhartz, University of Washington (Fisheries)  
PhD Committee, Eliza Heery, University of Washington (Biology)

PhD Committee, Katie Dobkowski, University of Washington (Biology)  
PhD Committee, Hilary Hayford, University of Washington (Biology)  
PhD Committee, Derek Smith, University of Washington (Biology)  
PhD Committee, Alex Lowe, University of Washington (Biology)  
PhD Committee, Chris Wells, University of Washington (Biology)  
PhD Committee, William King, University of Washington (Biology)  
PhD Committee, Margaret Turner, University of Washington (Biology)  
PhD Committee, Colton Miller, University of Washington (School of Environmental and Forest Resources)  
PhD Committee, Amy Singer, University of Montana (Geology Dept)  
MS Committee, Ashley Bolwerk, University of Alaska Fairbanks

#### **OTHER RECENT PROFESSIONAL AND COMMUNITY SERVICE ACTIVITIES:**

Chair of Search Committee for Marine Biology Inaugural Director, College of the Environment.  
National Reviewer for undergraduate marine science major, U.C. Davis, Feb. 2018  
Reviewed papers in the last year for: Marine Biology; Ecology; Marine Ecology Progress Series; Oecologia; Oikos; Journal of Phycology; Journal of Sea Research; Estuarine, Coastal and Shelf Science; Ecological Engineering  
Served as editor for series of 10 peer-reviewed papers, the Valued Ecosystem Components Reports. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington and by Washington Sea Grant.  
Brought a marine biology curriculum into the local 3<sup>rd</sup> grade classes at local elementary school (for 15 years)  
Attended numerous workshops and committee meetings (at local, state, and regional levels) on monitoring programs, marine preserves, marine and estuarine habitat classification systems, and shoreline mapping efforts  
Chair of Board of Trustees, Spring Street International School, Friday Harbor  
Nearshore Science Team, Puget Sound Nearshore Ecosystem Recovery Program, US Army Corps of Engineers  
Washington State Academy of Science, Review Committee for Puget Sound Partnership

#### **PRESS COVERAGE**

<https://www.eopugetsound.org/magazine/armoring-foodweb>  
<https://www.eopugetsound.org/articles/conference-snapshot-lengthy-study-looks-impacts-shoreline-armoring>  
<http://www.washington.edu/news/2016/04/18/first-salish-sea-wide-shoreline-armoring-study-shows-cumulative-effects-on-ecosystem/>  
<http://kuow.org/post/puget-sound-suffers-homeowners-wall-natural-shoreline>  
<http://www.seattleweekly.com/news/how-driftwood-can-help-save-the-salmon/>  
<http://seattlemag.com/seattle-seawalls-no-longer-shore-thing>  
<https://ensia.com/features/living-shorelines/>  
<https://www.businessinsider.com/ways-you-hurt-the-oceans-2019-5>