

Priya Shukla, PhD

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EDUCATION

- 2023** **Ph.D. Ecology**, University of California, Davis (UCD)
Dissertation: *Resisting Global Change: Oyster Aquaculture and Disease in an Era of Marine Heatwaves*
Adviser: Dr. Edwin (Ted) Grosholz
- 2016** **M.S. Ecology**, San Diego State University (SDSU)
Thesis: *Environmental Variability Influences Kelp Physiology: Implications of Anthropogenic Climate Change*
Adviser: Dr. Matthew Edwards
- 2011** **B.S. Environmental Science and Management**, University of California, Davis (UCD)
Emphasis in Ecology, Biodiversity and Conservation, Minor in Oceanography

PROFESSIONAL EXPERIENCE

- 2022-Present** **Science Engagement Specialist**, California Ocean Science Trust
- 2018-Present** **Ocean and Climate Science Contributor**, Forbes
- 2021-2023** **San Francisco Weather Reporter**, Currently
- 2020-2021** **Lead Mentor**, Coastal and Marine Sciences Institute (CMSI), UCD
- 2019** **Policy Engagement Fellow**, COMPASS (Communication Partnership for Science and the Sea)
- 2019** **Communications Coordinator**, CMSI, UCD
- 2016-2018** **Lab Manager**, Bodega Ocean Acidification Research Group, UCD Bodega Marine Lab
- 2016** **Policy Research Intern**, San Francisco Baykeeper
- 2015-2016** **Public Educator**, Marine Science Institute
- 2012-2015** **Graduate Student Researcher**, Department of Biology, SDSU
- 2014-2015** **Research Diving Technician**, Point Loma Kelp Forest Abalone Outplanting Survey, SDSU
- 2012** **Environmental Consulting Intern**, San Francisco-Oakland Bay Bridge Seismic Safety Project, Caltrans
- 2011** **Lab Technician**, Biogeochemistry Laboratory, Bodega Marine Laboratory, UCD
- 2009-2011** **Lead Lab Technician**, Fish Conservation Biology Laboratory, UCD
- 2008-2009** **Lab Technician**, Agricultural Entomology Laboratory, UCD
- 2008** **Lab Technician**, Air Quality Research Center, UCD
- 2005-2007** **Lab Technician**, Environmental Toxicology Laboratory, Stanford University

PEER-REVIEWED PUBLICATIONS

- 2022** Oldach, E.*, Killeen, H.*, **Shukla, P.**, Brauer, E., Carter, N., Fields, J., Thomsen, A., Cooper, C., Mellinger, L., Wang, K., Hendrickson, C., Neuman, A., Bøving, P.S., Fanguie, N. 2022. Managed and unmanaged whale mortality in the California Current Ecosystem. *Marine Policy*. 140:105039. *denotes shared first-authorship.
- 2021** Merkle, B.A., Valdez-Ward, E., **Shukla, P.**, Bayer, S. haring Science Through Shared Values, Goals, and Stories: An Evidence-Based Approach to Making Science Matter. *Human-Wildlife interactions*. 15(3): The Back Page.
- 2021** Ricart, A., Ward, M., Hill, T., Sanford, E., Kroeker, K. Takeshita, Y., Merolla, S., **Shukla, P.**, Ninokawa, A., Elsmore, K., Gaylord, B., Coast-wide evidence of low pH amelioration by seagrass ecosystems. *Global Change Biology*. 27(11):2580-2591.
- 2021** Ricart, A., Gaylord, B., Hill, T., Sigwart, Julia., **Shukla, P.**, Ward, M., Ninokawa, A., and Sanford, E. Seagrass driven changes in carbonate chemistry enhance oyster growth. *Oecologia*. 196:565-576.
- 2019** Barclay, K.M., Gaylord, B., Jellison, B.M., **Shukla, P.**, Sanford, E., and Leighton, L.R. Variation in the effects of ocean acidification on shell growth and strength in two intertidal gastropods. *Marine Ecology Progress Series*. 626:109-121.
- 2018** Cavalcanti, G.S., **Shukla, P.**, Morris, M., Ribeiro, B., Foley, M., Doane, M., Leomil, L., Thompson, C., Edwards, M.S., Dinsdale, E. A., and Thompson, F.L. Rhodoliths holobionts in a changing ocean: Host-microbes interactions mediating coralline algae resilience under ocean acidification? *BMC Genomics*. 19:701.
- 2017** **Shukla, P.** and Edwards, M.S. Elevated $p\text{CO}_2$ is less detrimental than increased temperature to early development of the giant kelp, *Macrocystis pyrifera* (Phaeophyceae, Laminariales). *Phycologia*. 56(6):638-648.

CHAPTERS & REPORTS

- 2020** Science in Action: Exploring the Future of U.S. Aquaculture, *A COMPASS Roundtable on Ocean Aquaculture* + Associated Blog Post: "[Science in Action: Exploring the Future of U.S. Aquaculture](#)"
- 2020** Oldach, E.J. & **Shukla, P.** Using Vulnerability Assessments to Evaluate the Sensitivity of Infrastructure to Environmental Change. Chapter in United Nations Sustainable Development Goals, Goal Nine Compendium.
- 2018** Gaylord, B., Rivest, E., Hill, T., Sanford, E., **Shukla, P.**, Ninokawa, A., Ng, G. [California mussels as bio-indicators of ocean acidification](#). A Report for California's Fourth Climate Change Assessment.

RESEARCH POSTERS † & ORAL PRESENTATIONS

- Dixit, L., Frank, N., Hood, N., Aquilino, K., **Shukla, P.**, Frederick, A. 2022. Improved Production of Endangered White Abalone (*Haliotis sorenseni*) through Reproductive Conditioning and Post-Larval Survival. 103rd Western Society of Naturalists, Oxnard, CA.
- Shukla, P.** 2021. Seeding, Ceding and Unseating for our Future: What does succeeding look like? **Keynote Session** with Dr. Levi Lewis. 11th Biennial Bay-Delta Science Conference. Virtual.
- Shukla, P.**, Burge, C. M., Grosholz, E.D. 2020. Effect of Temperature on the Mortality, Growth & Immune Response of the Pacific Oyster, *Crassostrea gigas*, in a California Estuary 101st Western Society of Naturalists Conference. Virtual.
- Ricart, A.M., Ward, M.A., Kroeker, K., Sanford, E., Gaylord, B., Merolla, S., **Shukla, P.**, Takeshita, Y., Hill, T.M. 2019. Seagrass ecosystems buffer low pH in coastal areas. Ocean Sciences Meeting, San Diego, CA.
- Ward, M.A., Hill, T.M., Ricart, A.M., Gaylord, B., O'Donnell, B., Capece, L. **Shukla, P.**, Kroeker, K., Sanford E, and Oechel, W. 2019. Assessing multiple carbon fluxes in a temperature, Pacific seagrass meadow. Ocean Sciences Meeting, San Diego, CA.
- Capece, L.R., Hill, T.M., Ricart, A.M., Ward, M., **Shukla, P.** 2018. Insights from stable isotopes and C/N ratios: Assessing the spatial and temporal variation of sedimentary organic matter stored in seagrass meadows. American Geophysical Union, Washington, D.C.
- Ricart, A.M., Sanford, E., Gaylord, B., **Shukla, P.**, Ward, M., Hill, T.M. 2018. Natural pH variability driven by seagrass affects oyster growth: insights into potential mitigation of ocean acidification. 99th Western Society of Naturalists Conference, Tacoma, WA.
- Shukla, P.** 2018. Climate Justice through Ocean Science. Imagining America, Chicago, IL.
- Barclay, K.M., Gaylord, B., Jellison, B.M., **Shukla, P.**, Sanford, E., and Leighton, L.R. 2017. Impact of ocean acidification on shell growth and strength of two intertidal gastropods exposed to the scent of predation. 98th Western Society of Naturalists Conference, Pasadena, CA.
- Ward, M.A., Hill, T.M., Gaylord, B., Sanford, E.D., Kroeker, K.J., O'Donnell, B.C., **Shukla, P.**, and Oechel, W.C. 2017. A synthesis of carbon services in California seagrass beds. 98th Western Society of Naturalists Conference, Pasadena, CA.
- Shukla, P.**, Brown, M.B., and Edwards, M.S. 2015. Impacts of elevated $p\text{CO}_2$ and temperature on multiple life stages of the giant kelp. 96th Western Society of Naturalists Conference, Sacramento, CA.
- Shukla, P.** 2015. Photosynthesis is a Choice: Environmental Variability Influences Carbon Uptake in Kelps at Different Life Stages. SDSU Marine Ecology and Biology Student Association Seminar Series, San Diego, CA.
- Shukla, P.** and Edwards, M.S. 2015. Elevated CO_2 concentrations facilitate development in microscopic life stages of *Macrocystis pyrifera*. 44th Annual Benthic Ecology Meeting, Québec City, Canada.
- Shukla, P.** and Edwards, M.S. 2014. Elevated CO_2 concentrations facilitate development in microscopic life stages of *Macrocystis pyrifera*. 95th Western Society of Naturalists Conference, Tacoma, WA.
- †**Shukla, P.** and Edwards, M.S. 2013. Characterizing the effects of climate change on photosynthesis for embryonic and juvenile sporophytes of *Pterygophora californica* and *Laminaria farlowii*. 94th Western Society of Naturalists Conference, Oxnard, CA.
- †**Shukla, P.** and Edwards, M.S. 2013. Characterizing the effects of climate change on photosynthesis for embryonic and juvenile sporophytes of *Pterygophora californica* and *Laminaria farlowii*. 22nd Biennial Conference of the Coastal and Estuarine Research Federation, San Diego, CA.
- †**Shukla, P.**, Hill, T.M., Gaylord, B., Hosfelt, J., and Nickols, K.J. 2011. Understanding impacts of ocean acidification on seagrass and salt marsh ecosystems based on studies in Bodega Harbor, California. 92th Western Society of Naturalists Conference, Vancouver, WA.
- †**Shukla, P.** Hobbs, J., Kurth, R., Kindopp, J., and Cavallo, B. 2010. Determining run-type using otolith $^{87}\text{Sr}/^{86}\text{Sr}$ ratios among Feather River Chinook salmon spawners, 2002-2008. 6th Biennial Bay-Delta Science Conference, Sacramento, CA.

GRANTS & AWARDS

| | |
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| 2022 | Dissertation Year Fellowship, UC Davis (\$49,300) |
| 2022 | [DECLINED] Dissertation Year Fellowship, American Association of University Women (\$20,000) |
| 2022 | [DECLINED] Graduate Group in Ecology Fellowship, UC Davis (\$23,928) |
| 2021 | Jastro & Shields Graduate Research Award, UC Davis (\$2,530) |
| 2021 | Sustainable Oceans National Science Foundation Research Traineeship (NRT) Extension, UC Davis (\$5,000) |
| 2020 | Scientist Sentinels: Civic Engagement & Leadership Program, COMPASS |
| 2020 | Graduate Research Fellowship, California Sea Grant (\$40,000) |
| 2019 | Dennis and Patricia Salisbury Graduate Student Award, UC Davis (\$3,993) |
| 2019 | Sustainable Oceans National Science Foundation Research Traineeship (NRT), UC Davis (\$51,892) |
| 2019 | Russell J. and Dorothy S. Bilinski Bodega Marine Lab Fellowship, UC Davis (\$20,000) |
| 2018 | Scholars Strategy Network Graduate Fellowship, Sacramento-Davis Chapter (\$2,000) |
| 2018 | Publicly Active Graduate Education (PAGE) Fellowship, Imagining America (\$500) |
| 2018 | Graduate Group in Ecology Fellowship, UC Davis (\$23,928) |
| 2018 | Western Society of Naturalists Student Travel Award (\$45) |
| 2017 | Climate Engagement Fellowship, UC Santa Cruz |
| 2016 | Monetary Award from Kung Guerra Foundation, Awarded to the Marine Science Institute (\$10,000) |
| 2015 | Most Valuable Member Award, SDSU MEBSA |
| 2014-2015 | Council on Oceanic Affairs, Science and Technology Graduate Student Research Award (\$3,000) |
| 2014 | San Diego State University Farris/EPEF Travel Award (\$1000) |
| 2014 | Western Society of Naturalists Student Travel Award (\$300) |
| 2013-2014 | Harold and June Grant Memorial Scholarship (\$2,195) |
| 2013 | Council on Oceanic Affairs, Science and Technology (COAST) Travel Award (\$500) |
| 2013 | San Diego State University Research Foundation Award (\$495) |
| 2013 | Maritime Alliance Environmental Leadership Award, co-recipient with MEBSA |
| 2013 | San Diego Ocean's Foundation Ocean Leadership Award, co-recipient with MEBSA |
| 2012-2015 | San Diego State University Grant (\$9,765) |
| 2010 | Dean's List, Biological Sciences, UC Davis (Spring Quarter) |

TEACHING & UNDERGRADUATE MENTORSHIP EXPERIENCE

Instructor

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| 2020 | Professional Development in Marine Science (ANS 198), UCD |
| 2021 | Career Discovery in Marine Science (ANS 198), UCD |
| 2021 | Marine Science Journal Club (ANS 198), UCD |

Guest Lectures

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| 2020 | Career Discovery, University of California, Irvine, Virtual |
| 2020 | Marine Conservation Ecology, California State University, Northridge, Virtual |
| 2020 | Climate Change Biology, Doane University, Virtual |
| 2020 | Coastal Oceanography, UCD, Virtual |
| 2020 | Marine Invertebrate Ecology, Texas A&M University at Galveston, Virtual |

Teaching Assistant

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| 2015 | Marine Ecology (BIOL 517), SDSU |
| 2014 | Ecology and the Environment (BIOL 354), SDSU |
| 2012-2013 | General Biology Laboratory (BIOL 100L), SDSU |
| 2011-2012 | AP Environmental Science, American High School, Fremont, CA |

Mentor to Undergraduate Laboratory Assistants

Nate Bossier. 2022. Dissecting oysters and measuring their growth and mortality in the lab and field.
Tenzing Sherpa. 2021. Measuring oyster growth and mortality in the field across a temperature gradient.
Olivia Zanzonico. 2018. Techniques for measuring and analyzing seawater carbonate chemistry data.
Amanda Nordstrom. 2017. Techniques for measuring and analyzing seawater carbonate chemistry data.
David Gamez-Alvarez. 2015. Analysis of ¹³C/¹²C and ¹⁵N/¹⁴N in giant kelp blades from Southern California.
Marina Gandara. 2015. Analysis of ¹³C/¹²C and ¹⁵N/¹⁴N in giant kelp blades from Southern California.
David Logue. 2014. Measuring and analyzing microscopic kelp densities.
Wesley Leonard. 2013. Building a system for manipulating seawater carbonate chemistry.

SHORT COURSE EXPERIENCE

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| 2019 | Expert Witness Training Academy , National Science Foundation, Mitchell Hamline School of Law |
| 2019 | Communications Training for Storytelling and Messaging , UCD |
| 2019 | Story Circles Narrative Training , Randy Olson |
| 2018 | Improv for Academics , UCD |
| 2016 | Science Communication Short Course , Bodega Marine Laboratory, UCD |
| 2013 | SciFund Introduction to Outreach , #SciFund University |
| 2013 | Design and Analysis of Ecological Experiments , SDSU |

PROFESSIONAL SERVICE

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| 2019-2022 | Referee , <i>Marine Ecology</i> |
| 2019 | Reviewer , UCD Graduate Group in Ecology Awards Committee |
| 2019 | Panelist , Northern California Forum for Diversity in Graduate Education: "What to do in a Gap Year", UC Davis |
| 2019 | Panelist , Scholars Strategy Network National Convening: "Partnering with the Media", Washington, D.C. |
| 2018-Present | Founding Board Member , Rowan Institute |
| 2018-2020 | Co-Chair, Graduate Student Affairs Committee , Coastal and Marine Sciences Institute, UC Davis |
| 2017-2019 | Pod Coordinator , 500 Women Scientists, San Francisco Bay Area Pod |
| 2016-2018 | Science Adviser , Time to Lead on Climate, Marin County, CA |
| 2017-2018 | Bodega Marine Lab Diversity Committee Co-Founder |
| 2017-2018 | Staff Diversity Administrative Advisory Committee to UCD's Provost and Chancellor |
| 2016-2018 | Bodega Marine Lab Sponsorship Program Co-Founder |
| 2018 | [DECLINED] Student Ambassador , Planetary Health Center of Expertise, University of California |
| 2017 | Referee , <i>Phycologia</i> |
| 2017 | Referee , Society for Advancement of Chicanos and Native Americans in Science (SACNAS) |
| 2017 | Twitter Conversation Panelist , Union of Concerned Scientists Science Network |
| 2016 | Contributor , Seagrass-Ocean Acidification Working Group |
| 2015 | Invited Expert , SDSU Climate Action Planning Retreat |
| 2012-2015 | Seminar Series Coordinator , SDSU Marine Ecology and Biology Student Association (MEBSA) |
| 2014 | Student Grant Writing Group Leader and Editor , SDSU |
| 2014 | External Reviewer , High Tech High School Fire Ecology Journal Articles |
| 2012-2013 | Member-at-Large , SDSU Marine Ecology and Biology Student Association (MEBSA) |
| 2008-2009 | Member & Chair , UCD Environmental Policy and Planning Commission |

PUBLIC ENGAGEMENT & ACTIVISM

Writing

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| 2022 | <u>Border Patrol's Answer To Climate Change Is Robot Dogs. And, It's The Wrong One</u> , <i>Currently</i> |
| 2020 | <u>What Civically Engaged Science Can Look Like: Our Work Doesn't End With Elections</u> , <i>COMPASS Blog</i> |
| 2020 | <u>Desis Should Celebrate Kamala Harris, But Also Hold Her Accountable</u> , <i>Medium</i> |
| 2020 | <u>Graduate School in a Post-COVID World Requires Reckoning with More than a Virus</u> , <i>COMPASS Blog</i> |
| 2019 | <u>How To: Write A Blog Post About Your Research with Priya Shukla</u> , <i>COMPASS Blog</i> |
| 2019 | <u>Scientists, Meet Twitter</u> , <i>The Xylom</i> (co-authored with Dr. Sabah Ul-Hasan & edited by 11 contributors) |
| 2019 | <u>Will Mussel Aquaculture Be Viable Along The California Coast?</u> , Coastal and Marine Sciences Institute, UCD |
| 2018 | <u>Why California Needs to Strengthen Marine Aquaculture to Endure Climate Change</u> , <i>Scholars Strategy Network</i> |
| 2018 | <u>Combating the Social Inequity That Climate Change Engenders</u> , <i>Imagining America</i> |
| 2018 | <u>Calling for a Revisionist Natural History</u> , <i>Bay Nature Magazine</i> |
| 2018 | <u>Stand Up for Science: More researchers now see engagement as a crucial part of their job</u> , <i>The Conversation</i> (co-authored with Drs. Chelsea Rochman, Susan Williams, and Tessa Hill) |
| 2017 | <u>Make Public Engagement a Professional Priority</u> , Union of Concerned Scientists Blog |
| 2017 | <u>I Will Be Marching Towards Pervasive Inclusion</u> |
| 2017 | <u>In 2017, I Resolve to Engage Publicly and Politically</u> |
| 2017 | <u>Diversi-tea & Cookies</u> , Resources for Supporting Diversity in Science, Blog Series on <u>Toxic Musings</u> |
| 2016 | <u>The Prosaic Mosaic</u> , an Effort to Normalize Diversity in Science, <u>Medium Publication</u> (>1000 reads) |
| 2016 | <u>Scientific service—for culture and community</u> (co-authored by Dr. Sarah E. Myhre) |
| 2016 | <u>Why Has Climate Change Been Omitted from Debates this Election Season?</u> |
| 2015 | <u>Forests of the Sea: the Role of Kelps in Oceanic Carbon Cycling</u> , Friends of CMIL Newsletter, SDSU |

Oral Presentations

- 2021 "Humanizing Your Science", Invited Speaker, William & Mary University, Virtual
2020 "Fostering Diversity, Equity & Inclusion Through Mentoring", California State University COAST
2020 "Science Writing & Communication", Invited Speaker, Reclaiming STEM, Virtual
2020 "Science Communication", Invited Speaker, UCD Graduate Group in Ecology Odd-yssey, Virtual
2020 "Science Writing", Invited Speaker, Santa Rosa Junior College, Virtual
2019 "Science Communication: Best Practices", Invited Speaker, Sonoma State University, Rohnert Park, CA
2019 "Exploring the Aquaculture Landscape in California and Beyond", Invited Speaker, Oceana, Washington, D.C.
2018 "What 'commitment to diversity' really means", Speed Talk, 99th Western Society of Naturalists Conference, Tacoma, WA.
2018 "Communicating Science and Publicly Engaging", Invited Speaker, Sonoma State University Geology Club, Rohnert Park, CA
2017 "Seeking Solutions in a Sea of Change", Invited Speaker, Science Uncorked, Bodega Bay, CA
2017 "Seeking Solutions in a Sea of Change", Invited Speaker, Taste of Science Festival, San Francisco, CA

Media

- 2020 "Russia's unfrozen Laptev Sea is not the only warning sign of climate change", *The California Aggie*
2020 Oceans Under A Changing Climate, Unfold Podcast
2020 "OK To Decay - Under the Bay", Exploratorium, After Dark Online
2020 "Warming oceans could mean bad news for oyster aquaculture", CMSI, UCD
2020 Profile: Priya Shukla, *46 Questions*
2019 #83: Knock Knock. Who's There? Climate Change, Important, Not Important Podcast
2019 SROCC Live Discussion!, Ocean Science Radio
2019 The Psychological Toll of Working as a Climate Scientist, On The Media, WNYC
2019 "It's the End of the World as They Know It: The distinct burden of being a climate scientist", *Mother Jones*
2019 "Biodiversity in and out of the field with Priya Shukla", *Therese's Nature Journal*
2019 All About Ocean Acidification & Dead Zones, Sustainable Design Master Class
2019 Deep Water and Mussels, Green Boater TV
2019 #STEMstories: Priya, PhD student, USA, Geeky Girl Reality
2018 Science is a Public Good, 500 Women Scientists
2017 Sharing the Stories of Marginalized Scientists, Ecological Society of America #MySciComm Series
2017 "Meet Three Scientists Ready to March", New York Times 360 Video, March for Science
2017 "Here are the voices of women who couldn't strike", *Splinter News*, Day Without a Woman (March 8)
2017 "Episode 2: How Dare a Woman", *Femmes of STEM* podcast episode about Rachel Carson's legacy

RELEVANT SKILLS

AAUS Scientific Diver (2013), SSI Open Water Scuba Diver (2010), California Boating and Waterways Safety Course (2012), Univariate and Multivariate Statistics (R, SYSTAT, SigmaPlot), Graphic Design, Website Design, Social Media