

**Cheryl L. Barnes** (she, her)

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## EDUCATION

|  |      |
|--|------|
| PhD, Fisheries   UNIVERSITY of ALASKA FAIRBANKS (UAF)  | 2019 |
| <i>Collaborators:</i> A. Beaudreau (UAF), L. Ciannelli (OSU), M. Dorn (AFSC, NOAA), K. Holsman (AFSC, NOAA), M. Hunsicker (NWFSC, NOAA), F. Mueter (UAF), T. Quinn (UAF), R. Yamada (AK Charter Association) |      |
| MS, Marine Science   MOSS LANDING MARINE LABORATORIES (MLML)   | 2015 |
| Degree awarded by San José State University (SJSU)   |      |
| <i>Collaborators:</i> R. Starr, S. Hamilton, and J. Harvey (MLML); K. Lesyna, P. Reilly, and T. Tanaka (CDFW)  |      |
| BS, Biology; Emphasis: Marine Biology   SAN DIEGO STATE UNIVERSITY (SDSU)  | 2006 |

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## PROFESSIONAL POSITIONS

|  |                 |
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| COOPERATIVE INSTITUTE for CLIMATE, OCEAN, and ECOSYSTEM STUDIES        |                 |
| UNIVERSITY of WASHINGTON – Seattle, WA                                 |                 |
| ALASKA FISHERIES SCIENCE CENTER, NOAA – Seattle, WA                    |                 |
| ALASKA REGIONAL OFFICE, NOAA – Juneau, AK                              |                 |
| <i>Research Scientist</i>  | 2022 to present |
| <i>Postdoctoral Scholar</i>  | 2020 to 2021    |
| SCALE BACK CONSULTING, LLC – Anchorage, AK                             |                 |
| <i>Principal Investigator</i>  | 2020 to present |
| CA COLLABORATIVE FISHERIES RESEARCH PROGRAM (CCFRP) – Moss Landing, CA |                 |
| <i>Lead Scientist</i>  | 2011 to 2014    |
| <i>Volunteer Coordinator</i>   | 2010 to 2011    |
| <i>Science Crew</i>  | 2010            |
| CALIFORNIA SEA GRANT – San Diego, CA                                   |                 |
| <i>Extension Program Representative</i>                                | 2010 to 2014    |
| SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA                     |                 |
| <i>Programs and Outreach Director</i>                                  | 2008 to 2010    |
| <i>Program Coordinator</i>   | 2008            |
| MWR: COMMANDER FLEET ACTIVITIES – Sasebo, Japan                        |                 |
| <i>Head Lifeguard and Water Safety Instructor</i>                      | 2006 to 2008    |

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## TEACHING

|   |                  |
|---|------------------|
| AMERICAN FISHERIES SOCIETY – Virtual  | 2021             |
| <i>Co-instructor:</i> Spatiotemporal Analysis of Ecological Data                      |                  |
| UNIVERSITY of ALASKA FAIRBANKS – Juneau, AK   |                  |
| <i>Guest Lecturer:</i> Making Ecological Inferences from Fisheries Data               | 2018             |
| <i>Teaching Assistant:</i> Field Methods in Marine Ecology and Fisheries              | 2017             |
| UNIVERSITY of ALASKA SOUTHEAST: INTRO. to ALASKA FISHERIES – Juneau, AK               | 2016             |
| <i>Guest Lecturer:</i> Pacific Halibut Biology, Ecology, and Management               |                  |
| CA COLLABORATIVE FISHERIES RESEARCH PROGRAM – Moss Landing, CA                        | 2014, 2013, 2012 |
| <i>Staff, Volunteer, and Participant Trainer:</i> MPA Survey Objectives and Protocols |                  |
| SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA                                    |                  |
| <i>Marine Science Educator:</i> Various 5-week K-12 Modules                           | 2008 to 2010     |
| <i>Citizen Science Instructor:</i> SCUBA Survey Methods and Species Identification    | 2008 to 2010     |

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## MENTORSHIP

### *Undergraduate Students*

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|--------------------------|------------------------|-----------------------|------------------------------|
| A. Aines (2013)          | D. Duncan (2013)       | L. Knopp (2009)       | E. Schurig (2013)            |
| D. Anaya (2013)          | A. Feck (2009)         | K. Kuhn (2008)        | S. Saadat (2010-2011)        |
| K. Askeland (2010)       | A. Gile (2015)         | J. Li (2020-2021)     | P. Saengcharoentrakul (2021) |
| M. Bargas (2017)         | C. Giordano (2014)     | S. Link (2016)        | N. Siababa (2014)            |
| K. Beck (2014)           | A. Hedger (2009)       | S. Lomonico (2014)    | E. Stollmeyer (2013)         |
| E. Bjork (2008)          | E. Hetherington (2009) | M. Mairz (2010)       | H. Wayner (2016-2017)        |
| S. Briley (2008)         | C. Homer (2018)        | R. McCollough (2013)  | D. Weir (2009)               |
| K. Brown (2016)          | C. Hope (2010)         | P. Muehlenbeck (2012) |                              |
| A. Chorazyczewski (2014) | Z. Johanson (2016)     | R. Rand (2011-2012)   |                              |
| C. Doles (2013)          | A. Kamber (2017)       | M. Schmidt (2012)     |                              |

### *Post-Baccalaureate Technicians*

|                      |                    |                 |
|----------------------|--------------------|-----------------|
| J. Antus (2009)      | S. Robinson (2011) | A. Sloan (2014) |
| H. Heath (2013-2014) | K. Ros (2010)      |                 |

### *Graduate Students*

|                |                            |
|----------------|----------------------------|
| G. Hunt (2015) | H. Delgado-Nordmann (2016) |
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## GRANTS AND FELLOWSHIPS

|   |                  |
|---|------------------|
| Magnuson-Stevens Act Implementation, Pls: J. Thorson, J. Pirtle, T. Essington – \$229,306 | 2020             |
| California Sea Grant Program Development Award (DEI Plenary, WSN) – \$4,000               | 2021             |
| Northern Gulf of Alaska Applied Research Award – \$10,000                                 | 2018, 2019       |
| Rasmuson Fisheries Research Center Graduate Fellowship – \$78,901                         | 2017, 2018, 2019 |
| Pollock Conservation Cooperative Research Center, PI: A. Beaudreau – \$201,516            | 2015             |
| SJSU Associated Students Advocacy Award – \$500   | 2014             |
| SJSU Graduate Equity Fellowship – \$3,000   | 2013             |
| Santa Monica Seafood's Responsible Sourcing Vendor Partner Grant (CCFRP) – \$15,000       | 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             |
| California Sea Grant: Program Development Award (SDOF) – \$9,900                          | 2010             |

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## AWARDS AND HONORS

|  |                        |
|--|------------------------|
| American Fisheries Society, Western Division – Diversity and Inclusion Service Award                 | 2021                   |
| American Institute of Fishery Biologists – W.F. Thompson Award (Best Student Paper from 2018) *      | 2019                   |
| UAF Dean's Recognition Award – Outstanding Graduate Student  | 2019                   |
| Wakefield Fisheries Symposium – Student Travel Award <sup>7</sup>                                    | 2019, 2015             |
| Western Groundfish Conference – First Place: Student Talk <sup>4</sup>                               | 2018                   |
| American Fisheries Society, AK Chapter – Student Travel Award <sup>1</sup>                           | 2018, 2017, 2015       |
| Western Groundfish Conference – Student Travel Award <sup>2</sup>                                    | 2018, 2016, 2014, 2012 |
| American Fisheries Society – Western Division Student Travel Award <sup>3</sup>                      | 2017                   |
| Western Groundfish Conference – Mirth Award <sup>5</sup> ; Second Place, Student Poster <sup>6</sup> | 2016                   |
| CSU Council on Ocean Affairs, Science, and Technology – Student Travel Award <sup>9</sup>            | 2014                   |
| International Flatfish Symposium – Student Travel Award <sup>8</sup>                                 | 2014                   |
| Monterey Bay National Marine Sanctuary Symposium – First Place, Student Poster <sup>10</sup>         | 2013                   |
| SDSU Dean's List – Honors Recognition  | 2006, 2004             |

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\* Superscripts correspond to those in 'PUBLICATIONS' and 'SELECTED PRESENTATIONS'

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## PUBLICATIONS

- Barnes CL**, Waltz GT, Hamilton SL, Ruttenberg BI, Starr RM, Wendt DE, and Ziegler SL. In prep. Synchrony as a measure of resilience for temperate groundfish communities.
- 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.
- Dorn MW and **Barnes CL**. Submitted. Time-varying predation as a modifier of constant natural mortality for Gulf of Alaska pollock. Fish Res. VSI Natural Mortality.
- Barnes CL**, Essington TE, Pirtle JP, Rooper CN, Laman EA, Holsman KK, Aydin KY, and Thorson JT. In review. Effects of model complexity on describing and forecasting species responses to climate change. Ecogr.
- 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. doi: 10.1002/mcf2.10141
- 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. doi:10.1002/eap.2141
- 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.

\* Superscripts correspond to those in 'AWARDS AND HONORS'

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## SELECT PRESENTATIONS

- |   |      |
|---|------|
| WESTERN SOCIETY of NATURALISTS – Virtual  | 2021 |
| — Model complexity has contrasting benefits for hindcasting and forecasting species responses to climate change |      |
| CENTER for the ADVANCEMENT of POPULATION ASSESSMENT METHODOLOGY – Virtual                                       | 2021 |
| — Predation as a modifier of constant natural mortality for Gulf of Alaska pollock                              |      |
| ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK   | 2020 |
| PICES (North Pacific Marine Science Organization) – Victoria, BC  | 2019 |
| — Development of a predation index to assess trophic stability in the Gulf of Alaska                            |      |
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**SELECT PRESENTATIONS, cont'd**

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|---|------|
| ALASKA FISHERIES SCIENCE CENTER, NOAA: GROUND FISH SEMINAR – Seattle, WA  | 2018 |
| — Ecological interactions among major groundfish species in the Gulf of Alaska  |      |
| AMERICAN FISHERIES SOCIETY: WESTERN DIVISION – Anchorage, AK <sup>1</sup>   | 2018 |
| WESTERN GROUND FISH CONFERENCE – Seaside, CA <sup>2</sup>   | 2018 |
| — Assessing the potential for competition between Pacific Halibut ( <i>H. stenolepis</i> ) and Arrowtooth Flounder ( <i>A. stomias</i> ) in the Gulf of Alaska          |      |
| AMERICAN FISHERIES SOCIETY: ALASKA CHAPTER – Fairbanks, AK <sup>1</sup>   | 2017 |
| AMERICAN FISHERIES SOCIETY: WESTERN DIV. STUDENT COLLOQUIUM – McCall, ID <sup>3</sup>   | 2017 |
| — A comparative assessment of resource use by Pacific Halibut ( <i>H. stenolepis</i> ) and Arrowtooth Flounder ( <i>A. stomias</i> ) throughout the Gulf of Alaska      |      |
| ALASKA MARINE SCIENCE SYMPOSIUM – Anchorage, AK   | 2016 |
| WESTERN GROUND FISH CONFERENCE – Newport, OR <sup>2</sup>   | 2016 |
| — Calculating an index of predation to improve the stock assessment for Walleye Pollock ( <i>G. chalcogrammus</i> ) in the Gulf of Alaska <sup>4</sup>                  |      |
| WESTERN GROUND FISH CONFERENCE – Newport, OR <sup>2, 5, 6</sup>   | 2016 |
| WAKEFIELD FISHERIES SYMPOSIUM – Anchorage, AK <sup>7</sup>  | 2015 |
| — Growth, mortality, and reproductive seasonality of California Halibut ( <i>P. californicus</i> ): a biogeographic approach <sup>6</sup>                               |      |
| AMERICAN FISHERIES SOCIETY: ALASKA CHAPTER – Homer, AK <sup>2</sup>   | 2015 |
| — Effects of demography, trophic interactions, and the environment on major groundfish species in the Gulf of Alaska  |      |
| — Exploring environmental and demographic drivers of resource overlap among Pacific Halibut, Arrowtooth Flounder, and Walleye Pollock in the Gulf of Alaska             |      |
| INTERNATIONAL FLATFISH SYMPOSIUM – Cle Elum, WA <sup>8</sup>  | 2014 |
| — Age, growth, and reproductive potential of California Halibut ( <i>P. californicus</i> )  |      |
| 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   |      |
| WESTERN GROUND FISH CONFERENCE – Victoria, Canada <sup>2</sup>  | 2014 |
| — MPA monitoring: more than just the latest and greatest in marine conservation trends  |      |
| WESTERN SOCIETY of NATURALISTS – Tacoma, WA <sup>9</sup>  | 2014 |
| — Reproductive biology of California Halibut ( <i>P. californicus</i> ): results from the Central Coast   |      |
| CALIFORNIA DEPARTMENT of FISH and WILDLIFE – Belmont, CA  | 2013 |
| — CCFRP workshop: objectives, results, and interpretations  |      |
| MONTEREY BAY NAT'L MAR. SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA  | 2013 |
| MOSS LANDING MARINE LABORATORIES: OPEN HOUSE SEMINAR – Moss Landing, CA   | 2013 |
| — Reproductive characteristics of California Halibut ( <i>P. californicus</i> ) off central California, with comparisons to the Southern California Bight <sup>10</sup> |      |
| MONTEREY BAY NAT'L MAR. SANCTUARY SYMP: SANCTUARY CURRENTS – Seaside, CA  | 2012 |
| WESTERN GROUND FISH CONFERENCE – Seattle, WA <sup>2</sup>   | 2012 |
| — Collaborative fisheries research: a transition from data-poor to data-rich management   |      |
| SAN DIEGO BAY SYMPOSIUM – San Diego, CA   | 2009 |
| — SDOF's White Seabass Restoration Project and its relevance to San Diego Bay   |      |

\* Superscripts correspond to those in 'AWARDS AND HONORS'

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## SERVICE AND OUTREACH

### PEER REVIEWS

|                        |                             |                                |
|------------------------|-----------------------------|--------------------------------|
| Ecosphere              | Fisheries Research          | ICES Journal of Marine Science |
| Exxon Valdez Oil Spill | Fishery Bulletin            | Journal of Fish Biology        |
| Trustee Council        | Frontiers in Marine Science | PLoS ONE                       |

AMERICAN FISHERIES SOCIETY, Diversity & Inclusion Committee 2021 to present

WESTERN GROUND FISH CONFERENCE, Steering Committee 2019 to present

### AMERICAN FISHERIES SOCIETY, ALASKA CHAPTER

|  |                 |
|--|-----------------|
| Diversity, Equity, and Inclusion Committee (Chair)       | 2018 to present |
| Program, Awards (co-Chair), and Entertainment Committees | 2018 to 2019    |
| Executive Committee                                      | 2015 to 2017    |

### AMERICAN FISHERIES SOCIETY, WESTERN DIVISION

|                                   |                 |
|-----------------------------------|-----------------|
| Diversity & Inclusion Committee   | 2018 to present |
| Annual Meeting Planning Committee | 2021            |

WESTERN SOCIETY of NATURALISTS, Diversity, Equity, & Inclusion Committee 2018 to present

SKYPE A SCIENTIST, Volunteer 2018 to present

ALASKA FISHERIES SCIENCE CENTER (NOAA), Gender Equity Working Group 2021

### UNIVERSITY OF ALASKA FAIRBANKS

|  |              |
|--|--------------|
| Assistant Professor in Quantitative Fisheries Search Committee | 2018 to 2019 |
| Graduate Academic and Advising Committee                       | 2017 to 2019 |
| Professional Development Workshop Organizer                    | 2018         |

### SOUTHEAST ALASKA LGBTQIA+ ALLIANCE

|              |              |
|--------------|--------------|
| Board Member | 2018 to 2019 |
| Volunteer    | 2015 to 2019 |

SITKA SOUND SCIENCE CENTER, Scientist in the Schools Volunteer 2018

PARTNERSHIP for INTERDISCIPLINARY STUDIES of COASTAL OCEANS, Volunteer 2018; 2013-14

ALASKA FISHERIES SCIENCE CENTER (NOAA), Bottom Trawl Survey Volunteer 2017

### MOSS LANDING MARINE LABORATORIES

|  |              |
|--|--------------|
| Curriculum Committee                   | 2012 to 2014 |
| Donations Committee (Advisor)          | 2013 to 2014 |
| Associated Student Body Vice President | 2011 to 2012 |
| Donations Committee (Chair)            | 2011 to 2012 |

MPA COLLABORATIVE NETWORK, Participant 2011 to 2014

TEACHER ENHANCEMENT PROGRAM, Marine Science Educator 2013

WATSONVILLE AREA TEENS CONSERVING HABITATS PROGRAM, Science Mentor 2012 to 2013

EXPANDING YOUR HORIZONS NETWORK, Young Women in Science Volunteer 2011 to 2013

MONTEREY BAY AQUARIUM, DSCVR Young Women in Science Mentor 2011 and 2013

SAN DIEGO STATE UNIVERSITY, Graduate Research Assistant 2010

SAN DIEGO SCIENCE & ENGINEERING FAIR, Professional Society Judge 2009 to 2010

SAN DIEGO COASTKEEPER, Outreach and Community Event Intern 2005 to 2006

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## PROFESSIONAL DEVELOPMENT

|   |                 |
|---|-----------------|
| ALASKA FISHERIES SCIENCE CENTER, NOAA: TIDE Pool Series Participant                     | 2021 to present |
| ALASKA MARINE SAFETY EDU ASSOC: Cold Water Survival, Skiff Operator                     | 2017, 2015      |
| AMERICAN ACADEMY of UNDERWATER SCIENCES: Scientific Diver                               | 2010 to present |
| AMERICAN RED CROSS:   |                 |
| CPR, AED, First Aid, Administering Emergency O <sub>2</sub>                             | 2006 to 2015    |
| Lifeguard and Water Safety Instructor; Fundamentals of Instructor Training              | 2006 to 2008    |
| CA DEPT. 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:  |                 |
| Working with the IACUC; Field and Lab Animal Researchers                                | 2015 to 2018    |
| DIVERSITY BUILDER, Gender Diversity and an Inclusive Workplace: Participant             | 2021            |
| EPSCoR, Mindful Leadership   Creating a Diverse and Inclusive UA: Workshop Participant  | 2018            |
| EQUAL EMPLOYMENT OPPORTUNITY COMM., Beyond the Binary: Workshop Participant             | 2021            |
| MORALE, WELFARE, and RECREATION, COMM. FLEET ACT: Power Boat Operator                   | 2007            |
| NAT'L ASSOC. of UNDERWATER INSTRUCTORS: Master SCUBA Diver and Nitrox Diver             | 2010            |
| NAT'L CENTER for ECOLOGICAL ANALYSIS and SYNTHESIS (NCEAS):                             |                 |
| Reproducible Research Techniques for Synthesis Workshop Participant                     | 2019            |
| PROFESSIONAL ASSOCIATION of DIVING INSTRUCTORS:   |                 |
| Open Water, Advanced Open Water, and Rescue Diver; Dive Master                          | 2006 to 2010    |
| REEF CHECK CALIFORNIA: UPC, Algae, Invertebrate, and Fish Surveyor                      | 2010            |
| REEF ENVIRON. EDU. FDN: Marine Algal, Invertebrate, and Expert Fish Surveyor            | 2008            |
| SACNAS Native Initiatives, Creating More Inclusive Spaces in STEM: Workshop Participant | 2021            |
| TRIMBLE: Intermediate Mapping and GIS Certificate                                       | 2011            |
| UNDERGRAD. RES. OPPORTUNITIES CTR, CSU MONTEREY BAY: Mentor                             | 2014            |

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## RELEVANT ASSOCIATIONS

500 QUEER SCIENTISTS  
500 WOMEN SCIENTISTS  
ALASKA CLIMATE INTEGRATED MODELING PROJECT  
AMERICAN ACADEMY of UNDERWATER SCIENCES  
AMERICAN FISHERIES SOCIETY  
AMERICAN INSTITUTE OF FISHERY RESEARCH BIOLOGISTS  
AMERICAN STATISTICAL ASSOCIATION  
ECOLOGICAL SOCIETY of AMERICA  
NOAA PRIDE  
oSTEM  
WESTERN SOCIETY of NATURALISTS

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