PATRICK SEAN MCDONALD CURRICULUM VITAE

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Education

PhD, University of Washington, College of Ocean and Fishery Sciences, Seattle, Washington, 2006. Dissertation title: "Biotic resistance and other factors affecting the distribution, habitat use, and potential impacts of invasive European green crab, *Carcinus maenas*, in the northeastern Pacific."

BS, (Marine Biology), Western Washington University, Bellingham, Washington, 1997.

Teaching and Research Experience

2020-Present **Associate Teaching Professor** – Program on the Environment/ School of Aquatic & Fishery Sciences, University of Washington, Seattle, Washington. Responsible for teaching Environmental Communications, Sustainable Cannabis, Capstone course series and mentoring/advising Environmental Studies students conducting senior research and internships.

2019-2020 **Senior Lecturer in Environmental Studies** – Program on the Environment, University of Washington, Seattle, Washington.

2012-2019 **Instructor/Lecturer in Environmental Studies** – Program on the Environment, University of Washington, Seattle, Washington.

2012-2019 **Research Scientist in Aquatic & Fishery Sciences** – School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington. Devise and implement independent and collaborative research projects.

2006-2012 **Research Associate in Environmental Studies & Aquatic & Fishery Sciences** – Program on the Environment, School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington. Responsible for Environmental Studies Capstone courses. Research projects included:

- Evaluating the abundance and ecological roles of geoduck clams and sea cucumbers in Hood Canal, WA. PI – Dr. Timothy Essington
- Investigating the ecosystem effects of intertidal geoduck aquaculture techniques in Puget Sound, WA. PI – Dr. Glenn VanBlaricom.

2006-2008 **Research Associate in Oceanography** – Shannon Point Marine Center, Western Washington University, Anacortes, Washington. Conduct on-site research and develop and teach marine science curricula. Courses include:

- *Oceanography* – NSF-funded, Multicultural Initiative in the Marine Sciences: Undergraduate Participation (MIMSUP) program.
- *Marine Ecology and Invasions* – a 5-credit, 400-level marine ecology course.

Teaching and Research Experience (Cont.)

2006-2007 **Research Associate in Biology** – Department of Biology, University of Washington, Seattle, Washington. Assessed ecological risk of European green crab. PI – Dr. Jennifer Ruesink.

1998-2006 **Graduate Research Assistant** – School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington. Assisted faculty and staff with fisheries research on the early life history of Dungeness crab, shellfish aquaculture, and the ecological role of bivalves.

1998- 2004 **Graduate Teaching Assistant, FISH 210/310** – School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington. Responsible for materials, exams, and grading for laboratory class in marine invertebrate (shellfish) biology, ecology and taxonomy. Coordinated and executed weekly laboratory sections in a techniques-driven fisheries/aquatic sciences course.

Publications

Reum, JC, **PS McDonald**, WC Long, KK Holsman, L Divine, D Armstrong, and J Armstrong. 2020. Rapid assessment of management options for promoting stock rebuilding in data-poor species under climate change. Conservation Biology 34(3): 611-621. DOI: https://doi.org/10.1111/cobi.13427

Brasseale, E, EW Grason, **PS McDonald**, J Adams, and P MacCready. 2019. Larval transport modeling support for identifying population sources of European green crab in the Salish Sea. Estuaries and Coasts. Estuaries and Coasts. Vol 42: 1586-1599. DOI: https://doi.org/10.1007/s12237-019-00586-2

Grason, EW, **PS McDonald** and J Ruesink. 2018. Comparing residence time and natural enemies between low- and high- density invasions. Biological Invasions 20(11): 3315-3330

Grason, EW, **PS McDonald**, J Adams, K Litle, JK Apple and A Pleus. 2018. Citizen science program detects range expansion of the globally invasive European green crab in Washington State (USA). Management of Biological Invasions 9(1): 39-47

Froehlich, HE, TE Essington, and **PS McDonald**. 2017. When does hypoxia affect management performance of a fishery? A Management Strategy Evaluation of Dungeness crab (Metacarcinus magister) fisheries in Hood Canal, Washington, U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 74(6): 922-932

Ryan, C, **PS McDonald**, DS Feinberg, LW Hall, JG Hamerly, and CW Wright. 2016. Digging deep: managing social and policy dimensions of geoduck aquaculture conflict in Puget Sound, Washington. Coastal Management 45: 1-17

Note: graduate student co-authors are highlighted.

Publications (Cont.)

Ferriss, BE, JC Reum, **PS McDonald**, DM Farrell, and CJ Harvey. 2015. Evaluating trophic and non-trophic effects of shellfish aquaculture in a coastal estuarine foodweb. ICES Journal of Marine Science: Journal du Conseil DOI:10.1093/icesjms/fsv173

McDonald, PS, TE Essington, JP Davis, AWE Galloway, BC Stevick, GC Jensen, GR VanBlaricom, and DA Armstrong. 2015. Distribution, abundance, and habitat associations of a large bivalve (*Panopea generosa*) in a eutrophic, fjord estuary. Journal of Shellfish Research 34(1) 137-145.

McDonald, PS, AWE Galloway, KC McPeek, and GR VanBlaricom. 2015. Effects of geoduck (*panopea generosa* Gould, 1850) aquaculture gear on resident and transient macrofauna communities of Puget Sound, Washington. Journal of Shellfish Research 34(1) 189-202.

Reum, JC, BE Ferriss, **PS McDonald**, DM Farrell, CJ Harvey, T Klinger, and PS Levin. 2015. Evaluating community impacts of ocean acidification using qualitative network models. Marine Ecology Progress Series 536:11-24

VanBlaricom, GR, J Price, J Olden, and **PS McDonald**. 2015. Ecological effects of the harvest phase of geoduck clam (*Panopea generosa* Gould, 1850) 1 aquaculture on infaunal communities in southern Puget Sound, Washington USA. Journal of Shellfish Research 34(1) 171-187.

McPeek, KC, **PS McDonald**, and GR VanBlaricom. 2014. Aquaculture Disturbance Impacts the Diet but not Ecological Linkages of a Ubiquitous Predatory Fish. Estuaries and Coasts 10.1007/s12237-014-9909-z

McDonald, PS. 2013. Dungeness crab. In: Miller, IM., C Shishido, L Antrim, and EC Bowlby. Climate Change and the Olympic Coast National Marine Sanctuary: Interpreting Potential Futures. Marine Sanctuaries Conservation Series ONMS-13-01. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Silver Spring, MD. 232 pp.

McDonald, PS, K Cardinal, E Timmins-Schiffman, and L Whitely Binder. 2012. Assessing vulnerability of Dungeness crab to Climate Change. In Assessing Vulnerability of West Coast Fisheries to a Changing Climate. Washington Sea Grant, University of Washington

Mach, ME, CD Levings, **PS McDonald**, and KMA Chan. 2011. An Atlantic infaunal engineer is established in the Northeast Pacific: *Clymenella torquata* (Polychaeta: Maldanidae) on the British Columbia and Washington Coasts. Biological Invasions, DOI: 10.1007/s10530-011-0096-6

Armstrong, DA, **PS McDonald**, GH Kruse, AH Hines, and JM Orensanz. 2010. A crab for all seasons: the confluence of fisheries and climate as drivers of crab abundance and distribution. In: GH Kruse, GL Eckert, RJ Foy, RN Lipcius, B Sainte-Marie, DL Stram, and D Woodby (eds.), Biology and Management of Exploited Crab Populations under Climate Change. Alaska Sea Grant, University of Alaska Fairbanks. doi:10.4027/bmecpcc.2010.05

Note: graduate student co-authors are highlighted.

Publications (Cont.)

McDonald, PS, and BL Bingham. 2010. Comparing macroalgal food and habitat choice in sympatric, tube-building amphipods, *Ampithoe lacertosa* and *Peramphithoe humeralis*. Marine Biology 157(7):1513-1524, DOI: 10.1007/s00227-010-1425-5

Holsman, KK, **PS McDonald**, PA Barreyro, and DA Armstrong. 2010. Restoration through eradication? Removal of an invasive bioengineer restores some habitat function for a native predator. Ecological Applications 20(8):2249-2262

Smith, R, and **PS McDonald**. 2010. Examining the effects of predator exclusion structures associated with geoduck aquaculture on mobile benthic macrofauna in South Puget Sound, Washington. Northwestern Undergraduate Research Journal 5(2009-2010): 11-16

Banas, NS, **PS McDonald**, and DA Armstrong. 2009. A lagrangian modeling approach to investigate retention of larval green crab, *Carcinus maenas*, in Willapa Bay, Washington, USA. Estuaries and Coasts (2009) 32:893–905; DOI 10.1007/s12237-009-9175-7.

Jensen, GC, **PS McDonald**, and DA Armstrong. 2007. Biotic resistance to green crabs in west coast bays. Marine Biology 151(6): 2231-2243; DOI 10.1007/s00227-007-0658-4.

McDonald, PS, KK Holsman, DA Beauchamp, BR Dumbauld, and DA Armstrong. 2006. Bioenergetics modeling to investigate habitat use by the nonindigenous crab, *Carcinus maenas*, in Willapa Bay, Washington, USA. Estuaries and Coasts 29(6B): 1132-1149.

Holsman, KK, **PS McDonald**, and DA Armstrong. 2006. Patterns of intertidal migration and habitat use by subadult Dungeness crab (*Cancer magister* Dana) in a coastal estuary of the northeastern Pacific. Marine Ecology Progress Series 308: 183-195

McDonald, PS. 2006. The European green crab, *Carcinus maenas*. The Siberian prawn, *Exopalaemon modestus*. *In* Invasive Species in the Pacific Northwest. Eds. Boersma, PD, SE Reichard, and AN Van Buren. Seattle, University of Washington Press

Visser, E, **PS McDonald**, and DA Armstrong. 2004. The impact of yellow shore crabs, *Hemigrapsus oregonensis*, on early benthic phase Dungeness crabs, *Cancer magister*, in intertidal oyster shell mitigation habitat. Estuaries 27(4): 699-715

Jensen, GC, **PS McDonald**, and DA Armstrong. 2002. East meets west: competitive interactions between green crab, *Carcinus maenas*, and native and introduced *Hemigrapsus spp*. Marine Ecology Progress Series 225: 251-262

McDonald, PS, GC Jensen, and DA Armstrong. 2001. The competitive and predatory impacts of the nonindigenous crab *Carcinus maenas* (L.) on early benthic phase Dungeness crab *Cancer magister* Dana. Journal of Experimental Marine Biology and Ecology 258(1): 39-54

Students Supervised

Graduate student committee participation
UW School of Aquatic and Fishery Sciences: Caroline Paulsen (MS, 2008); Jenny Price (MS, 2010)*; Kathleen McPeek (MS, 2014)*; Halley Froehlich (PhD, 2015)*
UW School of Marine and Environmental Affairs: Allison Brown (MMA, 2018); Abigail Keller
UW School of Environmental and Forest Sciences: Krystal Guerrero; Mary Fisher

UW Program on the Environment mentorship
Capstone thesis: 21 students (current); 628 students (Autumn 2010 – Spring 2020)
Non-Capstone internship: 40 students (Autumn 2010 – Spring 2020)
Independent study: 1 student (current); 19 students (Autumn 2010 – Spring 2020)

UW School of Aquatic and Fishery Sciences mentorship
Capstone thesis*:* 12 students (Autumn 2005 – Winter 2020)
Non-Capstone Internship: 20 students (Autumn 2005 – Winter 2020)

Supervisor/mentor, NSF Research Experience for Undergraduates (REU) program – Shannon Point Marine Center, Anacortes, Washington. Rachel Smith (2008)*; Lillian Hancock (2007)

Supervisor/mentor, NSF Multicultural Initiative in the Marine Sciences: Undergraduate Participation (MIMSUP) program – Shannon Point Marine Center, Anacortes, Washington. Robert Williams (2008); Pablo Barreyro (2007)*

*Resulted in co-authored publication with student.

Funds Awarded; total $2,599,827 since 2006

Development of an eDNA assay for invasive European green crab (Carcinus maenas) and implementation in a citizen science monitoring program
Source: Washington Sea Grant College Program
Role: Principal investigator; co-wrote proposal
Amount: $ 262,240 (2020-2022)

Collaborative Research: Tracking fine-scale selection to temperature at the invasion front of a highly dispersive marine predator
Source: National Science Foundation
Role: Principal investigator; co-wrote proposal
Amount: $222,500 (2019-2022)

Evaluating the effects of climate, predators and prey, and management actions on data-poor species: application of qualitative network models to blue king crab
Source: North Pacific Research Board
Role: Principal investigator; co-wrote proposal
Amount: $116,989 (2016-2019)

Using bioenergetics models to evaluate ecological and fishery impacts of climate change on Dungeness crab
Source: Washington Sea Grant College Program
Role: Principal investigator; co-wrote proposal
Amount: $136,138 (2016-2019)

Funds Awarded; total $2,599,827 since 2006 (Cont.)

An ecosystem modeling approach to investigate direct and indirect effects of geoduck aquaculture expansion in Washington State
Source: Washington Sea Grant College Program
Role: Principal investigator; co-wrote proposal
Amount: $100,162 (2013-2019)

Toward sustainable geoduck aquaculture management in Puget Sound: Assessing policy and social dimensions
Source: Washington Sea Grant College Program
Role: Co-investigator; co-wrote proposal
Amount: $92,166 (2013-2015)

An ecosystem modeling approach to investigate direct and indirect effects of geoduck aquaculture expansion in Washington State
Source: Washington Sea Grant College Program
Role: Co-investigator; co-wrote proposal
Amount: $100,162 (2013-2015)

Evaluation of effects of geoduck aquaculture operations on intertidal ecosystems in southern Puget Sound Washington
Source: Washington Northwest Indian Fisheries Commission
Role: Co-investigator; co-wrote proposal
Amount: $55,000 (2013-2015)

Blue king crab, habitat, and the ecosystem: Data rescue from the 1980s
Source: North Pacific Research Board
Role: Co-investigator; co-wrote proposal
Amount: $85,523 (2013-2015)

Multi-trophic implications of structure additions associated with intertidal geoduck aquaculture
Source: 2010 National Marine Aquaculture Initiative, NOAA
Role: Senior Personnel; co-wrote proposal with principal investigators
Amount: $397,672 (2010-2014)

Ecological consequences of disturbances associated with geoduck aquaculture operations in Washington
Source: Washington Sea Grant College Program/ Washington Department of Natural Resources
Role: Senior Personnel; co-wrote proposal with principal investigators
Amount: $164,563 (2010-2011)

Ecological effects of intertidal geoduck aquaculture operations in Puget Sound
Source: Washington Department of Ecology
Role: Collaborating Investigator; co-wrote proposal with principal investigators
Amount: $19,989 (2010)

Funds Awarded; total $2,599,827 since 2006 (Cont.)

Geochemical and ecological consequences of disturbances associated with geoduck aquaculture operations in Washington
Source: Washington State Legislature/ Washington Sea Grant College Program
Role: Senior Personnel; co-wrote proposal with principal investigators
Amount: $259,935 (2008-2010)

Evaluating the ecological role of geoducks and sea cucumbers in Hood Canal
Source: Hood Canal Salmon Enhancement Group / Washington Department of Natural Resources
Role: Senior Personnel; co-wrote proposal with principal investigators
Amount: $534,524 (2006-2009; distributed in two awards)

Green crab invasion modeling: Modeling recruitment dynamics and the potential for larval retention within a northeastern Pacific estuary
Source: National Sea Grant College Program Aquatic Invasive Species Research and Outreach
Role: Co-investigator; co-wrote proposal
Amount: $52,264 (2006-2008)

Seminars and Invited presentations

Advancing the science and management of invasive European green crab in Washington Waters. – *27th Conference for Shellfish Growers*, Union, Washington, March 2020.

Crabs, climate, and community concern: volunteer invasive species monitoring in a changing Salish Sea – *Cherry Point Science Forum*, Bellingham, Washington, November 2019.

Dungeness Crab: complex life history and a Puget Sound mystery. – *Bevan Symposium and SAFS Centennial Celebration*, Seattle, Washington, April 2019.

Lost in translation? Making marine ecology more relevant to environment-related decision making. – *Rabinowitz Speaker Series: Society's Role in a Changing Environment*, Seattle, Washington, March 2018.

Honoring the data: a review of recent studies on ecological consequences of geoduck aquaculture in southern Puget Sound. – *Shellfish and the Environment Research Symposium*, Lacey, Washington, December 2014.

Geoduck aquaculture and the environment: recent findings and future directions. – *South Sound Science Symposium 2014*, Shelton, Washington, October 2014.

Patterns in abundance of fish and macro-invertebrates associated with geoduck aquaculture. – *19th Conference for Shellfish Growers*, Union, Washington, March 2012.

Exposure and sensitivity of Dungeness crab to climate change. – *Assessing Vulnerability of West Coast fisheries to a changing climate workshop*, Washington Sea Grant, Seattle, Washington, May 2011.

Seminars and Invited presentations (Cont.)

Species- and community-level responses to agents of ecosystem change: perspectives on shellfish aquaculture and fisheries. – *Malaspina University-College*, Nanaimo, British Columbia, April 2008.

Alien invader from the sea: facilitation and biotic resistance affect the success of green crab on the West Coast. – *Duke University Marine Lab Seminar Series*, Beaufort, North Carolina, October 2007.

Invasion ecology and the marine environment. – *Shannon Point Marine Center Seminar*, Anacortes, Washington, December 2006.

Could *Spartina* tip the balance between native and non-native crabs in Willapa Bay, Washington? – *Hatfield Marine Science Center Seminar Series*, Newport, Oregon, February 2006.

Aliens from the deep: can they be stopped? – *Marine Sciences Lecture Series*, Highline Community College, Marine Science and Technology Center (MaST), Des Moines, Washington, November 2004.

Biotic resistance to invasion by a native crab guild in the northeastern Pacific. – *Exotic Species in Marine Ecosystems Invited Speaker*, The Evergreen State College, Olympia, Washington, April 2003.

Threat or threatened? Progression of the study of green crab, *Carcinus maenas*, in the northeastern Pacific. – *Washington Department of Fish and Wildlife Seminar Series*, Olympia, Washington, March 2002.

Selected Contributed Papers

Incorporating human dimensions into shellfish aquaculture management – *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting,* Portland, Oregon, 2019.

Comparing predation impacts of native and invasive crabs using a bioenergetics approach – National Shellfisheries Association, 110th Annual Meeting, Seattle, Washington, 2018.

Mental models in mariculture: The right tools for bridging gaps, busting silos, and bringing stakeholders together – *Ecological Society of America 2017*, Portland, Oregon, 2017.

People, perspectives and permitting in geoduck aquaculture – *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting,* Chelan, Washington, 2016.

Application of an ecosystem model to address stakeholder concerns about aquaculture expansion – *Coastal & Estuarine Research Federation, 23rd Biennial Meeting*, Portland, Oregon, 2015.

Ecological effects of clam (*Panopea generosa*) aquaculture on resident and transient macrofauna in an urban estuary. - *Western Society of Naturalists*, Tacoma, Washington, 2014.

Selected Contributed Papers (Cont.)

Shellfish aquaculture at the confluence of science, policy, and conflicting stakeholder interests: lessons learned from geoduck farming in the northeastern Pacific. – *ICES Annual Science Conference 2014*, A Corūna, Spain, 2014

Evaluating spillover effects of geoduck aquaculture practices on selected resident invertebrates of southern Puget Sound – *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting*, Marysville, Washington, 2013.

Crabs in hot water: assessing the Dungeness crab fishery's vulnerability to climate change. – *National Shellfisheries Association Annual Meeting*, Seattle, Washington, 2012.

The effects of geoduck Aquaculture practices on habitat and trophic dynamics of nekton and macroinvertebrates In Puget Sound. – *American Fisheries Society 141st Annual Meeting*, Seattle, Washington, 2011.

A fisheye perspective on habitat complexity: do structures associated with intertidal geoduck aquaculture affect trophic dynamics of nekton in unique ways? – *World Aquaculture Society/ National Shellfisheries Association, Aquaculture 2010 Meeting*, San Diego, California, 2010

Marine Stewardship Council certification for Dungeness crab as example of a "data-poor" fishery: easier said than done. – *Coastal & Estuarine Research Federation, 20th Biennial Meeting*, Portland, Oregon, 2009.

An evaluation of methods to control Atlantic bamboo worms in Samish Bay, WA with a prospectus for large-scale application. – *Sixth International Conference on Marine Bioinvasions*, Portland, Oregon, 2009.

Effects of geoduck aquaculture on ecosystem structure and function: a progress report..– *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting,* Chelan, Washington, 2008.

The impact of cordgrass, *Spartina alterniflora,* on Dungeness crab, *Cancer magister*, in Willapa Bay, Washington. – *Estuarine Research Federation, 19th Biennial Meeting*, Providence, Rhode Island, 2007.

The impact of a highly abundant competitor on nonindigenous *Carcinus maenas* in Willapa Bay, Washington. – *Western Society of Naturalists, 87th Annual Meeting,* Redmond, Washington, 2006.

The curious case of *Carcinus maenas*: reconciling behavior with the results of a bioenergetics model. – *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting,* Hood River, Oregon, 2005.

Selected Contributed Papers (Cont.)

Between a rock and a hard place: the ecology of ovigerous green crab, *Carcinus maenas* (L.). – *National Shellfisheries Assoc. - Pacific Coast Section / Pacific Coast Shellfish Growers Assoc. Annual Meeting,* Portland, Oregon, 2003.

Evidence of biotic resistance to the introduction of European green crab, *Carcinus maenas*, in estuaries of the northeastern Pacific. – *Pacific Estuarine Research Society, 25th Annual Meeting,* Portland, Oregon, 2002.

Patterns of movement by the nonindigenous crab, *Carcinus maenas*: observations using ultrasonic telemetry. – *Western Society of Naturalists, 82nd Annual Meeting,* Ventura, California, 2001.

The potential impacts of *Carcinus maenas* introduction on juvenile Dungeness crab, *Cancer magister*, survival. – *92nd Annual Meeting of the National Shellfisheries Assoc.,* Seattle, Washington, 2000.

Cancer meets *Carcinus*: a showdown in Washington estuaries. – *Pacific Ecology Conference 1999*, Parksville, British Columbia, Canada, 1999.

Green Crabs and Native Predators: Possible Limitations on the West Coast Invasion. – *Pacific Coast Oyster Growers Assoc, British Columbia Shellfish Growers Assoc., National Shellfisheries Assoc. - Pacific Coast Section Joint Annual Conference,* Nanaimo, British Columbia, Canada, 1998.

A study of nest-building ecology of two amphipod species. – *Western Society of Naturalists, 78th Annual Meeting,* Monterey, California, 1997.

Education and Outreach Service

"Climate Science On Tap" (Co-organizer). Public seminars on climate science. Monthly (2018-present).

"Topics in Environmental Communication" (Organizer). Weekly panels communication practitioners in science, policy, sustainable business, social media, and environmental journalism. Winter quarter (2015-2020).

"Where to begin—deciding what's right for you in science communication" (Moderator). Amplify is a series of conversations among faculty, staff, postdocs and graduate students who want to explore and engage in science communication and outreach. Novemer 12, 2019.

"Going Public: Sharing Research Beyond the Academy" (Co-organizer). A workshop to provide faculty and students guidance on public and policy engagement. April 29, 2017.

Meet, Greet, Teach | "Bridge to Somewhere" (Panelist). An informal conversation on interdisciplinary approaches to teaching, January 12, 2017.

Meet, Greet, Teach | "Making a Difference?" (Panelist). An informal conversation on interdisciplinary approaches to teaching, April 3, 2014.

Awards and Recognition

- Salish Sea Prize 2020 (Washington Sea Grant Crab Team)
- UW Distinguished Teaching Award (nomination): 2017, 2018, 2019, 2020
- UW College of the Environment's Outstanding Teaching Faculty award (nomination): 2020.
- UW College of the Environment's Exceptional Mentoring of Undergraduates award (nomination): 2019.
- National Shellfisheries Association Pacific Coast Section – Executive board, 2009-present. Current Chair.
- UW Provost's Report, "*Connecting the Dots: Linking Academic Passion to Life and Profession*". Featured. May 2015.
- Thurlow C. Nelson Award (honorable mention), NSA 98th Annual Meeting, 2006.
- Heinle Award (best overall presentation), PERS 29th Annual Meeting, 2006.
- Best Student Poster Award (1st place), PERS 29th Annual Meeting, 2006.
- Best Student Paper Award (1st place), NSA/PCS-PCSGA Annual Meeting, 2005.
- Victor and Tamara Loosanoff Fellowship, 2005-2006
- Curriculum Committee Appointment – School of Aquatic and Fishery Sciences, Seattle, Washington, 2004-2006.
- Best Student Paper Award (1st place), NSA/PCS-PCSGA Annual Meeting, 2002.
- Best Student Paper Award (3rd place), PERS 25th Annual Meeting, 2002.
- SAFS Fisheries Memorial Research Scholarship, 2002-2003
- Best Student Poster Award (1st place), Western Society of Naturalists 81st Annual Meeting, 2000.
- William H. Pierre, Sr. Fellowship, 1999-2000.
- School of Fisheries Lead Teaching Assistant, 1999-2000.
- Best Student Paper Award (1st place), School of Fisheries Graduate Student Symposium, 1998.
- NSF Research Experience for Undergraduates, 1997.
- Activities Tuition Scholarship, Western Washington University, 1996.

Peer Reviewer

- Aquatic Biology (AB)
- Biological Invasions (BI)
- Journal of Animal Ecology (JAE)
- Journal of Crustacean Biology (JCB)
- Journal of Experimental Marine Biology and Ecology (JEMBE)
- Journal of Shellfish Research (JSR)
- Marine Biology (MB)
- Marine Ecology Progress Series (MEPS)

Selected Certifications/Expertise/Skills

- ESRI ArcView 3.2 GIS certification; ArcGIS proficient
- Current CPR and oxygen first aid
- SCUBA

1991 – SSI Open Water Diver (#675910066)
1995 – SSI Advanced Open Water Diver (#19882)
1997 – SSI Stress and Rescue Diver (#28237)
1998 – SSI Master Diver (#52208)
1998 – TDI Nitrox Diver (#12692)
1998 – AAUS Scientific Diver

Selected Relevant Experience

Organizer, National Shellfisheries Assoc/Pacific Coast Shellfish Growers Assoc Annual Shellfish Conference – Planning Committee 2010-present. Organize yearly conference for shellfish aquaculture industry, academics, and tribal, federal, and state shellfish managers and scientists.

Curriculum Committee – School of Aquatic and Fishery Sciences, Seattle, Washington, 2004-2006. Addressed curriculum issues; represented student interests during meetings with faculty; interviewed faculty candidates.

Organizer, SAFS Conference of Graduate Students (COGS) – School of Aquatic and Fishery Sciences, Seattle, Washington, 2005. Organized departmental conference for graduate students to develop community, share skills, discuss graduate student issues.

Organizer, 10th Annual School of Fisheries Graduate Student Symposium (GSS) – School of Fisheries, Seattle, Washington, 1999. Organized symposium for students to present research to peers and colleagues.

Representative, Fisheries Integrated Network of Students (FINS) – School of Fisheries, Seattle, Washington, 1998, 1999, 2005, 2006. Represented graduate and undergraduate student interests within the School of Fisheries and greater campus.

Instructor, Marine Science Afloat – Pacific Marine Research, Seattle, Washington. 1998-1999. Responsible for lectures and activities in a shipboard classroom setting (3rd through 12th grade); Oceanography and marine biology curriculum; collected and maintained display specimens.

Teaching Assistant, BIOL 460 – Western Washington University, Bellingham, Washington, 1997. Provided laboratory instruction for invertebrate zoology class; prepared quizzes and exams; corrected assignments and recorded grades; collected and maintained laboratory specimens.

Mentor/tutor, LINK Project – Western Washington University, Bellingham, Washington, 1996-1997. Mentored Native American youth; conducted cultural programs; tutored science topics.