November 2022

Michelle J. Jungbluth, Ph.D. mjungbluth@sfsu.edu

EDUCATION

Ph.D. Oceanography	University of Hawai‘i at Mānoa	2016
M.S. Oceanography	University of Hawai‘i at Mānoa	2012
B.S. Biology	University of Wisconsin Madison	2007

RESEARCH EXPERIENCE

Adjunct Assistant Professor of Biology, Dept. of Biology, San Francisco State University, Estuary & Ocean Science Center — Sept 2018-Present

Postdoctoral Research Fellow, San Francisco State University, Estuary & Ocean Science Center — 2017-2019
Funding: California Sea Grant - Delta Science Fellowship, funded by the State and Federal Contractors Water Agency

Postdoctoral Researcher, Hawaii Pacific University — 2016
Funding: UK Seabed Resources Ltd.

Graduate research assistant, University of Hawai‘i at Mānoa — 2013-2016
Funding: NOAA Sea Grant, NSF-EAGER grant

Graduate research assistant, University of Hawai‘i at Mānoa — 2010-2012
Funding: NOAA Sea Grant

ACTIVE RESEARCH PROJECTS:

- Zooplankton recruitment dynamics in high latitude ecosystems
- From microbes to zooplankton, what defines a beneficial wetland?
- Manta ray distribution applying environmental DNA
- Filling gaps in knowledge of zooplankton prey of listed smelt species
- Seasonal transitions in the food webs supporting delta and longfin smelt
- Resolving contradictions in foodweb support for native pelagic fishes
- Sacramento River nutrient change study: Using changes in nutrient loading and transport to test hypotheses about potential nutrient management actions
- Revealing the invisible contributors to diets of larval and juvenile fishes in the San Francisco Estuary
- Targeted assays for copepod grazing studies

PUBLISHED MANUSCRIPTS:

12 **Jungbluth, M.J.*,** Hanson, K.M.*, Lenz, P.H., Robinson, E., and Goetze, E. (2022). A qPCR-based approach for estimating species-specific biomass of metazoan plankton. *Limnology and Oceanography: Methods.* 20(6), 305-319. *co-first author

11 **Jungbluth, M.J.,** Lee, C., Patel, C., Ignoffo, T., and Kimmerer, W. (2022). Production of the copepod *Pseudodiaptomus forbesi* is not enhanced by ingestion of the diatom *Aulacoseira granulata* during a bloom. *Estuaries and Coasts*. 44(4), 1083-1099. doi: 10.1007/s12237-020-00843-9. Online Access: https://rdcu.be/b8lUk

10 **Jungbluth, M.J.,** Burns, J., Grimaldo, L., Katla, A., and Kimmerer, W. (2021) Feeding habits and novel prey of larval fishes in the northern San Francisco Estuary. *Environmental DNA*. 3(6), 1059-1080. doi: 10.1002/edn3.226

9 Kersten, O., Vetter, E.W., **Jungbluth, M.J.,** Smith, C. R., & Goetze, E. (2019). Larval assemblages over the abyssal plain in the Pacific are highly diverse and spatially patchy. *PeerJ*, 36. doi: 10.7717/peerj.7691

8 Millette, N.C., Grosse, J., Johnson, W.M., **Jungbluth, M.J.,** and Suter, E. (2018). Hidden in plain sight: The importance of cryptic interactions in marine plankton. *Limnology and Oceanography Letters.* 3, 341-356. doi: 10.1002/lol2.10084 (Open Access)

7 Selph, K.E., Goetze, E., **Jungbluth, M.J.,** Lenz, P.H., and Kolker, G. (2018). Microbial food web connections and rates in a subtropical embayment. *Marine Ecology Progress Series.* 590, 19-34. doi: 10.3354/meps12432

6 **Jungbluth, M.J.,** Selph, K.E., Lenz, P.H., & Goetze, E. (2017). Species-specific grazing and significant trophic impacts by two species of copepod nauplii, *Parvocalanus crassirostris* and *Bestiolina similis*. *Marine Ecology Progress Series, 572*, 57-76. doi:10.3354/meps12139

5 **Jungbluth, M.J.**, Selph, K.E., Lenz, P.H., & Goetze, E. (2017). Incubation duration effects on copepod naupliar grazing estimates. *Journal of Experimental Marine Biology and Ecology, 494*, 54-62. doi: 10.1016/j.jembe.2017.05.005

Jungbluth, M.J. (2016). Copepod nauplii and their roles in marine planktonic environments. (PhD Dissertation), Oceanography, UH Mānoa, Honolulu, Hawaii.

4 Roncalli, V., **Jungbluth, M.J.,** Lenz, P.H., (2016). Glutathione S-Transferase regulation in *Calanus finmarchicus* feeding on the toxic dinoflagellate *Alexandrium fundyense*. *PLoS ONE* 11, e0159563.

3 Goetze, E., & **Jungbluth, M.J.** (2013). Acetone preservation for zooplankton molecular studies. *Journal of Plankton Research, 35*(5), 972-981. doi: 10.1093/plankt/fbt035

2 **Jungbluth, M.J,** Goetze, E, & Lenz, P.H. (2013). Measuring copepod naupliar abundance in a subtropical bay using quantitative PCR. *Marine Biology*, 160, 3125-3141. doi: 10.1007/s00227-013-2300-y

1 **Jungbluth, M.J.**, & Lenz, P.H. (2013). Copepod diversity in a subtropical bay based on a fragment of the mitochondrial COI gene. *Journal of Plankton Research, 35*(3), 630-643. doi: 10.1093/plankt/fbt015

Jungbluth, M.J. (2012). Development and demonstration of a quantitative PCR based method to enumerate copepod nauplii in field samples. (MS Thesis), Oceanography, UH Manoa, Honolulu, Hawaii.

MANUSCRIPTS in PREPARATION or IN REVIEW:

Jungbluth, M.J., Ignoffo, T., Slaughter, A., and Kimmerer, W. *What really defines food for a non-native estuarine copepod? In Prep.*

Jungbluth, M.J., Feyrer, F., Grimaldo, L., Slaughter, A., and Kimmerer, W. *Molecular insights into prey important to the diets of native fishes of the San Francisco Estuary. In Prep.*

Jungbluth, M.J., Selph, K., Lenz, P.H., Goetze, E. *Storm impacts on copepod populations over ontogeny in a subtropical coastal ecosystem. In Prep.*

AWARDS

Proposals Awarded

As PI:

From Microbes to Zooplankton What Defines a Beneficial Wetland? (Delta Science Awards, 2021). Amount Awarded: $706,463.

As Co-PI:

Collaborative Research: Zooplankton restarts in a high-latitude marine ecosystem: species-specific recruitment and development in early spring. (National Science Foundation, 2022). PI: Dr. Petra Lenz. Amount Awarded: $350,839.

Seasonal transitions in the food webs supporting delta and longfin smelt. (State Water Contractors, 2021). PI: Dr. Wim Kimmerer. Amount Awarded: $426,221.

Filling gaps in knowledge of zooplankton prey of listed smelt species. (California Department of Fish and Wildlife, Proposition 1, 2021). PI: Dr. Wim Kimmerer. Amount Awarded: $288,682.

As Research Associate:

High-resolution characterization of lower food web resources connected to important nursery habitats in restored wetlands. (Delta Science Proposal Solicitation, 2018). PI: Dr. Wim Kimmerer. Amount awarded: $715,000.

Other Proposals Applied for as PI

Problematic parasites and carnivorous copepod impacts on native estuarine fishes. (California Department of Fish and Wildlife, Proposition 1 RFP 2021). $860,000. *Not awarded.*

Enhanced zooplankton monitoring along coastal north-central California. (Sea Grant New Faculty Grant Program, 2020). $104,000 Not awarded.

High-resolution characterization of lower food web resources connected to important nursery habitats in restored wetlands (Delta Science Proposal Solicitation, 2018). $995,000 not awarded.

Other Awards

To Self

Equitable Collaboration in STEM Award, to support and enhance collaboration across female researchers at SF State, NSF-based, $1000.

Collaboratively wrote and was awarded a **Delta Science Postdoctoral Research Fellowship**, sponsored by the California Sea Grant Program, and funded by SFWCA. PI: Dr. Wim Kimmerer. Award amount: $219,272 over two years.

UH Mānoa **Graduate Student Organization award**, to attend international symposium. Award amount: $725

ICES/PICES 6th Zooplankton Production Symposium, **travel award**. Award amount: $1050

UH Mānoa **Graduate Student Organization award**, to attend international workshop. Award amount: $650

UH Mānoa Student Activity and Program Fee Board, organization awarded **funding for a professional development event** on using improvisation for improving science communication; awarded to the Science Communicators ʻOhana. Award amount: $304

Association for the Sciences of Limnology and Oceanography **Outstanding Student Presentation Award**, 2014 Ocean Sciences Conference, Honolulu, Hawaii.

Sea Grant **Travel Award**, Association for the Sciences of Limnology and Oceanography 2013 Aquatic Science Meeting, New Orleans, Louisiana. Award amount: $1800

Sea Grant **Travel Award**, Association for the Sciences of Limnology and Oceanography 2012 Ocean Sciences Meeting, Salt Lake City, Utah. Award amount: $1200

To Students

COAST 2022 Research Award $3,000 to Graduate Student Erick Ortiz

ARCS 2021 Scholarship $10,000 to Graduate Student Amy Wong

COAST 2021 Research Award $3,000 to Graduate Student Amy Wong

COAST 2021 Research Award $3,000 to Mentee Graduate Student Lindsey Metz

Sea Grant 2020 State Fellowship to Mentee Graduate Student Cheryl Patel

TEACHING

Lecturer*, EPS N82 Introduction to Oceans* — Summer Sessions, 2022
University of California Berkeley

Guest Lecturer, MSCI 709 *Foundations in Global Change in Urbanized Coasts and Estuaries* — 2019 - Present
San Francisco State University

Chief Scientist, REU Teaching Research Cruise, R/V Questuary — 2019, 2022
San Francisco State University

Lead Teaching Assistant, *Oceanography 201 -Science of the Sea, Lecture and Lab Course* — Fall semester, 2015
University of Hawaiʻi at Mānoa

Teaching Assistant, Oceanography 201 -*Science of the Sea, Lecture and Lab Course* — Spring semester, 2015
University of Hawaiʻi at Mānoa

ADVISING and MENTORING:

Primary thesis advisor, IMES program SFSU – graduate student project studying foodweb benefits provided by wetlands to native larval fishes. Student: Anthony Donahue — 2022-present

Primary thesis advisor, IMES program SFSU – graduate student project studying zooplankton dietary DNA and response to spring bloom in Gulf of Alaska. Student: Jennifer Staat — 2022-present

Research mentor – NSF Research Experiences for Undergraduates at San Francisco State University: Biological Research in Ecological and Evolutionary Developmental Biology Program. REU Scholar: Paris Kellogg	Summer 2022
Primary thesis advisor, IMES program SFSU – graduate student project studying diversity and distribution of the microbes to zooplankton in restoring wetlands an estuary. Student: Erick Ortiz	2021-present
Thesis committee member – graduate student project studying relationship between California sea lion's diet and ocean conditions on the Farallon Islands. Student: Maria Salgado	2021-present
Thesis committee member and mentor - graduate student project comparing feeding by two dominant copepods during transition periods in abundance. Student: Amy Wong	2020-present
Thesis committee member - graduate student project measuring microbial assemblages associated with toxic algae. Student: Lindsey Metz	2019-present
Primary thesis advisor - graduate student project designing assays to measure feeding by *Pseudodiaptomus forbesi* on multiple prey. Student: Cheryl Patel	2018-present
Research mentor – NSF Research Experiences for Undergraduates at San Francisco State University: Biological Research in Ecological and Evolutionary Developmental Biology. REU Scholar: Aspen Katla	Summer 2019
Research mentor – Stem Teacher and Researcher (STAR) program, San Francisco State University. STAR Fellow: De'asha Moore	Summer 2019
Mentor graduate research assistant measuring grazing rates by *Pseudodiaptomus forbesi* on the diatom, *Aulacoseira* sp. Student: Calvin Lee	2017-2018
Mentor summer high school student. Intern: Chandler Gorman	2017
Mentor undergraduate student lab assistant. Student: Michelle Uchida	2015, 2016
Mentor undergraduate student through a senior thesis project (C-MORE Scholar). Student: John Lee	2012
Mentor and Teacher, UH Manoa undergraduate volunteers in the field (numerous)	2011-2015

INVITED PRESENTATIONS:

Cyclopoid diversity and distribution in the San Francisco Estuary from metabarcoding. Zoopfest 2022: Interagency Ecological Program. Virtual. CA.	Aug 2022
Revealing the hidden diversity, abundance and feeding interactions at the base of aquatic food webs. Rosenberg Institute Seminar, Estuary and Ocean Science Center. San Francisco State University, San Francisco, CA	May 2022

Revealing the hidden diversity, abundance and feeding interactions at the base of aquatic food webs. Moss Landing Marine Labs, Symposium Series — Apr 2022

Feeding and Predation in the Zooplankton. Zooplankton Ecology Symposium. Virtual. CA — Oct 2020

Larval longfin smelt diets assessed with morphological ID and DNA sequencing of guts. Longfin Smelt Symposium. Sacramento, CA — Nov 2019

Molecular insights into aquatic foodweb ecology in the San Francisco Estuary and beyond. Rosenberg Institute Seminar, Estuary and Ocean Science Center. San Francisco State University, San Francisco, CA — Apr 2019

Composition of larval fish diets: Comparing high-throughput DNA sequencing with morphological methods. Interagency Ecological Program Workshop, Folsom, CA — Mar 2019

Studies of marine and estuarine zooplankton ecology using molecular methods. Moss Landing Marine Labs, Moss Landing, CA — Sept 2017

Are plankton life history stages important to marine food webs? Seminar, School of Freshwater Sciences, University of Wisconsin Milwaukee, WI. — Sept 2015

SELECTED CONFERENCE and SYMPOSIUM PRESENTATIONS:
Talks

Jungbluth, M. *From microbes to zooplankton: Characterizing variation in foodweb resources in a major temperate estuary*. Ocean Sciences Meeting, Virtual. — Feb 2022

Jungbluth, M., Slaughter, A., Ignoffo, T., and Kimmerer, W. *Insights into foodweb connections between anadromous forage fishes of the San Francisco Estuary through dietary DNA*. CERF Conference, Virtual, CA. — Nov 2021

Jungbluth, M. and Kimmerer W. *Feeding habits and novel prey of larval fishes in the San Francisco Estuary, revealed by gut DNA metabarcoding*. Ocean Sciences Meeting, San Diego, CA — Feb 2020

Jungbluth, M. *Molecular insights into aquatic foodweb ecology in the San Francisco Estuary and beyond*. Rosenberg Institute Seminar, Estuary and Ocean Science Center. San Francisco State University, San Francisco, CA — Apr 2019

Jungbluth, M. *Molecular insights into aquatic food web ecology in the San Francisco Estuary and beyond*. Colloquium in Ecology, Evolution and Conservation Biology. San Francisco State University, San Francisco, CA — Feb 2019

Jungbluth, M. and Kimmerer, W. *Habitat variation in the diets of young longfin smelt, enhanced with DNA metabarcoding*. Bay Delta Science Conference. Sacramento, CA — Sept 2018

Jungbluth, M., Selph, K., Lenz, P.H., and Goetze, E. *Copepod nauplii in subtropical environments*. Stazione Zoological di Napoli. Naples, Italy — May 2016

Jungbluth, M., Selph, K., Lenz, P.H., and Goetze, E. *Species-specific grazing impacts of copepod nauplii.* ICES/PICES 6th Zooplankton Production Symposium, Bergen, Norway — May 2016

Jungbluth, M., Lenz, P.H., and Goetze, E. *Naupliar responses to ecosystem perturbations in a subtropical embayment*. Ocean Sciences Meeting, Honolulu, HI — Feb 2014

Jungbluth, M., Goetze, E., and Lenz, P. H. *A new qPCR-based approach to studying copepod nauplii in the field.* ASLO Aquatic Sciences Meeting, New Orleans, LA — Feb 2013

Jungbluth, M. *Toward the use of quantitative real-time PCR as a method to study copepod population dynamics*. UH Manoa 35th Annual Tester Symposium, Honolulu, HI — Mar 2012

Posters

*Indicates mentored student presentation

Ortiz, E.*, and **Jungbluth, M.** *Characterizing the diversity and foodweb support provided by microorganisms to native fishes in restored wetlands*. Ocean Sciences Meeting, Virtual. — Feb 2022

Jungbluth, M. and Kimmerer, W. *Insights into dietary DNA of juvenile longfin smelt and northern anchovy*. Interagency Ecological Program/BDSC Workshop, **Virtual**, CA. — April 2021

Jungbluth, M. Burns, J., Grimaldo, L., Katla, A., and Kimmerer, W. *Feeding habits and novel prey of larval fishes in the northern San Francisco Estuary*. Interagency Ecological Program Workshop, **Virtual**, CA — Sept 2020

Katla, A.* and **Jungbluth, M.**. *DNA barcoding of San Francisco Estuary Zooplankton*. Ocean Sciences Meeting, San Diego, CA. — Feb 2020

Jungbluth, M. Jungbluth, S, and Kimmerer W. *A targeted genetic database of local fauna for analysis of aquatic community metabarcode data*. Digital Data in Biodiversity Conference, New Haven, CT — June 2019

Patel, C.*, Lee, C., Ignoffo, T., **Jungbluth, M.** and Kimmerer, W. *Investigating copepod consumption of phytoplankton in San Francisco Estuary using qPCR*. Ocean Sciences Meeting, Puerto Rico. — Feb 2019

Jungbluth, M. and Kimmerer, W. *DNA metabarcoding to reveal the invisible prey in the diet of longfin smelt larvae.* Interagency Ecological Program Workshop. Folsom, CA — Mar 2018

Jungbluth, M. and Kimmerer, W. *Revealing the breadth of prey in the diets of a threatened fish in the San Francisco Estuary.* Ocean Sciences Meeting. Portland, OR — Feb 2018

Jungbluth, M. and Kimmerer, W. *Revealing the breadth of prey in young longfin smelt diets across the San Francisco Estuary*. Gordon Research Conference, Predator-Prey Interactions. Ventura, CA — Jan 2018

Jungbluth, M. *Revealing the invisible contributors to the diets of young longfin smelt in the San Francisco Estuary.* State of the Estuary Conference. Oakland, CA — Oct 2017

Jungbluth, M., and Goetze, E. *The roles of copepod nauplii in marine planktonic ecosystems*. 13th International Conference on Copepoda, San Pedro, CA — July 2017

Jungbluth, M., Lenz, P.H., Hanson, K.M., Selph, K.E. and Goetze, E. *Copepod early-life history responses to event-scale perturbations in the coastal zone.* ASLO Ocean Sciences Meeting, Honolulu, HI — Feb 2017

Jungbluth, M., Lenz, P.H., Goetze, E. *A novel molecular method to enumerate copepod nauplii in field populations*. Ocean Sciences Meeting, Salt Lake City, UT — Feb 2012

Jungbluth, M., Goetze, E., Lenz, P.H. *Development of a quantitative method to enumerate copepod nauplii in field samples*. The Crustacean Society Summer Conference, Honolulu, HI — June 2011

PROFESSIONAL SERVICE

Scientific Journal Reviewer: Frontiers in Marine Science, Nature Scientific Reports, Marine Biology, Marine Ecology Progress Series, Journal of Plankton Research, PeerJ, Bioinvasions Records, Crustaceana

Contributing Member: Interagency Ecological Program: Zooplankton Project Work Team, San Francisco Bay-Delta region

Contributing Member: Interagency Ecological Program: Genetics Project Work Team, San Francisco Bay-Delta region

Contributing Member: Interagency Ecological Program: Estuarine Ecology Team, San Francisco Bay-Delta region

Contributing Member: California Molecular Methods Work Group

Faculty Committees at SFSU: OPC Roadshow Organizer for EOS Center Science Networking Event (2020), Student Scholarship Committee (2019, 2020)

SELECTED SCIENCE COMMUNICATION

Jungbluth, M. *Using DNA to map out the food that keep fish alive*. San Francisco Examiner. Nov 27, 2019. https://www.sfexaminer.com/news-columnists/using-dna-to-map-out-the-food-that-keep-fish-alive/ — Online Newspaper Article

Jungbluth, M. *One scientist's path.* Presentation to Research Experiences for Undergraduates (REU) Students, Tiburon, CA. June 2017 — Outreach Talk

Jungbluth, M. *Connections between plankton and people in Kane'ohe Bay, Hawai'i: Effects of coastal storm runoff on copepod populations*. Sea Grant Graduate Presentations, Hanauma Bay, Honolulu, HI. Dec 2013 — Public Presentation

Jungbluth, M, Lenz, PH, and E Goetze. *What genetic methods can tell us about copepod populations in Kane'ohe Bay.* Sea Grant Graduate Presentations, Hanauma Bay, Honolulu, HI. Nov 2012	Public Presentation
Jungbluth, M, Lenz, PH, and E Goetze. *Tiny crustaceans in a large sea: How storms affect copepods in Kane'ohe Bay, Hawaii*. Sea Grant Graduate Presentations, Hanauma Bay, Honolulu, HI. Nov 2011	Public Presentation
Jungbluth, M. *Use of molecular techniques to study local zooplankton populations*. Ka Pili Kai, Sea Grant Hawaii, Vol. 33(1) 6-7. May 2011	Article
Jungbluth, M, Lenz, PH, and E Goetze. *Copepods of Kane'ohe Bay, Hawai'i.* Sea Grant Graduate Presentations, Hanauma Bay, Honolulu, Hawaii. Nov 2010	Public Presentation

PROFESSIONAL DEVELOPMENT

LEADERSHIP EXPERIENCE:

Fellow, Equitable Collaboration in STEM HUB, SFSU	2021-2022
Exhibit Leader, California Academy of Science; Women in Science Nightlife Event *Duties*: Organized a group of students in the creation of a few new outreach materials to share the work our lab does with the public through an interactive exhibit about San Francisco Estuary zooplankton	2019
Visiting Scientist, on NOAA Pacific Island Fisheries Science Center LOPEC Research Cruise; Joint Institute for Marine and Atmospheric Research, Honolulu, Hawaii	2017
Exhibit Leader, SOEST Open House outreach event- *Zooplankton: Microscopic Ocean Drifters* *Duties*: Organize and develop outreach materials, coordinate and teach volunteers, work the event	2013, 2015, 2017
Officer, Professional Development and Training Program *Duties:* Help plan and organize professional development opportunities for graduate students and post-docs in SOEST	2015-2016
Chair, Science Communicators 'Ohana, an organization I co-founded that aimed to promote effective methods of science communication to increase science literacy in society *Duties*: Organize and lead group meetings, organize and facilitate workshops, advertise, recruit members, coordinate events outside organizations	2014-2015
President, Na Kama Kai Oceanography graduate student organization	2014-2015
Member, Mentoring Network. Mentors and mentees of all levels who talk about how to be better mentors.	2014-2015

Organizer, student committee member representative of The Oceanography Society, for the 2014 Ocean Sciences Meeting in Honolulu, HI — 2013-2014

Vice President, Na Kama Kai Oceanography graduate student organization — 2013- 2014

Founder and contributor, Real Science at SOEST Blog: the first blog for graduate students in the School of Ocean Earth Science and Technology (UH Manoa) to share research and science experiences with the public — 2013-2016

SHIP TIME: 88 days at sea, >87 on small vessels coastally

Chief Scientist, R/V Athena (ICF) – Lead Scientist, field work for my Microbes to Zooplankton project in wetlands of the San Francisco Estuary (6+ days) — 2022

R/V Questuary (SFSU) – Lead Scientist, teaching cruise for 2019 Summer REU students around the Central San Francisco Bay. Also 6 months pregnant. (1 day ea) — 2019, 2022

R/V Questuary (SFSU) and R/V Turning Tide (ICF) – San Francisco Estuary field sampling investigating fine-scale spatial distribution of longfin smelt juveniles and potential prey assemblage, coordinated between a team of three research vessels each day. (8 days) — 2018

Chief Scientist, R/V Questuary(SFSU) – San Francisco Estuary field sampling investigating depth distribution of longfin smelt juveniles and potential prey community, coordinated between a team of three research vessels. (2 days) — 2017

NOAA Oscar Elton Sette – Cruise SE17-03, Leeward Oahu Pelagic Ecosystem Characterization (LOPEC) cruise participant – D. Kobayashi (NOAA) chief scientist. (10 days) — 2017

R/V Questuary – San Francisco Estuary field sampling targeting longfin smelt larvae and potential prey community. (2 days) — 2017

RRS James Clark Ross – Atlantic Meridional Transect cruise 24, Basin-Scale Genetics of Marine Zooplankton, cruise participant, NSF RAPID funded – T. Smyth (PML) chief scientist. (46 days) — 2014

R/V Falkor – Student cruise 3 participant, Station ALOHA and Molokai Channel, MOCNESS zooplankton tows, microzooplankton grazing experiments, and seafloor mapping. E. Goetze (UH) chief scientist. (6 days) — 2014

R/V Kilo Moana – cruise participant, Station ALOHA, NSF-funded Mesopelagic Micronekton study, B. Popp & J. Drazen chief scientists. (6 days) — 2011

R/V Kilo Moana – cruise participant, West Coast of Oahu, Hawaii, University of Hawaii School of Ocean and Earth Science and Technology funded student cruise, J. Drazen (UH) chief scientist. (2 days) — 2011

R/V Atlantis – ROV JASON-II cruise participant, Juan de Fuca Ridge, NSF-Microbial Observatory, J. Cowen (UH) & A. Fisher (UCSC) chief scientists. (18 days) — 2010

Field sampling time series, Kaneohe Bay, HI – M.S. and Ph.D. Monthly plankton and environmental samples, four sets of 2-week daily sampling, other events. (>75 days)	2010-2016

CONFERENCES and SYMPOSIA:

Ocean Sciences Conference, Virtual	2022
Coastal and Estuarine Research Foundation Conference, Virtual	2021
Bay Delta Science Conference/Interagency Ecological Program Workshop, Virtual	2021
DNA AquaNet Conference, Virtual	2021
Biodiversity Genomics Conference, Virtual	2020
Ocean Sciences Conference, San Diego, CA	2020
Digital Data in Biodiversity Conference, New Haven, CT	2019
Illumina User Group Meeting, San Francisco, CA	2018
Bay Delta Science Conference, Sacramento, CA	2018
Ocean Sciences Conference, Portland, OR	2018
Gordon Research Conference on Predator-Prey Interactions, Ventura, CA	2018
State of the Estuary Conference, Oakland, CA	2017
13th International Conference on Copepoda, San Pedro, CA	2017
6th Zooplankton Production Symposium, Bergen Norway	2016
Ocean Sciences Conference, Honolulu, HI	2014
Aquatic Sciences Conference, New Orleans, LA	2013
Ocean Sciences Conference, Salt Lake City, UT	2012
The Crustacean Society Summer Conference, Honolulu, HI	2011

WORKSHOPS and SHORT COURSES ATTENDED:

Zoopfest Workshop	2022
COAST Implicit Bias Training Workshop, Virtual	2021
Interagency Ecological Program Workshop, Folsom, CA	2018-2022
Professional Website Workshop, Science Communicators ‘Ohana, Honolulu, HI	2016
Improvisation for Scientists Workshop, Science Communicators ‘Ohana, Honolulu, HI	2015
Early Career Leadership Workshop, Science and Technology Center Meeting, Honolulu, HI	2015

Sir Alister Hardy Foundation for Ocean Sciences- Marine Crustacean Zooplankton Workshop, 1 of 20 international attendees, Plymouth, United Kingdom	2015
Negotiating the Next Career Move: A Leadership Summit with COACh, Honolulu, HI	2015
Pub Speech Workshop, Science Communicators 'Ohana, Honolulu, HI	2015
Blog Basics Workshop, Science Communicators 'Ohana, Honolulu, HI	2015
Teaching Science as Inquiry: Communicating Ocean Science workshop, Honolulu, HI	2013
Publishing and Reviewing Manuscripts workshop, New Orleans, LA	2013
SCINTILLATION: A Workshop to Make Your Science Communication Scintillate through "Critical Storytelling", New Orleans, LA	2013
C-MORE Virtual Workshop on Science Writing, Honolulu, HI	2012
Clustering in Bioinformatics and Medical Informatics workshop, Honolulu, HI	2012
Science: Becoming the Messenger workshop, NSF, Honolulu, HI	2012
R/V Kilo Moana, 1 m^2 MOCNESS (Multiple Opening and Closing Net and Environmental Sensing System)- *training for deployment and recovery*, Honolulu, HI	2011

PROFESSIONAL MEMBERSHIPS:

Association for the Sciences of Limnology and Oceanography (ASLO)
The Oceanography Society (TOS)
World Association of Copepodologists (WAC)
American Microscopical Society (AMS)
The Crustacean Society (TCS)

PUBLIC SERVICE

Outreach: Girl Scouts. *Women Oceanographers, Oceanography, and the Importance of Ocean Science to Our Planet!* Discussion with a Girl Scout Troop, to help them get their Oceanography Badge. Virtual Brooklyn, NY. April 2021.

Outreach: Skype-a-Scientist. *Plankton Science!* Presentation to 1st grade class in Virtual Chester, PA. March 2021.

Outreach: Skype-a-Scientist. *What's in your water? Studies of tiny aquatic animals*. Presentation to 5th grade class in Virtual Brooklyn, NY. April 2020.

Outreach: California Academy of Sciences Night Life Women in Science event. Organized and led an exhibit on women in plankton ecology: past, present, and future. 2019.

Invited Panelist: University of California, Berkeley, *Beyond Academia: Public Sector Fellowships* Workshop. 2018.

Outreach: Estuary & Ocean Science Center Discovery Day, public science outreach event (2018, 2019: not held in 2020, 2021)

Community Service: Beach cleanup with Sustainable Coastlines Hawaii

Outreach: School of Ocean Science Engineering and Technology Open House, Organized and led the Plankton and Food Webs exhibit

Community Service: Zooplankton expert, Kapolei Middle School trips to Hawaii Institute of Marine Biology: plankton tows, talk to students about zooplankton and my research

Community Service: Hawaii State Science and Engineering Fair, Judge, Junior & Senior divisions

Community Service: Plankton expert, biannual UH Manoa Biology Plankton Party

Outreach: Interviewee on the *All Things Marine* radio show, via COSEE Island Earth on Hawaii's Tomorrow 760 AM radio, live from the R/V Falkor

Community Service: Expanding Your Horizons event, to motivate young women in science, mathematics, and technology, Honolulu, Hawaii

Community Service: Expert in identification of plankton, CDEBI & CMORE Marine Science Workshop for outer island teachers, Sacred Hearts Academy, Lahaina, Maui

Outreach: CDEBI & CMORE visit to Kalama Middle School, discuss careers in Marine Science with 8th grade students, Makawao, Maui HI

Community Service: Hawaii Association of Independent Schools District Science Fair, Judge

Community Service: Hawaiian Humane Society volunteer

Community Service: School of Ocean Science Engineering and Technology Open House, Kids activity tent with *Gyotaku*, density, and wave activities

Community Service: Provided frequent field sampling opportunities for undergraduates