Christopher B. Wall

Curriculum Vitae

Assistant Research Faculty – SOEST Early Career Research Fellow
Department of Earth Sciences
University of Hawai'i at Mānoa, Honolulu, HI USA
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RESEARCH INTERESTS

Coral reefs; marine and freshwater ecology; stable isotopes and biogeochemistry; trophic ecology; symbioses; physiological ecology; host-associated microbiomes and microbial ecology; nutrient fluxes in host-symbiont interactions; heatwaves; climate change; fire impacts on inland waters and the ocean

PROFESSIONAL APPOINTMENTS

Research appointments

2026 –	Cooperating Graduate Faculty, Marine Biology Graduate Program, UH-Mānoa
2024 –	Regular Graduate Faculty, Dept. of Earth Sciences, UH-Mānoa
2024 –	Assistant Research Faculty, SOEST Early Career Research Fellow, UH-Mānoa
2021 – 2024	Postdoctoral Researcher, University of California, San Diego
2019 – 2021	Postdoctoral Researcher, Pacific Biosciences Research Center, UH-Mānoa
2016	Denise B. Evans Research Fellow in Oceanographic Research, UH-Mānoa
2015 – 2019	Environmental Protection Agency (EPA) STAR Research Fellow, UH-Mānoa

Teaching appointments

2026	Adjunct Professor, Div. of Extended Studies, University of California, San Diego
2022	Associate Professor, Dept. of Mathematics and Natural Sciences, National University
2021	Adjunct Professor, Dept. of Interdisciplinary Studies, Cal State Univ, Dominguez Hills
2013	Adjunct Professor, Life Sciences Department, Santa Monica College

EDUCATION

2019	Ph.D. Marine Biology, University of Hawai'i at Mānoa Dissertation: *Environmental and biological effects on nutritional mode and resource partitioning in scleractinian corals*. Chairs: Drs. Ruth Gates and Megan Donahue
2012	M.Sc. Biology, California State University Northridge Thesis: *Effects of temperature and ocean acidification on juvenile scleractinian corals* Chair: Dr. Peter Edmunds
2008	B.Sc. Biology, minor Chemistry, *Summa Cum Laude*, University of North Texas Research topic: *Symbiosis between arbuscular mycorrhizal fungi and wetland plants*
2005	A.Sc. North Lake College

PUBLICATIONS

(‡ shared first authorship, *undergraduate mentee) *Google scholar citations*: 1311 *h-index*: 20 *i10-index*: 24

Published manuscripts

36. **Wall CB**‡, Besser AC‡, Symons CS, Newsome SD, Shurin JB. (2026) Zooplankton reliance on autochthonous and allochthonous resources across mountain lakes revealed through essential amino acid $\delta^{13}C$ analysis. *Limnology and Oceanography*, e70496.

35. Dominguez JH, Härer A, **Wall CB**, Rennison DJ, Symons CC, Shurin JB. (2026) Parallel, scale-dependent biogeography of host-associated and free-living microbiomes. *Molecular Ecology*, 35(12):e70428

34. Stoner-Osborne BR, García-Seoane, R **Wall CB**, Wallsgrove NJ, Drazen JC, Popp BN. (2026) Amino acid compound-specific isotope analysis reveals island mass effect subsidies in reef-associated Hawaiian zooplankton. *PeerJ*, 14:e21076

33. **Wall CB‡**, Perreault M‡, Demmell MY, Diaz E, Dominguez JH, Shurin JB. (2025) Spatial and intra-seasonal variation in free-living and zooplankton-associated microbial communities of alpine lakes. *Molecular Ecology*, 34(19):e70069.

32. Demmel MY‡, **Wall CB‡**, Spiegel CJ, Erazo N, Diaz E, Perreault M, Perez-Coronel E, Jackrel SL, Bowman J, Shurin JB. (2025) Wildfire-driven changes in terrestrial subsidies shift freshwater zooplankton and microbial communities to new compositional states. *Molecular Ecology*, e17794.

31. Echenique-Subiabre I, Jackrel S, McCarren J, James CC, Perez-Coronel E, Tran C, Perreault M, Farah U, White PS, Baker H, **Wall CB**, Sager L, Becker S, Barton A, Shurin JB. (2025) Traits determine dispersal and colonization abilities of microbes. *Applied and Environmental Microbiology* 0:e02055-24

30. **Wall CB**, Kajihara K, Rodriguez F, Vilonen L, Yogi D, Swift SOI, Hynson NA. (2025) Symbiotic fungi alter plant resource allocation independent of water availability. *American Journal of Botany* 2025:e16459

29. Khen A, Fox MD, Johnson MD, **Wall CB**, Smith JE. (2024) Inter- and intraspecific responses of coral colonies to thermal anomalies on Palmyra atoll, central Pacific. *PLoS ONE* 19(11): e0312409

28. Kealoha AK, **Wall CB**, Liggett TA. Coastal water quality improves during the COVID-19 pandemic: Maui, Hawai'i. (2024) *Marine Pollution Bulletin* 209A:117088

27. Spiegel CJ, Mladenov N, **Wall CB**, Hollman K, Tran CH*, Symons CC, Shurin JB. (2024) Life after a fiery death: Fire and plant biomass loading affect dissolved organic matter in experimental ponds. *Global Change Biology* 30: e17061

26. **Wall CB**, Spiegel CJ, Diaz E*, Tran C*, Fabiani A, Broe TY, Jackrel SL, Mladenov N, Symons CC, Shurin JB. (2024) Fire transforms effects of terrestrial subsidies on aquatic ecosystem structure and function. *Global Change Biology* 30: e17058

25. Khen A, **Wall CB,** Smith JE. (2023) Standardization of coral bleaching measurements highlights the variability in genus, morphology, and region-specific responses. *PeerJ* 11:e16100

24. Mannochio-Russo H, Swift SIO, Nakayama K, **Wall CB**, Gentry EC, Panitchpakdi M, Caraballo Rodriguez AM, Aron AT, Petras D, Dorrestein K, Dorrestein T, Williams TM, Nalley E, Altman-Kurosaki NT, Martinelli M, Kuwabara J, Darcy JL, Bolzani VS, Kelly LW, Mora C, Yew J, Amend AS, Hynson NA, Dorrestein PC, Nelson CE. (2023) Association networks of microbiomes and metabolomes among dominant coral reef primary producer holobionts illustrate a potential role for immunolipids in marine symbioses. *Communications Biology* 6, 896

23. **Wall CB**, Swift SOI, D'Antonio CM, Gebauer G, Hynson NA. (2023) Isoscapes of remnant and restored Hawaiian montane forests reveal differences in biological nitrogen fixation and carbon inputs. *PeerJ* 11:e15468

22. Kajihara KT*, Egan CP, Swift SOI, **Wall CB**, Muir CD, Hynson NA. (2022) Core arbuscular mycorrhizal fungi are predicted by a high abundance-occupancy relationship and host specialists are rare and geographically structured. *New Phytologist.* 234:1464–1476

21. **Wall CB**, Ricci CA, Wen AD*, Ledbetter BE*, Klinger DE*, Mydlarz LD, Gates RD, Putnam HM. (2021) Shifting baselines: Physiological legacies contribute to the response of reef corals to frequent heatwaves. *Functional Ecology.* 35:1366–1378

20. **Wall CB**, Wallsgrove NJ, Gates RD, Popp BN. (2021) Amino acid $\delta^{13}C$ and $\delta^{15}N$ analyses reveal distinct species-specific patterns of trophic plasticity in a marine symbiosis. *Limnology and Oceanography.* 66:2033–2050

19. Bernard J, **Wall CB**, Costantini MS, Rollins RL, Atkins ML, Cabrera FP, Cetraro ND, Feliciano CKJ, Greene AL, Kitamura PK, Olmedo-Velarde A, Sirimalwatta VNS, Sung HW, Thompson LPM, Vu HT, Wilhite CJ, Amend AS. (2021) Plant part and a steep environmental gradient predict plant microbial composition in a tropical watershed. *ISME J* 15:999–1009.

18. **Wall CB‡**, Egan C‡, Swift SOI, Hynson NA. (2020) Three decades post reforestation has not led to the reassembly of arbuscular mycorrhizal fungal communities associated with remnant primary forests. *Molecular Ecology*. 29:4234–4247
17. Mason RAB, **Wall CB**, Cunning R, Dove S, Gates RD. (2020) High light alongside elevated pCO2 alleviates thermal depression of photosynthesis in a hard coral (*Pocillopora acuta*). *Journal of Experimental Biology* 223, jeb223198
16. Kitchen RM*, Piscetta M*, Lenz EA, de Souza MR, Schar D, Gates RD, **Wall CB.** (2020) Symbiont transmission and reproductive mode influence responses of three Hawaiian coral larvae to elevated temperature and nutrients. *Coral Reefs* 39:419–431
15. **Wall CB**, Kaluhiokalani M*, Popp BN, Donahue MJ, Gates RD. (2020) Divergent symbiont communities determine the physiology and nutrition of a reef coral across a light-availability gradient. *The ISME Journal* 14:945-958
14. Shih JL, Selph KE, **Wall CB**, Wallsgrove NJ, Lesser MP, Popp BN. (2020) Trophic ecology of the tropical Pacific sponge *Mycale grandis* inferred from amino acid compound specific isotopic analyses. *Microbial Ecology* 79:495-510
13. **Wall CB**, Ritson-Williams R, Popp BN, Gates RD. (2019) Spatial variation in the biochemical and isotopic composition of corals during bleaching and recovery. *Limnology and Oceanography* 64: 2011-2028
12. Neilson BJ, **Wall CB**, Mancini FT, Gewecke CA. (2018) Herbivore biocontrol and manual removal successfully reduce invasive macroalgae on coral reefs. *PeerJ* 6: e5332
11. **Wall CB**, Ricci CA, Foulds GE*, Mydlarz LD, Gates RD, Putnam HM. (2018) The effects of environmental history and thermal stress on coral physiology and immunity. *Marine Biology* 165:56-71
10. Innis T, Cunning R, Ritson-Williams R, **Wall CB**, Gates RD. (2018) Coral color and depth drive symbiosis ecology of *Montipora capitata* in Kāneʻohe Bay, Oʻahu, Hawaiʻi. *Coral Reefs* 37:423-430
9. **Wall CB,** Mason RA, Ellis WR*, Cunning R, Gates RD. (2017) Elevated pCO_2 affects tissue biomass composition, but not calcification, in a reef coral under two light regimes. *Royal Society Open Science*. 4:170683
8. 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.** (2016) Effects of gear restriction on the abundance of juvenile fishes along sandy beaches in Hawaiʻi. *PLoS ONE* 11:e0155221
7. **Wall CB**, Stevens KJ. (2015) 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
6. Edmunds PJ, Burgess SC, Putnam HM, Baskett ML, Bramanti L, Fabina NS, Han X, Lesser MP, **Wall CB**, Yost DM, Gates RD. (2014) Evaluating the causal basis of ecological success within the Scleractinia: An integral projection model approach. *Marine Biology* 161:2719-2734
5. Edmunds PJ, **Wall CB.** (2014) Evidence that high pCO_2 affects protein metabolism in tropical reef corals. *Biological Bulletin* 227:68-77
4. **Wall CB**, Fan T, Edmunds PJ. (2014) Ocean acidification has no effect on thermal bleaching in the coral *Seriatopora caliendrum*. *Coral Reefs* 33:119-130
3. **Wall CB**, Edmunds PJ. (2013) In situ effects of low pH and elevated HCO_3^- on juvenile *Porites* spp.in Moorea, French Polynesia. *Biological Bulletin* 225:92-101
2. Cumbo VR, Edmunds PJ, **Wall CB**, Fan T-Y. (2013) Brooded coral larvae differ in their response to high temperature and elevated pCO_2 depending on the day of release. *Marine Biology* 160:2903-2917
1. Stevens KJ, **Wall CB**, Janssen JA. (2011) 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

Manuscripts in revision or review (available upon request)

a. Stephenson CN, Nelson C, Silbiger N, **Wall CB**, Moreland-Ochoa C, Donahue MJ. The role of submarine groundwater in shaping nearshore coral physiology (*in review, Coral Reefs*)

b. Meyer GG, García-Seaone R, **Wall CB**, Stoner-Osborne BR, Papastamatiou YP, Popp BN. Hurricane Walaka impact on reef predator movements at a remote atoll (*in review, Coral Reefs*)

c. Wang Q , Luo X, Liu X, Zhang J, Huang D, Wang J, Zhou X, **Wall CB**, Leung JYS, Zheng X. Heterotrophic reliance and trophic plasticity explain stress-tolerant coral dominance. (*in revision Proceedings of the Royal Society: Biological Sciences*)

d. Dominguez JH, **Wall CB**, Demmel MY, Shurin JB. Does host diversity beget microbiome diversity? Effects of zooplankton diversity and composition on environmental and host-associated microbes. (*in review, Proceedings of Royal Society: Biological Sciences*).

e. Kolle S, Kramer N, Suchocki C, XX J, Badder L, Levy N, Martin SPC*, Beaupain A, Perez AV, Kundu S, Schuster E, **Wall CB**, Toonen R, R3D consortium, Wangpraseurt D. Coral Guard substrates accelerate growth and fragment fusion for coral restoration. (*in review, iScience*)

f. Soriano MU, Baker HK, Bonadonna CC, Dominguez JH, Jones JT, Martin EL, Mohan J, Schulhof MA, **Wall CB**, Shurin JB, Symons CC. Thermophilization of Zooplankton Communities in Mountain Lakes (*in review, Proceedings of the Royal Society: Biological Sciences*)

Theses

Wall CB (2019) Environmental and biological effects on nutritional mode and resource partitioning in scleractinian corals. Ph.D., Dissertation, University of Hawai'i at Mānoa

Wall CB (2012) Effects of temperature and ocean acidification on juvenile scleractinian corals. M.Sc., Thesis, Department of Biology, California State University Northridge

PRESENTATIONS

Invited Seminars

14. **Keynote speaker**: 14th ISOECOL, Hong Kong (2026). *Energy channels and nutrient plasticity in reef building corals*

13. University of Hawai'i at Mānoa Life Sciences Seminar (2026). Resolving trophic interactions and energy channels in marine and aquatic ecosystems using amino acid isotope analysis.

12. Scripps Institute of Oceanography, University of California San Diego marine ecology seminar Resolving trophic interactions and energy channels in marine and aquatic ecosystems using amino acid isotope analysis. (2025).

11. Pacific Northwest National Laboratory, Richland, WA (2025.) Fire effects on aquatic ecosystems structure and function.

10. Hawai'i Institute of Marine Biology, Moku o Lo'e Student Association (MoLSA) (2025). Unlocking Rmarkdown with GitHub to support reproducible (and beautiful) open access science.

9. Earth Science Department Seminar: University of Hawai'i at Mānoa, Dept of Earth Sciences (2025). The trophic paradox How molecular proxies are revolutionizing the study of coral reef symbioses.

8. University of California, Santa Barbara National Reserve System Seminar (2023) Zooplankton microbiomes across alpine lakes of the Eastern Sierra**.**

7. University of California San Diego R-Users seminar (2022) An Introduction to R markdown.

6. Scripps Institute of Oceanography, University of California San Diego marine biology seminar (2021) The trophic paradox: How molecular proxies are revolutionizing the study of coral reef symbioses.

5. Hawai'i Pacific University, Marine Science Seminar (2019) Stable isotopes as a tool to understand the biology and nutrition of reef corals.

4. UH Mānoa Graduate Student Organization (2019) How to improve your coding with R markdown and GitHub.

3. Hawai'i Institute of Marine Biology, Moku o Lo'e Student Organization (2018) An Intro to R markdown with GitHub version control.

2. Hawai'i Institute of Marine Biology, Marine Biology seminar (2013) Effects of elevated temperature and ocean acidification on juvenile reef corals.

1. Pulse Amplitude Modulation Fluorometry (PAM) workshop (2011) National Museum of Marine Biology and Aquarium, Checheng, Taiwan. Chlorophyll fluorescence and the photophysiology of *Symbiodinium* spp.

Contributed presentations § indicates a poster

30. CB Wall, AC Besser, CS Symons, SD Newsome, JS Shurin (2026) Zooplankton reliance on autochthonous and allochthonous resources across alpine lakes revealed through essential amino acid $\delta^{13}C$. Association for the Science of Limnology and Oceanography (ASLO)-SIL Joint Conference, Montreal, Canada.

29. CB Wall, JA Martinez, J Alip, B Stoner-Osborne, N Wallsgrove, BN Popp (2025) Amino acid isotope analysis identifies symbiont-support of coral nutrition across an environmental gradient. Western Society of Naturalists 106th Annual Meeting. San Diego, CA.

28. § ALT Ijima, CB Wall, BN Popp, AK Kealoha (2025). Nutrient landscapes in a pristine coral reef ecosystem: Insights from coral stable isotope analyses. Albert L. Tester Symposium, UH Mānoa. *Mentee* ALT Ijima: Runner up, Best undergraduate research poster,

27. CB Wall, R Ritson-Williams, BN Popp, RD Gates (2020) Spatial variation in biochemical and isotopic composition of corals during bleaching and recovery. Society of Integrative and Comparative Biology Regional Meeting. Austin, Texas

26. CB Wall, M Kaluhiokalani, MJ Donahue (2019) The influence of symbiont genotypes in stable isotope values in corals. 9th Annual Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, Wawona, California

25. CB Wall, M Kaluhiokalani, MJ Donahue (2019) Symbiont genotypes drive isotope values of a reef coral across a light gradient. 44th Albert L. Tester Symposium, University of Hawai'i at Mānoa. Honolulu, Hawai'i

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 pCO_2 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 pCO_2 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 pCO_2 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 pCO_2 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) pCO_2 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 pCO_2 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 pCO_2 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 pCO_2 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

RESEARCH GRANTS, FELLOWSHIPS, & SCHOLARSHIPS

Total Principal Investigator/Senior Personnel awards: $1,872,474
Total Individual awards: $78,700
Total awards under consideration: $3,163,069

I. AWARDED: Principal Investigator or Senior Personnel

Principal Investigator

1. Project Title: *Coral Reef Ecosystem Research*
   Private donor donation, University of Hawai'i Foundation
   Awarded: $10,000

2. Project Title: *Smoke on the Water: Wildfire Effects on Coral–Sponge Reef Systems.*
   Funding Organization: Gordon and Betty Moore Foundation
   Lead Institution: UH-Mānoa
   Postdoctoral Researchers: Ji Hoon (Justin) Han
   Awarded: $204,679
   Grant Period: 2026-2028

3. Project Title: *Coral Reef Responses to Climate-Induced Wildfire Disturbance.*
   Funding Org.: National Science Foundation: Biological Oceanography (GEO/OCE).
   Co-Principal Investigators: Lisa McManus, Lauren Van Heukelem.
   Postdoctoral Researchers: Zachary Quinlan
   Lead Institution: UH-Mānoa
   Awarded: $850,000
   Grant Period: 2025-2028.

4. Project Title: *Revealing the dynamic interaction of nutrient pollution and seawater temperature on reef corals: Is nutrient enrichment undermining reef resilience to climate change?*
   Funding Org.: Environmental Protection Agency (EPA) STAR Fellowship.
   Lead Institution: UH-Mānoa.
   Awarded: $132,000
   Grant Period: 2016-2019.

Senior Personnel

1. Project Title: *REU Site: Earth Science on Volcanic Islands.*
   Funding Org.: National Science Foundation (NSF): EAR – Education and Human Resources.
   Principal Investigators: Bridget R Smith-Konter, Sloan Coats…et al.
   Lead Institution: UH-Mānoa.
   Awarded: $675,795
   Grant Period: 2025-2027.

II. PENDING: Principal Investigator or Co-Principal Investigator

Principal Investigator

1. Project Title: *Adaptive Consequences of Polyploidy in Reef Corals*
   Funding Org.: National Science Foundation: Biological Oceanography (GEO/OCE)
   Lead Institution: UH-Mānoa.
   Co-Principal Investigators: Crawford Drury, Lauren Van Heukelem,
   Postdoctoral Researchers: Erika Johnston, Zach Quinlan.
   Proposed Budget: $1,203,532
   Grant Period: 2027-2030

2. Project Title: *Taking Symbiodiniaceaean symbioses apart & putting them back together: Connecting interspecific variation in biogeochemical niche, trophic plasticity, & holobiont physiological resilience.*
   Funding Org.: Gordon and Betty Moore Foundation: Aquatic Symbiosis
   Co-Lead Institution: UH-Mānoa, SUNY College of Environmental Science and Forestry

Co-Principal Investigators: Hannah Reich (SUNY)
Proposed Budget: $1,339,769.
Grant period: 2027-2030

Co-Principal Investigator

3. Project Title: *Lalionaisi: A Grand Teacher*
Funding Org.: National Geographic Society
Principal Instigators: Molly Timmers
Lead Institution: National Geographic Society
Grant Period: 2025-2027. ($107,998 subaward), *in review*

4. Project Title: *On the backs of whales and underground rivers: Characterizing nutrient subsidies to Hawaiian coastal fisheries in support of community climate-resilience.*
Funding Org.: Pacific Islands Climate Adaptation Science Center.
Principal Investigators: Timothy Grabowski, USGS. Lead Institution: UH-Hilo.
Grant Period: 2026-2028. ($511,770), *in review*

III. AWARDED: Individual grants and fellowships

$3,000	UH-NSF CASA award to support Native Hawaiian place of learning (2024)
$1,000	Cal-State Office of Chancellor, Equity-Minded Pedagogy (2023)
$2,000	Distance Education Faculty Mentor, Santa Monica College (2020)
$1,000	UH Graduate Student Organization grant (2019)
$1,000	Peter Castro Travel Scholarship (2019)
$1,200	IsoCamp2018, NSF Scholarship (2018)
$1,000	Best Paper: 42nd Albert L. Tester Symposium, UH Mānoa (2017)
$28,000	Denise B. Evans Fellowship in Oceanographic Res. (SOEST, UH Mānoa) (2016)
$2,500	Marine Biology Program Student Grant; UH Mānoa (2015)
$10,500	Col. Willys E. Lord & Sandina L. Lord Endowed Scholar.; UH Mānoa (2014 – 2018)
$2,500	Santa Monica College Faculty Fellowship (2014)
$1,000	Arthur & Beatrice Harris Endowment Graduates Scholarship; UH Mānoa (2014)
$6,000	Edmondson Research Grant; UH Mānoa (2013, 2014, 2016)
$6,000	Graduate Opportunity Grant; UH Mānoa (2013 – 2016)
$2,000	California State University Grant; CSUN (2011)
$1,000	Thesis Support Fellowship; CSUN (2011)
$2,000	Graduate Equity Fellowship Grant ; CSUN (2010-2011)
$1,000	Student Travel Award; Society of Wetland Scientist Regional Conference (2008)
$1,000	Honors College Scholarship; UNT (2006)
$5,000	Transfer Student Scholarship; UNT (2005 – 2006)

IV. Proposals <u>not</u> selected for funding

1. *Toxicity assessment of urban-wildfire ash on water and air quality from the ongoing and unprecedented Los Angeles fires in winter 2024-2025.*
Funding Organization: National Institutes of Health (NIH): Time-Sensitive Research Opportunities in Environmental Health Sciences.
Principal Instigators: Julie Dinasquet, Rasmus Swalethorp, Douglas Hamilton.
Lead Institution: Scripps Institution of Oceanography.
Proposed Budget: $495,388 (SIO: $459,013, UHM: $36,375)
Grant Period: 2025-2027 (*not funded*)

2. Collaborative Research: RUI: Drivers of the coral recruitment bottleneck on Pacific reefs
Funding Organization: National Science Foundation: Biological Oceanography (GEO/OCE)
Lead Investigator/Institution: Dr. Peter Edmunds , Cal State University, Northridge (CSUN)
Proposed Budget: $1,309,491 (UHM $551,718, CSUN $757,773)
Grant Period: 2027-2029 (*not funded)*

3. *Microbial symbionts as drivers of marine sponge nutrition and niche space.*
   Funding Organization: NSF Postdoctoral Research Fellowship in Biology
   Grant Period: 2019-2022 ($207,000, *not funded*)

HONORS and AWARDS

2026 Keynote Speaker: 14th Annual ISOECOL conference (2026), Hong Kong.
2021 Outstanding Peer Reviewer, *Limnology and Oceanography*
2018 UH Mānoa Biology Photography Contest, *People and Environment*
2017 Best Paper: 42nd Albert L. Tester Symposium, UH Mānoa
2016 Eco-Steward, IUCN-UH Mānoa East-West Center, IUCN World Congress
2015 Sigma Xi, *Full Membership*
2013 NSF Graduate Research Fellowship Program, *Honorable Mention*
2008 *Summa Cum Laude*, University of North Texas

RESEARCH EXPERIENCE

2021 – 2024 *Postdoctoral Researcher*, University of California San Diego
Alpine Lake ecology, study of plankton-associated microbiomes, pyrogenic impacts on aquatic systems, ecology of environmental and host-associated microbial communities, trophic transfer efficiency in aquatic food webs.

2019 – 2021 *Postdoctoral Researcher*, Pacific Biosciences Research Center, UH Mānoa
Plant-fungi symbioses, microbiome-inoculation, axenic plant culturing and microbiome-mediate physiological resilience

2015 *Research Contractor*, State of Hawai'i Division of Aquatic Resources,
Lead: Brian Nielson. Assessing the success of management strategies to remove invasive algae in Kāne'ohe Bay, O'ahu. Statistical analyses, publication of research

2015 *Researcher*, 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
Stable isotopes and patterns of coral-Symbiodiniaceae community distribution

2013 – 2019 *Grad. Research assistant*, Dr. Ruth Gates, Hawai'i Institute of Marine Biology.
Coral energetics, stable isotope biogeochemistry, and nutritional flexibility in corals

2010 – 2012 *Grad. Research assistant*, Dr. Peter Edmunds, Edmunds Polyp Laboratory, CSU Northridge. Physiological effects of ocean acidification and temperature on juvenile reef corals in Mo'orea French Polynesia and Taiwan.

2009 – 2010 *Research technician*, Dr. Ione Hunt von Herbing, Laboratory for Marine Conservation Physiology University of North Texas. Multi-trophic marine aquaculture and biofiltration techniques.

2008 – 2010 *Research technician*, Dr. Kevin Stevens, Wetland Ecology Research Group, University of North Texas. Ecology of vegetation and seed banks in wetlands.

2007 – 2008 *Undergrad. Research assistant*, Dr. Kevin Stevens, University of North Texas
Effects of mycorrhiza fungi and soil inundation on wetland seedling.

2005 *Undergrad. Research assistant*, Hawaiian Field Studies Program, North Lake College

PROFESSIONAL TRAINING

2025 DEIJA best practices in the classroom, National University
2025 Peer Online Course Review, Santa Monica College
2023 Equity-Minded Pedagogy, California State University, Office of the Chancellor
2022 10th Annual Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, Wawona, Yosemite National Park; University of California Merced
2022 ACUE Microcredential Course in Promoting Active Learning Online

2019 9th Annual Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, Wawona, Yosemite National Park; University of California Merced

2018 IsoCamp 2018, University of Utah Stable Isotope Biogeochemistry and Ecology with Lab (BIOL 7473, BIOL 7475)

2017 7th Annual Yosemite Symbiosis Workshop. Sierra Nevada Research Institute, Wawona, Yosemite National Park; University of California Merced

2017 STEM mentorship workshop. UH Mānoa-SOEST, hosted by Dr. Becky Packard

2016 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 pH and Autonomous Ocean Sensor Workshop. University of California San Diego Scripps Institute of Oceanography and Woods Hole Oceanographic Institute.

2013 EarthCube Domain Workshop: Developing a Community Vision of Cyberinfrastructure (NSF), Hawai'i Institute of Marine Biology

2012 Environmental Proteomics Workshop (NSF) California Polytechnic University, San Luis Obispo; sponsored by Dr. Lars Tomenak

2012 Tropical Coral Reefs of the Future (focus on coral physiology) National Center for Ecological Analysis and Synthesis (NCEAS) Working Group

TEACHING EXPERIENCE

Instructor *Number of semesters or quarters taught for each course are listed*

2026 Division of Extended Studies, University of California, San Diego
Microbiology with Lab (online): *3 semesters*

2022 – Dept. of Mathematics and Natural Sciences, National University, San Diego
**accelerated, 4 week courses*
Survey of Biosciences (BIO-100, online): *4 semesters*
Survey of Biosciences lab (BIO-100A lab, online): *9 semesters*
Oceanography (EES-322, online): *5 semesters*
Geography (SCI-300, online): *5 semesters*
General Biology (BIO-163): *1 semester*
General Biology (BIO-162-online) Independent Study: *1 semester*

2021 Department of Interdisciplinary Studies, California State University Dominguez Hills
Special Topics in Interdisc. Studies: Endangered Species (IDS 350-41-online): *1 semester*

2013 – 2026 Life Sciences, Santa Monica College
Marine Biology non-laboratory (BIOL 15N-online): (*40+ semesters: Spr, Summ, Fall, Wint*)
Marine Biology with laboratory (BIO 15-online): *2 semesters*
Introduction to Plant Biology with laboratory (Botany 1): *1 semester*
Marine Biology non-laboratory (BIOL 15N): *1 semester*

Teaching Assistant

2018 – 2019 Center for Teaching Excellence, UH Mānoa
Instruction for graduate students in teaching laboratory science course: *4 semesters*

2017 – 2019 Department of Oceanography, UH Mānoa
Science of the Sea, Laboratory (OCN 201L): *4 semesters*
Head TA of 4-6 sections: Science of the Sea, Laboratory (OCN 201L): *3 semesters*

2013 – 2016 Department of Biology, UH Mānoa
Introduction to Biology Laboratory (BIOL 171L): *3 semesters*
Marine Biology Graduate Program core curriculum (MBIO 601): *1 semester*
Advanced Topics in Marine Biology (BIOL 404): *2 semesters*

2005 Hawai'i Field Studies, North Lake College

2003 – 2008 North Lake College, Science Center
Subjects: botany, biology, geology, chemistry

Guest Lectures

2025 Coral Resilience Lab, UH Mānoa, Hawai'i Institute of Marine Biology
Isotope proxies of nutritional plasticity in reef corals.

2025 UH Mānoa, Advanced Topics in Quantitative Biology (MBIO 740)
Reproducible coding and version control in R.

2025 California Institute of Technology, Environmental impacts of wildfires (ESE 200).
Fire impacts on aquatic ecosystem function.

2025 UH Mānoa, Stable Isotope Biogeochemistry (GG/ERTH 639)
Fundamentals of coral trophic ecology using stable isotopes

2024 UH Mānoa, Respiratory Processes in Coral Reef Organisms (MBIO 621)
Respirometry of the Coral Holobiont

2023 University of New Mexico, Newsome Lab
Alpine Lake Ecology and Plankton Microbiomes

2020 Utah Valley University, Intro to Data Analysis (BIOL 3100)
R-markdown and reproducible science

2020 California State University Channel Islands, Field Methods (ESRM 351)
Methods in coral reef physiological ecology

2019 UH Mānoa, Stable Isotope Biogeochemistry (GG/ERTH 639)
Stable isotopes resolve coral trophic interactions

2019 UH Mānoa, Field Problems in Marine Biology (ZOOL 403)
Stable isotopes in marine food webs

2018 – 2025 UH Mānoa, Corals and Coral Reefs (BIOL 410)
2018: *A song of stress and acclimation: Unraveling nutritional plasticity in corals*
2019: *Studying nutritional ecology of reef corals*
2020: *The chemistry of corals*
2022: *New frontiers in the study of coral nutrition*
2023: *Coral nutrition, biomass, and trophic plasticity*
2024: *Biomass energetics and reef corals*
2025: *Isotope proxies for coral nutrition*

2016 – 2019 Kapi'olani Community College (Honolulu, HI)
2016: *What's in the water? How ocean chemistry and temperature affect reef corals*
2017: *Nutritional flexibility in corals: unraveling the biological response*
2018: *Coral bleaching: Causes and consequences*
2019: *Nutritional plasticity and tissue biomass: metrics for reef coral physiological resilience*

2016 – 2018 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*

2016 Coppell High School (Coppell, TX), 12th grade, Skype lecture
Introduction to Coral Reefs

2014, 2015 North Lake College (Irving, TX) Introduction to Biology (BIOL 1407), Skype lecture
2014: *From community college to community ecology: The taxis of a scientist to the sea*
2015: *Lessons for success in science higher education*

STUDENT MENTORSHIP

54 students: 19 grad., 28 underg., 9 mid/high school – 37 woman; 13 people of color; *student coauthors

Graduate Committee Chair

2026 - Linnea Nodlii, MSc., University of Hawai'i Mānoa, Marine Biology Program
2026 - Hailey Hatch, MSc., University of Hawai'i Mānoa, Marine Biology Program

Graduate Committee Member

2024 - Blake Stoner-Osbourne, PhD, University of Hawai'i Mānoa, Dept of Oceanography*
2024 - Michael Dowd, PhD, University of Hawai'i Mānoa, Dept of Oceanography
2023-2024 Mario Kaluhiokalani, MSc, University of Hawai'i Mānoa, Dept of Oceanography

Graduate students (students served through structured mentorship plans, collaboration, and regular meetings)

2026 Sophia Zummo, MSc student, Scripps Institution of Oceanography (Wegley-Kelly Lab) *
2026 Garrett Licata-Portentoso, PhD student, University of Hawai'i at Mānoa (MBIO)
2026 Raffi Isah, PhD student, University of Hawai'i at Mānoa (OCN)
2025 Emily Rivest, PhD student, University of Hawai'i at Mānoa (MBIO)
2026 Loretto Paulino, Jr, PhD, University of Hawai'i at Mānoa*
2025 Jessica Glazner, PhD, University of Hawai'i at Mānoa*
2024 Callie Stephenson, MSc, University of Hawai'i at Mānoa*
2023 Gabriela Freedman, MSc, University of California San Diego
2022 Madeline Perreault, MSc, University of California San Diego*
2022 Evelyn Diaz, MSc, University of California San Diego*
2021 Cody Spiegel, MSc, University of California San Diego*
2018 Madeline Piscetta, MSc, University of Miami RSMAS*
2018 Rebecca Kitchen, MSc, Northeastern University*
2016 Teegan Innis, MSc, Northeastern University*

Undergraduate students

2026 Kimberly Murphy, NSF-REU student, University of Hawai'i -West O'ahu*
2026 Riley Johnson, University of Hawai'i at Mānoa*
2025 Kai Aiona-Agra, NSF-REU student, Seattle University*
2025 Ashley Leland, University of Hawai'i at Mānoa*
2025 Sofia Martin, University of Hawai'i at Mānoa*
2024 Allyson Ijima, University of Hawai'i at Mānoa*
2024 Jadeanna Martinez, NSF-REU student, Cal Poly Pomona*
2024 Jasmine Alip, University of Hawai'i at Mānoa
2023 Samantha Tsang, University of California San Diego
2023 Yerin Go, University of California San Diego
2023 Troy Weldon, University of California San Diego*
2023 Ananya Giri, University of California San Diego
2022 Sierra Vasquez, University of California San Diego
2022 Ethan Shane, University of California San Diego
2022 Eugene Kim, University of California San Diego
2022 Kirby Inocente, University of California San Diego
2022 Tristie Le, University of California San Diego
2022 Ari Brisco-Schofield, University of California San Diego
2021 Keeley Lanigan, University of California San Diego*
2021 Cindy Tran, University of California San Diego*
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
2015 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	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

2026	Career Day: Kahala Elementary Pre-Kindergarten
2025	Waikīkī Elementary, First Grade, *The fun, the wild, and the beautiful: life on coral reefs*
2024	Panelist, Biological Sciences Student Association UCSD mentorship program *What I wish I had known as an undergraduate?*
2023	California Ecology and Conservation: *Ecology research from undergrad through grad studies*
2020	Koko Head Elementary School: *Coral reef in the face of local and global change*
2020	PhDrinking Sci-com podcast: Cold brews and cool water make for happy corals (and coral biologists)
2019	Nerd Nite Honolulu: *What can stable isotopes teach us about life and our planet*
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 – 2019	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'uanu 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 reefscapes 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
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
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

Editorial board

Assistant Editor, *Limnology and Oceanography*

Grant Proposal Reviewer

2025	National Science Foundation (NSF) Biological Oceanography Program (BioOce)
2025	National Science Foundation (NSF) CAREER Program

2024 King Abdullah University of Science and Technology (KAUST) Opportunity Fund Program (OFP)

Dissertation External Examiner

2025 Hayden Roisin, PhD, Hong Kong University (external examiner)
2025 Amanda Grima, University of Technology, Sydney (external examiner)

Activities

2021 Invited Panelist: SOEST Mentoring Panel – *Effective mentoring during the COVID-19 pandemic*
2019 Invited Panelist: Parenting in Academia
Moku o Loʻe Student Association, Hawaiʻi Institute of Marine Biology
2018 Co-organizer committee (1 of 3 graduate students)
UH-Mānoa Dept. of Biology, 43rd Annual Albert L. Testers Memorial Symposium
2010 – 2011 Marine Biology Graduate Student Association (CSU-Northridge), Treasurer
2013 – 2015 Hazardous Waste Manager, Gates Laboratory, Hawaiʻi Institute of Marine Biology

Scientific Journal Reviewer

Coral Reefs, Ecology and Evolution, Ecological Engineering, Frontiers in Marine Science, Frontiers in Physiology, Functional Ecology, Fungal Ecology, Geophysical Research Letters, Global Change Biology, ICES Journal of Marine Science, International Review of Hydrobiology, ISME J, ISME Communications, Invertebrate Biology, Limnology and Oceanography, Marine Ecology Progress Series, Methods in Ecology and Evolution, Nature Ecology and Evolution, Nature Communications, Nature Science Advances, Nature Scientific Reports, Oecologia, PeerJ, Planta, PLoS ONE, Proceedings of the Royal Society B: Biological Sciences, Royal Society Open Science, Science of the Total Environment, Wetlands, Wetlands Ecology and Management

PRESS COVERAGE

NSF News -- Wildfires transform aquatic ecosystems, with implications for wildlife and water quality.
https://new.nsf.gov/news/wildfires-transform-aquatic-ecosystems

Phys.org --Wildfires found to also impact aquatic ecosystem.
https://phys.org/news/2023-12-wildfires-impact-aquatic-ecosystems.html

UC San Diego Today -- Wildfires Also Impact Aquatic Ecosystems.
https://today.ucsd.edu/story/wildfires-also-impact-aquatic-ecosystems

Star Advertiser – Certain algae help Kaneohe Bay corals weather warmer seas.
https://www.staradvertiser.com/2020/01/27/hawaii-news/certain-algae-help-kaneohe-bay-corals-weather-warmer-seas/

Science Daily – Corals' partnership with microalgae helps in stressful times but there's a trade-off
www.sciencedaily.com/releases/2020/01/200121112939.htm

University of Hawaiʻi News – Corals' partnership with microalgae helps in stressful times but there's a trade-off
https://www.soest.hawaii.edu/soestwp/announce/news/reef-corals-partnership-with-microalgae-may-get-them-through-a-stressful-time-but-theres-a-trade-off/

Phys.org – Corals' partnership with microalgae helps in stressful times but there's a trade-off
https://phys.org/news/2020-01-corals-partnership-microalgae-stressful-trade-off.html

Nature Microbiology: Behind the Paper – Nutrition and niches of coral endosymbionts
https://naturemicrobiologycommunity.nature.com/users/341508-christopher-b-wall/posts/58050-nutrition-and-niches-of-corals-endosymbionts

National Geographic – Hawaii Enlists Urchins to Help Corals Resist Algae Invasion
www.nationalgeographic.com/environment/2018/08/hawaii-coral-reef-healthy-recovery-urchins/

Popular Science – An army of hungry little sea urchins could save Hawaiian reefs
www.popsci.com/sea-urchins-hawaiian-reefs-invasive-algae/

Tech Times – Corals Recover After Bleaching Thanks To Soft Tissue
www.techtimes.com/articles/242135/20190424/corals-recover-after-bleaching-thanks-to-soft-tissue.htm

Phys.org – Soft tissue makes coral tougher in the face of climate change
https://phys.org/news/2019-04-soft-tissue-coral-tougher-climate.html

Science Daily – Unique dietary strategy of a tropical marine sponge
www.sciencedaily.com/releases/2019/08/190814090712.htm

Science Daily – Soft tissue makes coral tougher in the face of climate change
www.sciencedaily.com/releases/2019/04/190423133651.htm

Big Island News Now – UH STUDY: Coral Reefs May Have 'Thick Skins' for Climate Change
bigislandnow.com/2019/04/27/uh-study-coral-reefs-may-have-thick-skins-for-climate-change/

University of Hawai'i News – Unique dietary strategy of invasive marine sponge
www.hawaii.edu/news/2019/08/19/unique-dietary-strategy-of-invasive-marine-sponge/

University of Hawai'i News – Sea urchins help researchers fight reef-smothering algae
www.hawaii.edu/news/2018/08/10/sea-urchins-fight-reef-smothering-algae/

Star Advertiser – Invasive sponge found to feed on own bug juice
www.staradvertiser.com/2019/08/19/hawaii-news/invasive-sponge-found-to-feed-on-own-bug-juice/

Star Advertiser – Native sea urchins help clear invasive macroalgae from Oahu reef, study finds
www.staradvertiser.com/2018/08/13/breaking-news/study-finds-native-sea-urchins-help-clear-invasive-macroalgae-from-oahu-reef/

Hawai'i Public Radio – radio interview

CERTIFICATION & PROFESSIONAL ORGANIZATIONS

International Society for Reef Studies (ISRS)
Society of Integrative and Comparative Biology (SICB)
American Society of Limnology and Oceanography (ASLO)
American Academy of Underwater Scientists (AAUS) SCUBA Research Diver (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. Jonathan Shurin
University of California San Diego
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Dr. Megan Donahue
Director, Hawai'i Institute of Marine Biology
donahuem@hawaii.edu

Dr. Brian Popp
University of Hawai'i at Mānoa
popp@hawaii.edu

Dr. Peter Edmunds
California State University Northridge
peter.edmunds@csun.edu