

Christopher B. Wall

Curriculum Vitae

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RESEARCH INTERESTS

Climate change and environmental stress effects on terrestrial and marine organisms; stable isotope biogeochemistry; microbial functional diversity; coral reef and wetland trophic ecology; autotrophic and heterotrophic nutrition and trophic flexibility; nutrient flux in host-symbiont interactions.

EDUCATION

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|-------|-------|---|
| 2013- | Ph.D. | Marine Biology, University of Hawai'i at Mānoa (<i>Spring 2019</i>)
Advisor: Dr. Ruth Gates
Committee Chair: Dr. Megan Donahue
Dissertation: <i>Environmental and biological effects on nutritional mode and resource partitioning in scleractinian corals</i> |
| 2012 | M.Sc. | Biology, <i>Academic Distinction</i> , California State University, Northridge
Advisor: Dr. Peter Edmunds
Thesis: <i>Effects of temperature and ocean acidification on juvenile scleractinian corals</i> |
| 2008 | B.Sc. | Biology, minor Chemistry, <i>Summa Cum Laude</i> , University of North Texas
Undergraduate research: wetland ecology; mycorrhizal symbiosis in wetland plants |
| 2004 | A.Sc. | North Lake College |

PUBLICATIONS

citations: 129 h-index: 5 i10-index: 4

- (*in review, Sept 2018*) **Wall CB**, Ritson-Williams R, Popp BN, Gates RD. Spatial variation in the biochemical and isotopic composition of corals during bleaching and recovery. (*Limnology and Oceanography*) *BioRxiv* pre-print: <https://doi.org/10.1101/414086>
13. 2018 Neilson BJ, **Wall CB**, Mancini FT, Gewecke CA. Herbivore biocontrol and manual removal successfully reduce invasive macroalgae on coral reefs. *PeerJ* 6: e5332
 12. 2018 **Wall CB**, Ricci CA, Foulds GE, Mydlarz LD, Gates RD, Putnam HM. The effects of environmental history and thermal stress on coral physiology and immunity. *Marine Biology* 165:56-71
 11. 2018 Innis T, Cunning R, Ritson-Williams R, **Wall CB**, Gates RD. Coral color and depth drive symbiosis ecology of *Montipora capitata* in Kāne'ohe Bay, O'ahu, Hawai'i. *Coral Reefs* 37:423-430
 10. 2017 **Wall CB**, Mason RA, Ellis WR, Cunning R, Gates RD. Elevated pCO₂ affects tissue biomass composition, but not calcification, in a reef coral under two light regimes. *Royal Society Open Science*. 4:170683
 9. 2016 Donovan MK, Friedlander AM, Usseglio P, Goodell W, Iglesias I, Schemmel EM, Stamoulis K, Filous A, Giddens J, Kamikawa K, Koike H, McCoy K, **Wall CB**. Effects of gear restriction on the abundance of juvenile fishes along sandy beaches in Hawai'i. *PLoS ONE* 11:e0155221
 8. 2015 **Wall CB**, Stevens KJ. Assessing wetland mitigation efforts using standing vegetation and seed bank community structure in neighboring natural and compensatory wetlands. *Wetlands Ecology and Management* 23:149-166
 7. 2014 Edmunds PJ, Burgess SC, Putnam HM, Baskett ML, Bramanti L, Fabina NS, Han X, Lesser MP, **Wall CB**, Yost DM, Gates RD. Evaluating the causal basis of ecological success within the Scleractinia: An integral projection model approach. *Marine Biology* 161:2719-2734

6. 2014 Edmunds PJ, **Wall CB**. Evidence that high pCO₂ affects protein metabolism in tropical reef corals. *Biological Bulletin* 227:68-77
5. 2014 **Wall CB**, Fan T, Edmunds PJ. Ocean acidification has no effect on thermal bleaching in the coral *Seriatopora caliendrum*. *Coral Reefs* 33:119-130
4. 2013 **Wall CB**, Edmunds PJ. In situ effects of low pH and elevated HCO₃⁻ on juvenile *Porites* spp. in Moorea, French Polynesia. *Biological Bulletin* 225:92-101
3. 2013 Cumbo VR, Edmunds PJ, **Wall CB**, Fan T-Y. Brooded coral larvae differ in their response to high temperature and elevated pCO₂ depending on the day of release. *Marine Biology* 160:2903-2917
2. 2012 **Wall CB**. Effects of temperature and ocean acidification on juvenile scleractinian corals. MSc Thesis, Department of Biology, California State University, Northridge
1. 2011 Stevens KJ, **Wall CB**, Janssen JA. Effects of arbuscular mycorrhizal fungi on seedling growth and development of two wetland plants, *Bidens frondosa* L., and *Eclipta prostrata* (L.) L., grown under three levels of water availability. *Mycorrhiza* 21:279-288

RESEARCH EXPERIENCE

- | | |
|-------------|---|
| 2015 | Division of Land and Natural Resources, Research Corporation of the University of Hawai'i at Mānoa. Assessing the success of management strategies to remove invasive algae in Kāne'ōhe Bay, O'ahu. Statistical analyses. |
| 2015 | National Oceanic and Atmospheric Administration Rapid Assessment and Monitoring Program research cruise Papahānaumokuākea Marine National Monument; NOAA Research Vessel, Hi'ialakai; Chief Scientist: Scott Godwin |
| 2013 – | Hawai'i Institute of Marine Biology, Dr. Ruth Gates Laboratory; UH Mānoa Coral energetics, stable isotope biogeochemistry, and nutritional flexibility in corals |
| 2010 – 2012 | Edmunds Polyp Laboratory, Dr. Peter Edmunds; CSU Northridge Physiological effects of ocean acidification and temperature on juvenile reef corals in Mo'orea French Polynesia and Taiwan. |
| 2009 – 2010 | Laboratory for Marine Conservation Physiology; Dr. Ione Hunt von Herbing; University of North Texas. Postbac research technician. Multi-trophic marine aquaculture and biofiltration techniques. |
| 2008 – 2010 | Wetland Ecology Research Group; Dr. Kevin Stevens; University of North Texas Postbac research technician. Ecology of vegetation and seed banks in wetlands. |
| 2007 – 2008 | Dr. Kevin Stevens; undergraduate research; University of North Texas Undergraduate research assistant. Effects of mycorrhiza fungi and soil inundation on wetland seedling. |
| 2005 | Hawaiian Field Studies Program; North Lake College |

TEACHING EXPERIENCE

Instructorships

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| 2013 – | <i>Adjunct faculty</i> : College of Life Sciences, Santa Monica College
Courses: Introduction to Plant Biology with laboratory (Botany 1): <i>1 semester</i>
Marine Biology non-laboratory (BIOL 15N): <i>2013 1 semester</i>
Marine Biology non-laboratory (BIOL 15N-online): <i>2013 – present (4 semesters/year)</i> |
| 2018 – | <i>Associate Teaching assistant</i> : Center for Teaching Excellence, University of Hawai'i at Mānoa; Instruction for graduate students in teaching laboratory science course |
| 2017 – 2018 | <i>Teaching assistant</i> : Department of Oceanography, University of Hawai'i at Mānoa Science of the Sea, Laboratory (OCN 201L): <i>1 semester</i>
<i>Head TA of 4-6 sections</i> : Science of the Sea, Laboratory (OCN 201L): <i>2 semester</i> |
| 2013 – 2016 | <i>Teaching assistant</i> : Department of Biology, University of Hawai'i at Mānoa Introduction to Biology Laboratory (BIOL 171L): <i>3 semesters</i> |

Marine Biology Graduate Program core curriculum (MBIO 601): *1 semester*
 Advanced Topics in Marine Biology (BIOL 404): *2 semesters*

- 2005 *Teaching assistant:* Hawaiian Field Studies, North Lake College
 2003 – 2008 *Supplemental instructor and tutor:* North Lake College, Science Center
 Subjects: botany, biology, geology, chemistry

Invited Lectures

- 2018 UH Mānoa, Corals and Coral Reefs (ZOOL 410)
A song of stress and acclimation: Unraveling the basis for nutritional plasticity in corals
- 2016 – 2018 Kapi'olani Community College (Honolulu, HI)
 2016: *What's in the water? How ocean chemistry and temperature affects reef corals*
 2017: *Nutritional flexibility in corals: unraveling the biological response*
 2018: *Coral bleaching: Causes and consequences*
- 2016 Coppell High School (Coppell, TX), 12th grade, Skype lecture
Introduction to Coral Reefs
- 2016, 2017 Frederica Academy (St. Simons Island, GA), 10th grade, Skype lecture
 2016: *Climate change and the biology of coral reefs*
 2017: *Ocean acidification and its impact on marine organisms and ecosystems*
 2018: *Environmental stress and the study of reef corals*
- 2016, 2018 UH Mānoa, Advanced Topics in Marine Biology (BIOL 404)
 2016: *Coral bleaching in Hawai'i: Impacts of the 2014–2015 El Niño event*
 2018: *Coral bleaching an recovery: effects on biomass and nutritional states*
- 2014, 2015 North Lake College (Irving, TX) Introduction to Biology (BIOL 1407), Skype lect.
 2014: *From community college to community ecology: The taxis of a scientist to the sea*
 2015: *Lessons for success in science higher education*
- 2013 Hawai'i Institute of Marine Biology, Marine Biology seminar
Effects of elevated temperature and ocean acidification on juvenile reef corals
- 2011 Pulse Amplitude Modulation Fluorometry (PAM) workshop
 National Museum of Marine Biology and Aquarium, Checheng, Taiwan.
Chlorophyll fluorescence and the photophysiology of Symbiodinium spp.

FELLOWSHIPS, RESEARCH GRANTS, SCHOLARSHIPS, & AWARDS (Total \$203,700)

- 2018 Peter Castro Travel Scholarship (\$1,000)
 2018 Scholarship: IsoCamp2018, NSF participant award (\$1,200)
 2018 *Award:* 2018 UH Mānoa Biology Photography Contest, *People and Environment*
 2017 *Award:* Best Paper: 42nd Albert L. Tester Symposium, UH Mānoa (\$1,000)
 2016 Denise B. Evans Fellowship in Oceanographic Res. (SOEST, UH Mānoa) (\$28,000)
 2016 – 2019 Environmental Protection Agency (EPA) STAR Fellowship (\$132,000)
 2016 *Award:* Eco-Steward: IUCN-UH Mānoa East-West Center, IUCN World Congress
 2015 Marine Biology Program Student Grant; UH Mānoa (\$2,500)
 2014 – 2018 Col. Willys E. Lord & Sandina L. Lord Endowed Scholarship; UH Mānoa (\$10,500)
 2014 Santa Monica College Faculty Sabbatical Fellowship (\$2,500)
 2014 Arthur & Beatrice Harris Endowment Graduates Scholarship; UH Mānoa (\$1,000)
 2013, 2014, 2016 Edmondson Research Grant; UH Mānoa (\$6,000)
 2013 – 2016 Graduate Opportunity Grant; UH Mānoa (\$6,000)
 2012 NSF Graduate Research Fellowship Program: *Honorable Mention*
 2011 California State University Grant; CSUN (\$2,000)
 2011 Thesis Support Fellowship; CSUN (\$1,000)
 2010, 2011 Graduate Equity Fellowship Grant ; CSUN (\$2,000)
 2008 *Summa Cum Laude*; University of North Texas
 2008 Student Travel Award; Society of Wetland Scientist Regional Conference (\$1,000)
 2006 Honors College Scholarship; UNT (\$1,000)
 2005 – 2006 Transfer Student Scholarship; UNT (\$5,000)

ORAL PRESENTATIONS (§ indicates a poster)

24. CB Wall, SB Matsuda, RD Gates (2018) *Symbiodinium* diversity in shallow reefs of the remote Northwestern Hawaiian Islands. NOAA Symposium on Science in Support of Archipelagic Management.
23. CB Wall, RD Gates (2017) Patterns of *Symbiodinium* diversity in the coral *Montipora capitata* from shallow reefs of the remote Northwestern Hawaiian Islands. 7th Annual Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, Wawona, California
22. CB Wall, RD Gates (2017) Ecosystem primary productivity as a driver for heterotrophic nutrition in reef corals of the Northwestern Hawaiian Islands. Hawai'i Institute of Marine Biology student scholarship research symposium. Kāne'ohe, Hawai'i
21. CB Wall, R Ritson-Williams, RD Gates (2017) Context-dependent shifts in nutritional modes of thermally stressed and recovered corals. 42nd Albert L. Tester Symposium, University of Hawai'i at Mānoa. Honolulu, Hawai'i
20. CB Wall, R Ritson-Williams, RD Gates (2017) Energetic and isotopic analysis of two species of thermally stressed and recovered corals. Association for the Study of Limnology and Oceanography Aquatic Sciences Meeting. Honolulu, Hawai'i
19. CB Wall, WR Ellis, R Mason, R Cunning, RD Gates (2016) High pCO₂ alters the energetics and composition of biomass, but not calcification, in a reef building coral at two light regimes. The 100th Western Society of Naturalists Conference, Monterey, California
18. CB Wall, WR Ellis, R Mason, R Cunning, RD Gates (2016) Combined effects of pCO₂ and irradiance on the energy reserves and calcification of a reef building coral. 13th International Coral Reef Symposium, Honolulu, Hawai'i
17. § BJ Neilson, CB Wall, F Mancini, CA Gewecke (2016) Coral reef restoration through management of alien invasive species through the use of mechanical removal and bio-control efforts. 13th International Coral Reef Symposium, Honolulu, Hawai'i
16. CB Wall, WR Ellis, R Mason, R Cunning, RD Gates (2016) Ocean acidification and irradiance effects on the energy reserves and calcification of the reef coral *Pocillopora damicornis*. The 41st Albert L. Tester Symposium, University of Hawai'i at Mānoa. Honolulu, Hawai'i
15. CB Wall, PJ Edmunds (2015) Evidence that elevated pCO₂ perturbs protein metabolism in two early life stages of a tropical reef coral. The 40th Albert L. Tester Symposium, University of Hawai'i at Mānoa. Honolulu, Hawai'i
14. CB Wall, PJ Edmunds (2014) Elevated pCO₂ alters protein metabolism in the early life stage of a tropical reef coral. 98th Western Society of Naturalists Conference, Tacoma, Washington
13. CB Wall, PJ Edmunds (2014) Elevated-DIC stimulates coral calcification in juvenile *Porites* spp. exposed to ocean acidification *in situ*. The 39th Albert L. Tester Symposium, UH Mānoa. Honolulu, Hawai'i
12. § CB Wall, T Fan, PJ Edmunds (2014) Ocean acidification does not affect thermal bleaching in the coral *Seriatopora caliendrum*. Ocean Science Meeting, Association for the Study of Limnology and Oceanography. Honolulu, Hawai'i
11. § CB Wall, PJ Edmunds (2013) Elevated pCO₂ increases ammonium excretion in the juvenile scleractinian coral *Seriatopora caliendrum*. Society of Integrative and Comparative Biology Regional Meeting. San Francisco, California
10. CB Wall, PJ Edmunds (2012) *In situ* effects of low-pH and elevated-DIC on the calcification and respiration of juvenile massive *Porites* spp. 96th Western Society of Naturalists Conference. Monterey, California

9. CB Wall, T Fan, PJ Edmunds (2012) Ocean acidification does not enhance thermal bleaching in juvenile scleractinian corals. CSUN Student Research Symposium. Northridge, California
8. CB Wall (2012) The effects of climate change on juvenile corals in Taiwan and Mo'orea, French Polynesia. Symposium for Mo'orea Scientific Research and Education, Gump South Pacific Research Station. Mo'orea, French Polynesia
7. CB Wall, T Fan, PJ Edmunds (2011) Ocean acidification and increased temperatures do not act additively to cause bleaching in the juvenile scleractinian coral *Seriatopora caliendrum*. NSF USA Taiwan Collaborative Research in Coral Biology, CSUN. Northridge, California
6. CB Wall, TY Fan, PJ Edmunds (2011) pCO₂ does not affect thermal bleaching in juvenile colonies of the coral *Seriatopora caliendrum*. 97th Western Society of Naturalists Conference. Vancouver, Washington
5. CB Wall, PJ Edmunds (2011) Elevated pCO₂ and coral thermal bleaching: Does ocean acidification affect bleaching severity or recovery? Taiwan-USA Bilateral Workshop on Coral Reef Research, Academia Sinica. Taipei, Taiwan
4. CB Wall, PJ Edmunds (2011) Elevated pCO₂ and temperature stress: Understanding the dynamics of coral bleaching in acidified oceans. NSF Coral Reproduction and Resilience Workshop, National Museum of Marine Biology and Aquarium. Checheng, Taiwan
3. § CB Wall, PJ Edmunds (2011) Effects of elevated pCO₂ and temperature on the corals *Pocillopora damicornis* and *P. verrucosa* – a proposal for research CSUN Student Research Symposium. Northridge, California
2. CB Wall, JA Jansen, KJ Stevens (2010) The role of arbuscular mycorrhizal fungi in modulating wetland community structure. 96th Western Society of Naturalists Conference. San Diego, California
1. CB Wall, JA Jansen, KJ Stevens (2008) Wetland plants form mycorrhizal association in variable water conditions. Society of Wetland Scientists Southwest Chapter Regional Conference. Birmingham, Alabama

PROFESSIONAL EXPERIENCE & TRAINING

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| 2018 | <u>Workshop participant:</u> IsoCamp 2018, University of Utah Stable Isotope Biogeochemistry and Ecology with Lab (BIOL 7473, BIOL 7475) |
| 2018 | <u>Conference organizing committee:</u> (1 of 3 graduate students)
UH Mānoa Dept. of Biology, 43rd Annual Albert L. Testers Memorial Symposium
In charge of booking guest speaker and venue, raising funds to support symposium, organized workshops, talk/poster selection, scheduling, and promotion |
| 2017 | <u>Workshop participant:</u> 7 th Annual Yosemite Symbiosis Workshop.
Sierra Nevada Research Institute, Wawona, Yosemite National Park;
University of California Merced |
| 2017 | <u>Workshop participant:</u> STEM mentorship workshop
UH Mānoa-SOEST, hosted by Dr. Becky Packard |
| 2016 | <u>Workshop participant:</u> Hawai'i Coral Bleaching Collaborative
Division of Aquatic Resources, National Oceanic and Atmospheric Administration
Coral Reef Task Force, Hawai'i Institute of Marine Biology Univ. of Hawai'i Mānoa |
| 2014 | <u>Workshop participant:</u> <i>pH and Autonomous Ocean Sensor Workshop</i> . University of California San Diego Scripps Institute of Oceanography and Woods Hole Oceanographic Institute. |
| 2013 | <u>Workshop participant:</u> <i>EarthCube Domain Workshop: Developing a Community Vision of Cyberinfrastructure</i> (NSF), Hawai'i Institute of Marine Biology |

- 2012 Workshop participant: *Environmental Proteomics Workshop* (NSF) California Polytechnic University, San Luis Obispo; sponsored Dr. Lars Tomenak
- 2012 Workshop participant: *Tropical Coral Reefs of the Future* (focus on coral physiology) National Center for Ecological Analysis and Synthesis (NCEAS) Working Group

STUDENT MENTORSHIP

3 grad., 8 undergrad., 9 middle/high school students – 13 woman, 9 Hawaiian/Pacific Islander/Asian

Graduate students (co-mentored)

- 2018 Madeline Piscetta, University of Miami RSMAS
- 2018 Rebecca Kitchen, Northeastern University
- 2016 Teegan Innis, Northeastern University

Undergraduate students

- 2018 Pansa Cecchini, Hawai'i Pacific University
- 2017 Christian Marin, Hawai'i Pacific University
- 2017 Mario Kaluhiokalani, Humboldt State University
- 2016 Kelly Wyrick, post-baccalaureate, University of Kentucky
- 2016 Alexandra Wen, Duke University
- 2016 Ann Pace, Univ. of California Los Angeles School for Theater, Film, and Television Sloan Finalist for Production; science advising for 'coral bleaching film'
- 2015 – 2016 William Ellis, Undergraduate, Northeastern University
- 2015 Dylan Comb, Undergraduate, Northeastern University

Middle school and high school students

- 2017 Bethany Lum, 12th grade, 'Iolani School, Honolulu, HI
Project: Are there limits to 'coral safe' sunscreen?
- 2017, 2018 Haley Otto, 7th grade, School for Examining Essential Questions of Sustainability: SEEQS (Honolulu, HI).
Project: Concentration dependent effects of sunscreen on corals
- 2016 Marco Conati and Ethan Li, 12th grade Minnetonka High School (Minnetonka, MN)
Remote mentor for high school science research
Project: Temperature and heterotrophy in thermally bleached *Aiptasia* sp. anemones
- 2016 Kaci Muromoto, 7th grade, Mid-Pacific Institute (Honolulu, HI)
Project: Does exposure time determine sunscreen pollution effects on corals?
Awards: Advanced to National Science Fair; Hawai'i State Science Fair: American Chemical Society Award, 1st in Biochemistry, 3rd in Chemistry
- 2016 Sami Thomas, 11th grade Coppell High School (Coppell, TX)
Coral science project mentor International Baccalaureate Diploma
- 2015 – 2016 Gabbie Owen-Mendonca, 7th grade, School for Examining Essential Questions of Sustainability: SEEQS (Honolulu, HI)
Project: Chronic exposure to sunscreen causes coral mortality and bleaching
- 2015 Kennedy Flores, 8th grade Mid-Pacific Institute, Honolulu, HI
Project: *Symbiodinium* diversity among reef patches in Kāne'ohe Bay, O'ahu
Awards: Advanced to National Science Fair
- 2014 Zoe Chan, 8th grade Mid-Pacific Institute, Honolulu, HI
Project: Potential for sunscreen to cause coral bleaching in *Pocillopora damicornis*
Awards: Advanced to Hawai'i State Science Fair

EDUCATIONAL OUTREACH

- 2018 Science outreach short film *What is a marine biologist?*
- 2018 Thomas Jefferson Elementary, Falls Church, VA, *How do I become a marine biologist?*

- 2018 *Chasing Coral* Scientific Panelist, LeJardin Academy, Kailua, HI
- 2018 Hawai'i Middle School Science Fair, Honolulu Convention Center
- 2017, 2018 Hawaiian Field Studies Program (Lihue, HI), North Lake College, Irving, TX
Coral reefs under ocean warming and acidification
- 2017 UH Mānoa SOEST Open House: *Understanding the Coral Complex*
- 2017, 2018 Hanahau'oli School (Honolulu, HI), kindergarten and 1st grade.
Water is life, but what lives in the water?
- 2017 Film contributor "PonoH2O" video, Ala Wai restoration initiative
- 2017 Waikiki Aquarium Science Seminar: *Acidic Seas: Understanding the Threat of Ocean Acidification for Marine Life and Coral Reefs*
- 2017 UH-SOEST high school outreach: Biodiversity within invasive algae mats
- 2017 UH Isdell Center for Global Leadership, Pace Academy (Atlanta, GA), 12th grade
Topics in coral conservation: ocean acidification
- 2017 Waikiki Aquarium, HIMB, JABSOM, *The Science of the Sting*
- 2017 Honolulu Museum of Art School, STEAM with Queen Ka'ahumanu 1st grade class
- 2017 Punahou School (Honolulu, HI) "Scientist for a Day" with the Gates Lab at HIMB
- 2016 Nu'uānu Elementary School (K-5) (Honolulu, HI)
Original content for STEM educational video: *Careers in Science: A Marine Biologist*
- 2016 Science project advising: Moanalua High School (Honolulu, HI)
- 2016 Honolulu Museum of Art School, STEAM with Queen Ka'ahumanu 1st grade class
- 2016 "Talk story with a scientist", science career advising. Kula Kaiapuni 'O Ānuenue
Hawaiian Cultural Immersion School (Honolulu, HI)
- 2016 School for Examining Essential Questions in Sustainability: SEEQS (Kahala, HI)
Gates Lab and HIMB coral education interactive tour (53 students)
- 2016 Pacific Island Institute, marine biologist snorkel tour at Kuilima Cove
- 2016 Hawaiian Field Studies Program (Irving, TX), Hawai'i Institute of Marine Biology
Stressed in paradise: Coral bleaching in Hawai'i and mechanisms of stress resilience
- 2016 Leihoku Elementary School (Wai'anae, HI); 6th grade, guest speaker: *Local and global stressors on coral reefs in Hawai'i*
- 2016 Career Day guest speaker, Kula Kaiapuni 'O Ānuenue Hawaiian Cultural Immersion
Elementary School (Honolulu, HI).
Coral research in the Main and Northwestern Hawaiian Islands
- 2016 OPIHI (Our Project In Hawaii's Intertidal) citizen science project; biological science
assistant and education volunteer; Mid Pacific Institute (Honolulu, HI) and The
University Laboratory School (Honolulu, HI)
- 2015 Hawaiian Field Studies Program (Lihue, HI), North Lake College, Irving, TX
Physiological resilience in reef corals: The role of nutritional flexibility
- 2015 Generation of open access, digital reefscape for coral reef education and outreach
- 2015 University of Hawai'i at Mānoa, School of Ocean and Earth Sciences and
Technology, Open House community outreach event
- 2015 Career Day guest speaker, Kula Kaiapuni 'O Ānuenue Hawaiian Cultural Immersion
School (Honolulu, HI)
- 2014 Hawaiian Field Studies Program (Lihue, HI), North Lake College, Irving, TX
Environmental stress and Hawai'i's coral reefs
- 2014 Kailua Intermediate School (Kailua, HI); 7th grade science fair judge
- 2014 Mid-Pacific Institute (Honolulu, HI); 8th grade science fair judge
- 2014 Hanauma Bay Lecture Series; *Reef corals and the threat of global climate change*
- 2014 Hawai'i Institute of Marine Biology education and community outreach volunteer
- 2014 Hawaiian Field Studies Program, North Lake College (Irving, TX); volunteer
- 2012 Sun Valley High School (Sun Valley, CA); guest lecturer: *A sea of change: Ocean acidification and the future of coral reefs*

- 2011 Viewpoint School (Calabasas, CA); guest lecturer: *Overfishing and Coral Reefs: Climate Change and Exploitation of Marine Resources*
- 2011 Viewpoint School (Calabasas, CA); guest lecturer: *Coastal upwelling in California*
- 2011 – 2012 National Museum of Marine Biology and Aquarium (Checheng, Taiwan), student education program
- 2009 – 2010 Texas Governor's School science research program for high school students, The University of North Texas.

PROFESSIONAL SERVICE

Service as Peer Reviewer:

Nature Scientific Reports, PLoS One, PeerJ, Ecological Engineering, ICES Journal of Marine Science, Frontiers in Marine Science, Invertebrate Biology

Marine Biology Graduate Student Association (CSUN), Treasurer, 2010-2011

Hazardous Waste Manager, Gates Laboratory, Hawai'i Institute of Marine Biology

CERTIFICATION & PROFESSIONAL ORGANIZATIONS

International Society for Reef Studies (ISRS)

American Society of Limnology and Oceanography (ASLO)

American Academy of Underwater Scientists (AAUS) (2010 – present)

Divers Action Network (DAN)

Boating certification, National Association of Boating Law Administrators (2016 – present)

NAUI Enriched Air Nitrox Diver (NITROX)

NAUI Master Diver

NAUI Rescue Diver

Emergency oxygen provider and emergency first responder (DAN)

PROFESSIONAL REFERENCES

Dr. Peter Edmunds (M.Sc. advisor)
California State University Northridge
818-677-2502
peter.edmunds@csun.edu

Dr. Brian Popp (Ph.D. committee member)
University of Hawai'i at Mānoa
808-956-6206
popp@hawaii.edu

Dr. Megan Donahue (Ph.D. committee chair)
Hawaii Institute of Marine Biology
808-236-7417
donahuem@hawaii.edu