Cheryl L. Barnes, PhD (she | they)

Assistant Professor, Integrated Marine Fisheries Lab

Coastal Oregon Marine Experiment Station Department of Fisheries, Wildlife, and Conservation Sciences Hatfield Marine Science Center, Oregon State University 2030 SE Marine Science Dr | Newport, OR 97365

> e: cheryl.barnes@oregonstate.edu · p: (541) 867-0116 w: cheryl-barnes.github.io

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EDUCATION	
PhD, Fisheries – UNIVERSITY of ALASKA FAIRBANKS (UAF) College of Fisheries and Ocean Sciences, Juneau Campus	2019
MS, Marine Science – MOSS LANDING MARINE LABORATORIES (MLML) Degree awarded by San José State University (SJSU)	2015
BS, Biology – SAN DIEGO STATE UNIVERSITY (SDSU) Emphasis: Marine Biology	2006
PROFESSIONAL EXPERIENCE (2006 to Present)	
COASTAL OREGON MARINE EXPERIMENT STATION DEPARTMENT OF FISHERIES, WILDLIFE, AND CONSERVATION SCIENCES OREGON STATE UNIVERSITY with support from OREGON DEPT. FISH and WILDLIFE Assistant Professor	2023-P
COOPERATIVE INSTITUTE for CLIMATE, OCEAN, and ECOSYSTEM STUDIES (CICOES) UNIVERSITY of WASHINGTON – Seattle, WA ALASKA FISHERIES SCIENCE CENTER, NOAA – Seattle, WA ALASKA REGIONAL OFFICE, NOAA – Juneau, AK Research Scientist	2022-2023
Postdoctoral Scholar	2020-2022
SCALE BACK CONSULTING, LLC – Anchorage, AK Principal Investigator	2020-2023
UNIVERSITY of ALASKA FAIRBANKS – Juneau, AK Research Assistant: Ecological interactions among groundfishes in the Gulf of Alaska Teaching Assistant: Field methods in marine ecology and fisheries	2015-2019 2017
CA COLLABORATIVE FISHERIES RESEARCH PROGRAM (CCFRP) – Moss Landing, CA Lead Scientist Volunteer Coordinator Science Crew	2011-2014 2010-2011 2010
CALIFORNIA SEA GRANT – San Diego, CA Extension Program Representative	2010-2014
SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA Programs and Outreach Director Marine Science Education Program Coordinator	2008-2010 2008
MWR: COMMANDER FLEET ACTIVITIES – Sasebo, Japan Head Lifeguard and Water Safety Instructor Lifeguard	2007-2008 2006-2007

AWARDS AND HONORS	
Chapter Service Award, Alaska Chapter of the American Fisheries Society	2023
Diversity and Inclusion Service Award, Western Division of the American Fisheries Society	2021
Top 10 Most Downloaded Papers ^, Ecological Applications	2020
W.F. Thompson Award (Best Student Paper from 2018*), American Institute of Fishery Biolog	ists 2019
Dean's Recognition Award – Outstanding Graduate Student, UAF	2019
First Place – Student Talk ¹ , Western Groundfish Conference	2018
Second Place – Student Poster ² , Western Groundfish Conference	2016
Mirth Award, Western Groundfish Conference	2016
First Place – Student Poster ³ , Monterey Bay National Marine Sanctuary Symposium	2013
Dean's List – Honors Recognition, SDSU	2004, 2006
Superscripts correspond to items in 'PUBLICATIONS' and 'PR	esentations'
Student Travel Awards:	
Wakefield Fisheries Symposium	2015, 2019
1	2017, 2018
Western Groundfish Conference 2012, 2014,	
Western Division of the American Fisheries Society	2017
CSU Council on Ocean Affairs, Science, and Technology	2014
International Flatfish Symposium	2014
GRANTS AND FELLOWSHIPS	
Alaska Regional Office, NOAA Fisheries (co-PIs: J. Pirtle, J. Thorson) – \$102,983	2023
Alaska Sea Grant Program Development Award (AK Chapter AFS) – \$8,850	2022
	2021; 2022
·	2020-2022
Northern Gulf of Alaska Applied Research Award – \$10,000	2018-2019
Rasmuson Fisheries Research Center Graduate Fellowship – \$78,901	2017-2019
Pollock Conservation Cooperative Research Center (PI: A. Beaudreau) – \$201,516	2015-2019
SJSU Associated Students Advocacy Award – \$500	2014
SJSU Graduate Equity Fellowship – \$3,000	2013-2014
	2013-2014
Clarence F. and Lyle V. Burmahln Scholarship – \$500	2013
Dr. Earl M. Myers and Ethel M. Myers Oceanographic and Marine Biol. Trust Grant – \$1,500	2013
MLML Scholar Award: Michael Lee Environmental Foundation – \$2,200	2013
Xiphias Martin Scholarship: John H. Martin Family – \$500	2013
Lucille and David Packard Foundation Research and Travel Grant – \$1,000	2013
CSU Council on Ocean Affairs, Science, and Technology Graduate Student Award – \$3,000	2013

PUBLICATIONS

Published, In Press, or Accepted

Thorson JT, **Barnes CL**, Friedman ST, Morano JL, and Siple MC. 2023. Spatially varying coefficients can improve parsimony and descriptive power for species distribution models. Ecogr. e06510.

Brodie S, Smith JA, Muhling BA, Kaplan IC, Barnett LAK, Carroll G, Fiedler P, Bograd SJ, Hazen EL, Jacox MG, Andrews KS, **Barnes CL**, Crozier L, Fiechter J, Fredston A, Haltuch MA, Harvey CJ, Holmes E, Karp MA, Liu OR, Malick MJ, Buil MP, Richerson K, Rooper CN, Samhouri J, Seary R, Selden RL, Thompson AR, Thorson J, Tommasi D, Ward EJ, and Zabel R. 2022. Recommendations for quantifying and reducing uncertainty in projections of species distributions. Glob Change Biol. 28:6586-6601.

PUBLICATIONS, CONT'D

- **Barnes CL**, Essington TE, Pirtle JP, Rooper CN, Laman EA, Holsman KK, Aydin KY, and Thorson JT. 2022. Climate-informed models benefit hindcasting but present challenges when forecasting species-habitat associations. Ecogr. e06189.
- Dorn MW and **Barnes CL**. 2022. Time-varying predation as a modifier of constant natural mortality for Gulf of Alaska pollock. Fish Res. VSI Natural Mortality. 254(2022):106291.
- Grüss A, Thorson JT, Stawitz CC, Reum JCP, Rohan SK, and **Barnes CL**. 2021. Synthesis of interannual variability in spatial demographic processes supports the strong influence of cold-pool extent on eastern Bering Sea walleye pollock (*Gadus chalcogrammus*). Progr Ocean. 194(2021):102569
- **Barnes CL**, Beaudreau AH, and Yamada RN. 2021. The role of size in trophic niche separation between two groundfish predators in Alaskan waters. Mar Coast Fish. 13:98–113.
- **Barnes CL**[^], Beaudreau AH, Dorn MW, Holsman KK, and Mueter FJ. 2020. Development of a predation index to assess trophic stability in the Gulf of Alaska. Ecol Appl. 30(4):e02141.
- **Barnes CL***, Beaudreau AH, Hunsicker ME, and Ciannelli L. 2018. Assessing the potential for competition between Pacific Halibut (*Hippoglossus stenolepis*) and Arrowtooth Flounder (*Atheresthes stomias*) in the Gulf of Alaska. PLoS ONE. 13(12):e0209402.
- **Barnes CL** and Starr RM. 2018. Reproductive tactics of California Halibut (*Paralichthys californicus*): combining spawning season, interspawning interval, and batch fecundity to estimate annual reproductive output for a multiple-batch spawning fish. CalCOFI Rep. 59:102–114.
- Lesyna KM and **Barnes CL** (corresponding author). 2016. Assessment of length- and age-at-maturity for California Halibut (*Paralichthys californicus*), including a histologically-based description of the reproductive cycle. Calif Fish Game. 102(3):79–99.
- **Barnes CL**, Starr RM, and Reilly PN. 2015. Growth, mortality, and reproductive seasonality of California Halibut (*Paralichthys californicus*): a biogeographic approach. CalCOFI Rep. 56:110–118.
- Starr RM, Wendt DE, **Barnes CL**, Marks CI, Malone D, Waltz G, Schmidt KT, Chiu J, Launer AL, Hall NC, and Yochum N. 2015. Variation in responses of fishes across multiple reserves within a network of marine protected areas in temperate waters. PLoS ONE. 10(3):e0118502.
- Starr RM, Cortés J, **Barnes CL**, Green K, and Breedy O. 2012. Characterization of deepwater invertebrates at Isla del Coco National Park and La Gemelas Seamount, Costa Rica. Int J Trop Biol. 60(3):303–319.

Submitted or In Review

Kerametsidis G, Thorson J, Rossi V, Álvarez-Berastegui D, **Barnes CL**, Certain G, Esteban A, García E, Jadaud A, Piñeiro S, Vivas M, and Hidalgo M. Submitted. Cross-scale environmental impacts across persistent and dynamic aggregations within a complex population: implications for fisheries management. Can J Fish Aquat Sci. Forthcoming.

In Preparation

- **Barnes CL**, Dorn MW, Essington TE, McGilliard CR, Punt AE, and Reum JCP. In prep. The potential for trophic cascades in an ever-changing ecosystem recently impacted by marine heatwaves.
- Holsman KK, **Barnes CL**, Aydin KY, Thorson JT, Zador S, Barbeaux SJ, Laurel BJ, Hurst TP, and Heintz RA. In prep. Patterns in foraging and energetics of mid-trophic level predators in the Bering Sea.
- **Barnes CL**, Waltz GT, Hamilton SL, Ruttenberg BI, Starr RM, et al. In prep. Synchrony as a measure of resilience for temperate groundfish communities.

PRESENTATIONS	
⁶⁴⁻⁶⁵ WESTERN GROUNDFISH CONFERENCE – Juneau, AK	2023
 Climate-informed models benefit hindcasting but present challenges for forecasting species-habitat associations Prospective students: new opportunities with the Integrated Marine Fisheries Lab at OSU 	
·	2023
62-63 ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Fairbanks, AK	2023
 Climate-informed models benefit hindcasting but present challenges for forecasting species-habitat associations Prospective students: new opportunities with the Integrated Marine Fisheries Lab at OSU 	
⁶¹ OREGON CHAPTER of the AMERICAN FISHERIES SOCIETY – Eugene, OR	2023
 Prospective students: new opportunities with the Integrated Marine Fisheries Lab at OSU 	
⁵⁹⁻⁶⁰ WESTERN SOCIETY OF NATURALISTS – Oxnard, CA	2023
 Climate-informed models benefit hindcasting but present challenges for forecasting species-habitat associations Prospective students: new opportunities with the Integrated Marine Fisheries Lab at OSU 	
58 ECOSYSTEM STUDIES of SUBARCTIC AND ARTIC SEAS – Seattle, WA	2022
 Climate-informed models benefit hindcasting but present challenges for forecasting species-habitat associations 	2022
⁵⁷ ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Virtual	2022
 Model complexity has contrasting effects for hindcasting and forecasting species responses to climate change 	2022
⁵⁶ WESTERN SOCIETY of NATURALISTS – Virtual	2021
 Model complexity has contrasting effects for hindcasting and forecasting species responses to climate change 	2021
	2021
 55 CENTER for the ADVANCEMENT of POPULATION ASSESSMENT METHODOLOGY - Virtual — Predation as a modifier of constant natural mortality for Gulf of Alaska pollock 	2021
⁵⁴ ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK	2020
 Development of a predation index to assess trophic stability in the Gulf of Alaska 	
 52-53 ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Sitka, AK — Assessing the potential for competition between Pacific Halibut and Arrowtooth Flounder in the Gulf of Alaska — Spatiotemporal variation in consumption of Walleye Pollock by major groundfish predators in the Gulf of Alaska 	2019
⁵¹ PICES – Victoria, BC	2019
 Ecological interactions among groundfish species in the Gulf of Alaska 	
50 POLLOCK CONSERVATION COOPERATIVE RESEARCH CENTER – Anchorage, AK — Ecological interactions among groundfish species in the Gulf of Alaska	2019
⁴⁹ RASMUSON FISHERIES RESEARCH CENTER – Anchorage, AK	2019
 Ecological interactions among groundfish species in the Gulf of Alaska 	_0.5
⁴⁸ WAKEFIELD FISHERIES SYMPOSIUM – Anchorage, AK	2019
 Comparative resource use by two groundfish species in nearshore SE Alaska 	20.5
⁴⁷ ALASKA FISHERIES SCIENCE CENTER, NOAA: GROUNDFISH SEMINAR – Seattle, WA	2018
— Ecological interactions among major groundfish species in the Gulf of Alaska	20.0
46 WESTERN DIVISION of the AMERICAN FISHERIES SOCIETY – Anchorage, AK	2018
 Assessing the potential for competition between Pacific Halibut and Arrowtooth Flounder in the Gulf of Alaska 	2010
	2010
 45 INTERNATIONAL PACIFIC HALIBUT COMMISSION SEMINAR SERIES – Seattle, WA — Assessing the potential for competition between Pacific Halibut and Arrowtooth Flounder in the Gulf of Alaska 	2018
	2010
 44 POLLOCK CONSERVATION COOPERATIVE RESEARCH CENTER – Anchorage, AK — Ecological interactions among groundfish species in the Gulf of Alaska 	2018
	2010
 43 RASMUSON FISHERIES RESEARCH CENTER – Anchorage, AK — Ecological interactions among groundfish species in the Gulf of Alaska 	2018
⁴² UNIVERSITY OF ALASKA FAIRBANKS: AQUATIC FOOD WEB ECOLOGY – Juneau, AK	2018
Making ecological inferences from fisheries data	
⁴¹ WESTERN GROUNDFISH CONFERENCE – Monterey, CA	2018
— A comparative assessment of resource use by P. Halibut and Arrowtooth Flounder throughout the Gulf of Alaska	

— The potential for competition between Pacific Halibut and Arrowtooth Flounder in the Gulf of Alaska

PRESENTATIONS, CONT'D	
³⁹ ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY – Fairbanks, AK	2017
— A comparative assessment of resource use by P. Halibut and Arrowtooth Flounder throughout the Gulf of Alaska	
 WESTERN DIV. of the AMERICAN FISHERIES SOCIETY: STUDENT COLLOQUIUM – McCall, ID A comparative assessment of resource use by P. Halibut and Arrowtooth Flounder from nearshore waters of SE Alaska 	2017
³⁷ ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK	2017
 Calculating an index of predation to improve the stock assessment for Walleye Pollock in the Gulf of Alaska 	
 Begin and the second stress of the content of the con	2017
 ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK Calculating an index of predation to improve the stock assessment for Walleye Pollock in the Gulf of Alaska 	2016
 33-34 POLLOCK CONSERVATION COOPERATIVE RESEARCH CENTER – Anchorage, AK — Developing an index of predation to improve the assessment of Walleye Pollock in the Gulf of Alaska — Ecological interactions among groundfish species in the Gulf of Alaska 	2016
³² UNIVERSITY of ALASKA SOUTHEAST – Juneau, AK — Introduction to AK Fisheries Seminar: Pacific Halibut biology, ecology, management	2016
 WESTERN GROUNDFISH CONFERENCE – Newport, OR — Growth, mortality, and reproductive seasonality of California Halibut: a biogeographic approach — Calculating an index of predation to improve the stock assessment for Walleye Pollock in the Gulf of Alaska² 	2016
 WESTERN SOCIETY of NATURALISTS – Monterey, CA A comparative assessment of resource use by Pacific Halibut and Arrowtooth Flounder from nearshore waters of Southeast Alaska: results from a small-scale field study 	2016
²⁷⁻²⁸ AMERICAN FISHERIES SOCIETY: ALASKA CHAPTER – Homer, AK	2015
 Effects of demography, trophic interactions, and the environment on major groundfish species in the Gulf of Alas Exploring environmental and demographic drivers of resource overlap among Pacific Halibut, Arrowtooth Flounder, and Walleye Pollock in the Gulf of Alaska 	ska
ALASKA CHAPTER of the AMERICAN FISHERIES SOCIETY: STUDENT SYMPOSIUM – Juneau, AK — Growth, mortality, and reproductive seasonality of California Halibut: a biogeographic approach	2015
25 WAKEFIELD FISHERIES SYMPOSIUM – Anchorage, AK	2015
— Growth, mortality, and reproductive seasonality of California Halibut	2013
²³⁻²⁴ CA COLLABORATIVE FISHERIES RESEARCH PROGRAM – Half Moon Bay & Moss Landing, CA	2014
 Research objectives, data collection, analyses, and project results (training workshop) MPA monitoring and other project results from 2013 (participant workshop) 	
²² INTERNATIONAL FLATFISH SYMPOSIUM – Cle Elum, WA — Age, growth, and reproductive potential of California Halibut	2014
MARINE: OCEANS COLLOQUIUM – Moss Landing, CA — Reproductive biology of California Halibut: results from the Central Coast	2014
MONTEREY BAY NAT'L MARINE SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA — Reproductive biology of California Halibut: results from the Central Coast	2014
19 MOSS LANDING MARINE LABORATORIES, OPEN HOUSE SEMINAR – Moss Landing, CA	2014
— Flatfish fecundity: evaluating the reproductive nature of a prolific spawner in and around Monterey Bay	
¹⁸ MPA COLLABORATIVE NETWORK	2014
 Key findings from monitoring Monterey Bay's marine protected areas 	
¹⁶⁻¹⁷ WESTERN GROUNDFISH CONFERENCE – Victoria, Canada	2014

— MPA monitoring: more than j— Reproductive biology of Calif	9		ds	
PRESENTATIONS, CONT'D				
15 WESTERN SOCIETY of NATU	JRALISTS – Tacoma, WA	1		2014
 Reproductive biology of Calif 	·			
 13-14 CA COLLABORATIVE FISH Research objectives, data col MPA monitoring and other properties. 	lection, analyses, and projec	ct results (training worksho	,	2013
 ¹² CALIFORNIA DEPARTMENT — The California Collaborative 	of FISH and WILDLIFE -	- Belmont, CA	terpretations	2013
11 MONTEREY BAY NAT'L MA — Reproductive characteristics of	rine sanctuary sym	P: SANCTUARY CURF	•	2013
MOSS LANDING MARINE LSpawning characteristics of C			oss Landing, CA	2013
9 WATSONVILLE AREA TEENS	CONSERVING HABITA	TS PROGRAM – Watso	onville, CA	2013
 Reproductive characteristics 	of California Halibut off cent	tral California, with compa	arisons to the S. California B	Sight
 WESTERN SOCIETY of NATU Reproductive biology of Calif 	•	n the Central Coast		2013
 6-7 CA COLLABORATIVE FISHE — Research objectives, data col — MPA monitoring and other presented in the presented in the	lection, analyses, and projec	ct results (training worksho	_	2012
⁵ EXPANDING YOUR HORIZONS NETWORK – Monterey, CA — Fishing for our future: fisheries biology and resource management			2012	
 MONTEREY BAY NAT'L MAR Collaborative fisheries researe 	RINE SANCTUARY SYMF	P: SANCTUARY CURR	,	2012
 MOSS LANDING MARINE LA — Fishing for science: the Califo 	ABORATORIES, OPEN H	OUSE SEMINAR – Mo		2012
 WESTERN GROUNDFISH CO Collaborative fisheries researe 	,		nt	2012
¹ SAN DIEGO BAY SYMPOSIU — SDOF's White Seabass Restor	0	nce to San Diego Bay		2009
MENTORSHIP				
Graduate Students (^c Committee M. Bargas (MS, 2023-P)	e Member)			
Graduate and Post-Baccalaure J. Antus (2009)	H. Heath (2013-14)	S. Robinson (2011)	A. Sloan (2014)	
H. Delgado-Nordmann (2016)		K. Ros (2010)		
Undergraduate Research Assi. A. Aines (2013) D. Anaya (2013) K. Askeland (2010) M. Bargas (2017) K. Beck (2014) E. Bjork (2008) S. Briley (2008)	D. Duncan (2013) A. Feck (2009) A. Gile (2015) N. Giraud (2009) C. Giordano (2014) A. Hedger (2009) E. Hetherington (2009)	 Z. Johanson (2016) A. Kamber (2017) L. Knopp (2009) K. Kuhn (2008) J. Li (2020-21) S. Link (2016) S. Lomonico (2014) 	R. Rand (2011-12) M. Schmidt (2012) E. Schurig (2013) S. Saadat (2010-11) P. Saengcharoentrakul N. Siababa (2014) E. Stollmeyer (2013)	(2021)

K. Brown (2016)
A. Chorazyczewski (2014)
C. Homer (2018)
C. Hope (2010)
P. Muehlenbeck (2012)
H. Wayner (2016-17)
D. Weir (2009)

PROFESSIONAL SERVICE AND OUTREACH ACT	ΓIVITIES	
SCIENTIFIC AND STATISTICAL COMMITTEE, PA	CIFIC FISHERY MANAGEMENT CO	UNCIL 2023-P
Oregon Department of Fish and Wildlife Appo	intment	
PEER REVIEWER		
Bulletin of the S California Academy of Sciences Ecosphere Exxon Valdez Oil Spill Trustee Council Fisheries Research	,	urnal of Fish Biology .oS ONE
NEWPORT PRIDE, Planning Committee and Fou	ınding Board of Directors	2022-P
AMERICAN FISHERIES SOCIETY, ALASKA CHAIR Peer Mentor; Professional Mentor Diversity, Equity, and Inclusion Committee (Channual Meeting Planning Committee Program, Awards (co-Chair), and Entertainmen Executive Committee, Student Representative	nair) 2017, 2019	2020-P 2018-P 0, 2021, 2022, 2023 2018-2019 2015-2017
AMERICAN FISHERIES SOCIETY, WESTERN DIV	ISION	
Diversity and Inclusion Committee; Annual Me		2018-P; 2021
AMERICAN FISHERIES SOCIETY, Diversity, Equi	ty, and Inclusion Committee	2021-2023
WESTERN GROUNDFISH CONFERENCE, Steeri	ng Committee	2019-2022
WESTERN SOCIETY OF NATURALISTS (WSN), E	Diversity, Equity, and Inclusion Comr	mittee 2018-2022
SKYPE A SCIENTIST, Volunteer		2018-2022
ALASKA FISHERIES SCIENCE CENTER (AFSC, NO	OAA), Gender Equity Working Group	p 2021
SOUTHEAST ALASKA LGBTQIA+ ALLIANCE	204	0.0010.0015.0010
Board Member; Volunteer	2018	8-2019; 2015-2019
UNIVERSITY OF ALASKA FAIRBANKS Assistant Professor in Quantitative Fisheries Sea Graduate Academic and Advising Committee Professional Development Workshop Organize		2018-2019 2017-2019 2018
SITKA SOUND SCIENCE CENTER, Scientist in the	ne Schools Volunteer	2018
PARTNERSHIP FOR INTERDISCIPLINARY STUDI	ES OF COASTAL OCEANS, Voluntee	er 2013-2014, 2018
ALASKA FISHERIES SCIENCE CENTER (NOAA),	Bottom Trawl Survey Volunteer	2017
MOSS LANDING MARINE LABORATORIES Curriculum Committee Donations Committee Chair ^a ; Advisor ^b Associated Student Body Vice President	^a 2011	2012-2014 -2012; ^b 2013-2014 2011-2012
TEACHER ENHANCEMENT PROGRAM, Marine	Science Educator	2013
WATSONVILLE AREA TEENS CONSERVING HA		
EXPANDING YOUR HORIZONS NETWORK, Y	, , , , , , , , , , , , , , , , , , ,	2011-2013
MONTEREY BAY AQUARIUM, DSCVR Young V	_	2011, 2013
SAN DIEGO STATE UNIVERSITY, Graduate Rese		2010
5 , 5.1233 57. The State of		2010

2009-2010

SAN DIEGO SCIENCE AND ENGINEERING FAIR, Professional Society Judge

UNDERGRADUATE RESOURCE OPPORTUNITIES CENTER CSU MONTEREY BAY, Mentor	2014
SELECT ASSOCIATIONS, TRAININGS, AND CERTIFICATIONS	
500 QUEER SCIENTISTS, Member	2017-P
ALASKA CLIMATE INTEGRATED MODELING (ACLIM), Collaborator	2020-P
ALASKA MARINE SAFETY EDUCATION ASSOCIATION (AMSEA)	
Small Vessel Operator; Onboard Drill Instructor	2015; 2017
AMERICAN ACADEMY OF UNDERWATER SCIENCES, Scientific Diver; Member	2010-P
AMERICAN FISHERIES SOCIETY, Western Division and Alaska Chapter Member	2015-P
AMERICAN INSTITUTE OF FISHERY RESEARCH BIOLOGISTS, Member	2019-P
AMERICAN RED CROSS	
CPR, AED, First Aid, and Administering Emergency O ₂	2006-2015
Lifeguard and Water Safety Instructor; Fundamentals of Instructor Training	2006-2008
AMERICAN STATISTICAL ASSOCIATION, Alaska Chapter Member	2019-P
CA DEPARTNENT OF BOATING AND WATERWAYS, Boating Education Certificate	2011
CA OCEAN SCIENCE TRUST, CA Citizen Science Initiative Participant	2014
CAREERSTONE GROUP, Managing Up Workshop Participant	2021
COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)	
	; 2015-2018
ECOLOGICAL SOCIETY OF AMERICA, Member	2019-P
EPSCoR, Mindful Leadership: Creating a Diverse and Inclusive UA Workshop Participant	2018
EQUAL EMPLOYMENT OPPORTUNITY COMM., Beyond the Binary Workshop Participant	2021
GULF OF ALASKA CLIMATE INTEGRATED MODELING (GOACLIM), Collaborator	2022-P
MORALE, WELFARE, AND RECREATION, COMM. FLEET ACT, Power Boat Operator	2007
MPA COLLABORATIVE NETWORK, Participant	2011-2014
NAT'L ASSOC. OF UNDERWATER INSTRUCTORS	
Master SCUBA Diver; Enriched Air Nitrox Diver	2010
NATIONAL CENTER FOR ECOLOGICAL ANALYSIS AND SYNTHESIS (NCEAS)	
Reproducible Research Techniques for Synthesis Workshop Participant	2019
NATIONAL COUNCIL FOR BEHAVIORAL HEALTH, Mental Health First Aid USA	2018
NOAA PRIDE EMPLOYEE RESOURCE GROUP, Member	2020-2023
oSTEM, Member	2019-P
PROFESSIONAL ASSOCIATION OF DIVING INSTRUCTORS Open Water, Advanced Open Water, Rescue Diver; Diversater 2006, 2007,	, 2009; 2010
REEF CHECK CALIFORNIA	2010
UPC, Algae, Invertebrate, and Fish Surveyor	2010
REEF ENVIRONMENTAL EDUCATION FOUNDATION (REEF) Marine Algal, Invertebrate, and Expert Fish Surveyor	2008
SACNAS, Member	2022-P
SACNAS NATIVE INITIATIVES, Creating More Inclusive Spaces in STEM Workshop Participa	
TRIMBLE, Intermediate Mapping and GIS Certificate	2021
Transper, intermediate mapping and dis Certificate	2011

2005-2006

SAN DIEGO COASTKEEPER, Outreach and Community Event Intern