

EDUCATION

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| PhD, Fisheries UNIVERSITY of ALASKA FAIRBANKS (UAF) | 2019 |
| — Collaborators: A. Beaudreau (UAF), L. Ciannelli (OSU), M. Dorn (NOAA), K. Holsman (NOAA), M. Hunsicker (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) | |
| — Collaborators: R. Starr, S. Hamilton, J. Harvey (MLML); K. Lesyna, P. Reilly, T. Tanaka (CDFW) | |
| BS, Biology; Emphasis: Marine Biology SAN DIEGO STATE UNIVERSITY (SDSU) | 2006 |

PROFESSIONAL EXPERIENCE (2006 onward)

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| 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 to present |
| Postdoctoral Scholar | 2020 to 2021 |
| SCALE BACK CONSULTING, LLC – Anchorage, AK | |
| Principal Investigator | 2020 to present |
| CA COLLABORATIVE FISHERIES RESEARCH PROGRAM (CCFRP) – Moss Landing, CA | |
| Lead Scientist | 2011 to 2014 |
| Volunteer Coordinator | 2010 to 2011 |
| Science Crew | 2010 |
| CALIFORNIA SEA GRANT – San Diego, CA | |
| Extension Program Representative | 2010 to 2014 |
| SAN DIEGO OCEANS FOUNDATION (SDOF) – San Diego, CA | |
| Programs and Outreach Director | 2008 to 2010 |
| Marine Science Education Program Coordinator | 2008 |
| MWR: COMMANDER FLEET ACTIVITIES – Sasebo, Japan | |
| Head Lifeguard and Water Safety Instructor | 2006 to 2008 |

TEACHING EXPERIENCE

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

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 (2010-11) |
| K. Askeland (2010) | A. Gile (2015) | J. Li (2020-21) | 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 (2016-17) |
| 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 (2011-12) | |
| C. Doles (2013) | A. Kamber (2017) | M. Schmidt (2012) | |

Post-Baccalaureate Technicians

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| J. Antus (2009) | S. Robinson (2011) | A. Sloan (2014) |
| H. Heath (2013-14) | K. Ros (2010) | |

Graduate Students

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

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| Magnuson-Stevens Act, Pls: J. Thorson, J. Pirtle, T. Essington – \$229,306 | 2020 to 2022 |
| California Sea Grant Program Development Award (WSN) – \$4,000 | 2021 |
| Northern Gulf of Alaska Applied Research Award – \$10,000 | 2018 to 2019 |
| Rasmuson Fisheries Research Center Graduate Fellowship – \$78,901 | 2017 to 2019 |
| Pollock Conservation Cooperative Research Center, PI: A. Beaudreau – \$201,516 | 2015 to 2019 |
| SJSU Associated Students Advocacy Award – \$500 | 2014 |
| SJSU Graduate Equity Fellowship – \$3,000 | 2013 to 2014 |
| Santa Monica Seafood's Responsible Sourcing Vendor Partner Grant (CCFRP) – \$15,000 | 2013 to 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 |

AWARDS AND HONORS

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|--|------------------------|
| 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 ⁷ | 2019, 2015 |
| Western Groundfish Conference – First Place: Student Talk ⁴ | 2018 |
| American Fisheries Society, AK Chapter – Student Travel Award ¹ | 2018, 2017, 2015 |
| Western Groundfish Conference – Student Travel Award ² | 2018, 2016, 2014, 2012 |
| American Fisheries Society – Western Division Student Travel Award ³ | 2017 |
| Western Groundfish Conference – Mirth Award ⁵ ; Second Place, Student Poster ⁶ | 2016 |
| CSU Council on Ocean Affairs, Science, and Technology – Student Travel Award ⁹ | 2014 |
| International Flatfish Symposium – Student Travel Award ⁸ | 2014 |
| Monterey Bay National Marine Sanctuary Symposium – First Place, Student Poster ¹⁰ | 2013 |
| SDSU Dean's List – Honors Recognition | 2006, 2004 |

Superscripts correspond with items in 'PUBLICATIONS' and 'SELECTED PRESENTATIONS'

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. *Can J Fish Aquat Sci.* Forthcoming.
- 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. *PNAS.* Forthcoming.
- 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.* Forthcoming.
- 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.* Forthcoming.
- 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.

SELECT PRESENTATIONS (N_{total} = 56)

- | | |
|---|------|
| 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 (N_{total} = 56), cont'd

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

PROFESSIONAL SERVICE

PEER REVIEWS

Ecosphere, Exxon Valdez Oil Spill Trustee Council, Fisheries Research, Fishery Bulletin,
Frontiers in Marine Science, ICES Journal of Marine Science, Journal of Fish Biology, 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 ^a, Chair ^b ^a 2013-14, ^b 2011-12

Associated Student Body Vice President 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

PROFESSIONAL ASSOCIATIONS, TRAININGS, AND CERTIFICATIONS

| | |
|---|-----------------|
| 500 QUEER SCIENTISTS: Member | 2017 to present |
| 500 WOMEN SCIENTIST, Alaska Chapter: Member | 2017 to present |
| ALASKA CLIMATE INTEGRATED MODELING (ACLIM): Collaborator | 2020 to present |
| ALASKA MARINE SAFETY EDU ASSOC: Cold Water Survival, Skiff Operator | 2017, 2015 |
| AMERICAN ACADEMY of UNDERWATER SCIENCES: Scientific Diver, Member | 2010 to present |
| AMERICAN FISHERIES SOCIETY, WESTERN DIV. & AK CHAPTER: Member | 2015 to present |
| AMERICAN INSTITUTE OF FISHERY RESEARCH BIOLOGISTS: Member | 2019 to present |
| AMERICAN RED CROSS: | |
| CPR, AED, First Aid, Administering Emergency O ₂ | 2006 to 2015 |
| Lifeguard and Water Safety Instructor; Fundamentals of Instructor Training | 2006 to 2008 |
| AMERICAN STATISTICAL ASSOCIATION: Alaska Chapter Member | 2019 to present |
| 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 |
| ECOLOGICAL SOCIETY of AMERICA: Member | 2019 to present |
| 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 |
| NOAA Pride Employee Resource Group: Member | 2020 to present |
| oSTEM: Member | 2019 to present |
| 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 |
| WESTERN SOCIETY of NATURALISTS: Member | 2010 to present |

REFERENCES AVAILABLE UPON REQUEST